ARROW ASSEMBLY

Cutting Shafts, Installing Components and Arrow Maintenance

Contents - This section of the Arrow Tuning and Maintenance Guide contains instructions for the assembly of shafts and components. It starts with functions that apply to all types of shafts (with noted exceptions)—determining correct length, measuring shafts, and cutting shafts. Methods for installing points and fletching vary based on the type of shaft being used, so these instructions are grouped based on their generic shaft type—Aluminum, Aluminum/Carbon, Carbon with internal components (ICS), and Carbon with external components. Most shafts can be used with at least two types of nock systems, so the nock systems are all grouped together in one section following the point and fletching sections for the various shafts. The last part of the Guide contains additional information of a more general nature, including F.O.C. calculations, AMO's minimum recommended arrow weights, and safety tips.

MEASURING AND CUTTING SHAFTS

Correct Arrow Length - Correct Arrow Length is measured from the bottom of the nock groove to the end of the shaft (see diagram). This distance includes a portion of the nock, the nock insert or outsert if any, and the shaft length. The point is not included. This is the length used for shaft selection. The optimum length of a finished arrow for a specific archer is determined by several factors including the draw length of the archer, the style of point, the configuration of the bow, and the archer's shooting style. To determine your correct arrow length, use the procedures that follow.

Measuring Correct Arrow Length - Your Recommended Correct Arrow Length can be determined by drawing back an extra-long arrow and having someone mark the arrow. This distance is measured from the front of the bow or from the front of the place where the arrow contacts the most forward position of the arrow rest. Which method to use depends on the type of bow and arrow being set up. From this you can measure your arrow length and know where the shaft should be cut.

Recommended Correct Arrow Length - X10, A/C/E, A/C/C, HyperSpeed, Aluminum, and Carbon Shafts with Internal Components - It is recommended that the Correct Arrow Length be determined by drawing back an extra-long arrow and having someone mark the arrow about 1" in front of the place where the arrow contacts the most forward position of the arrow rest. This extra 1" provides a measure of safety by allowing small variances in draw length to occur without resulting in a target arrow falling behind the arrow rest. This measurement is your Correct Arrow Length and is where your shaft should be cut .

(Carbon Shafts with External Components) Some shafts are fitted with components that fit over the outside of the shaft. To accommodate this, the outserts and one-piece points must be larger in diameter than the shaft. Therefore, all Correct Arrow Length calculations allow for at least 1⁄2" clearance from the back of the One-Piece Point or Standard Adapter to the most forward part of the arrow rest (as indicated by the

diagrams). This prevents any disturbance to the arrow caused by the outsert as the arrow is drawn or released.

NOTE: Beginners with recurve bows may want to add an extra 1⁄2"-1" to their arrow length so that, as they become stronger and their shooting technique improves, the arrow will not be too short.

Determining Shaft Cut length - Remember that your Correct Arrow Length is measured to the bottom of the nock groove and includes the small distance that the nock base extends beyond the nock taper. Therefore, your shaft cut length is slightly shorter than your Correct Arrow Length.

Cutting Shafts to Length - After determining Correct Arrow Length follow the steps below. Note: Carbon shafts of all types must be cut carefully to prevent splintering of the carbon (graphite) fibers. Never use rotary tube cutters, hack saws or other methods that can damage the shaft or leave a rough cut. Always wear a NIOSH approved dust mask and safety glasses when cutting arrow shafts !

1. Set up the Easton Pro Shop Cut-Off Tool to cut the shaft so that after the nock system is installed, the total length of the shaft plus nock system will equal your desired Correct Arrow Length. To do this you will have to temporarily install the nock system on one full length shaft and then use that shaft to measure and set up the proper cutoff length.
2. Set the shaft support on the Cut-Off Tool so the abrasive wheel only cuts about 1⁄3 through the diameter of the shaft.
3. While slowly rotating the shaft in the same direction as the cutoff wheel, gently push the shaft into the wheel and rotate the shaft until it is completely cut. Continue to slowly rotate the shaft two more revolutions to ensure a square cut.
4. Deburring and chamfering is the final step. What needs to be done varies with the type of shaft . ALUMINUM—Deburr only the inside of the wall just enough to eliminate the sharp edge of the tube. A/C/E, A/C/C and HyperSpeed—deburr the inner aluminum core tube very lightly using the more pointed deburring head on Easton's Cut-Off Tool. Be careful not to remove too much aluminum. Beman ICS (Internal Component System) —do not chamfer the inside of the tube. ICS Hunter (Internal Component System)— Deburr the inside of the tube just enough to remove the burr. All Carbon with External Components—these components fit over the outside of the shaft, so chamfering must be done on the outside edges of the shaft (see illustration on right). Use the recessed grinding stone on the Cut-Off Tool or lightly chamfer the end of the shaft with 180- or 240-grit sandpaper. Rotate the shaft as you lightly drag the edge of the shaft along the sandpaper. Three complete revolutions will produce a sufficient chamfer.
5. Easton recommends that you test-draw one arrow with all components installed (without adhesive) before cutting and finishing a complete set of arrows.

ALUMINUM SHAFT COMPONENT INSTALLATION –

Shaft Construction - Easton shafts, depending on the model line, are produced

from super high-strength 7178 or 7075 aluminum alloys. Both alloys are processed to their highest possible strength using Easton's proprietary manufacturing steps. This insures that Easton shafts will stay straight even through severe shooting conditions. Easton shafts are cold drawn many times from an aluminum tube that has been fusion bonded from precision coil stock. This tube has a precisely uniform spine because it is made from uniform thickness coil stock, drawn many times, and thermally treated until the fusion line is totally absorbed into the adjacent metal. To further ensure integrity of every shaft, each Easton aluminum shaft goes through an eddy current tester that "looks" through the wall thickness and rejects any shafts with flaws or imperfections in the material. Each Easton aluminum shaft of a given size and model is guaranteed to have the same inside diameter to a tolerance of ±0.0004". This close tolerance ensures a consistent point or insert fit. The outside diameter is made to ±0.0003" tolerance to ensure a uniform spine from shaft to shaft. In addition, the wall thickness is uniform to give consistent spine 360° around each shaft.

Shaft Size Identification - Easton uses various arrow shaft outside diameters and wall thicknesses to obtain the necessary number of shaft spines needed to shoot well from nearly all bow weight and arrow length combinations. The Outside Diameter is the main factor in determining shaft stiffness. This diameter is coded in the first two digits of the shaft size number—for example, in 2312, the 23 = 23/64". This is the shaft diameter rounded to the nearest sixty-fourth of an inch. The Wall Thickness code is the second two digits of the shaft size number. These digits indicate the shaft wall thickness to the closest one thousandth of an inch—for example, in 2312, the 12 = 0.012". The wall thickness is the main factor in determining the shaft weight. For two shafts of the same stiffness, a larger diameter, thin-walled shaft will be much lighter than a smaller diameter, thicker walled shaft.

Easton Aluminum Shaft Weight Groups - Easton aluminum shafts are classified by weight groups, each with its own performance characteristics. There are shaft sizes in each weight group to match nearly every bow weight/arrow length combination.

- UltraLite aluminum – .012" wall thickness
- SuperLite aluminum – .013" - .014" wall thickness
- Lite aluminum – .015" - .016" wall thickness
- Standard aluminum – .017" - .020" wall thickness

INSTALLING POINTS AND ALUMINUM INSERTS -

MATERIALS NEEDED FOR INSTALLATION OF POINTS AND ALUMINUM INSERTS

- 91% isopropyl alcohol
- Paper towels
- Cotton swabs
- Easton hot-melt
- Torch or burner

To produce the most bend-resistant aluminum shaft possible, extremely high-yield

strength and internal stresses are built into each Easton shaft. Therefore, care must be taken when installing a point or insert to prevent splitting the end of the shaft due to overstressing. Easton two-piece points and RPS aluminum inserts for aluminum shafts have an exclusive press-fit feature on the last 1⁄8" (3 mm) of the insert. This feature accurately aligns the component in the shaft and holds it in place while the adhesive hardens. Follow the shaft cutting instructions carefully, then follow the steps below for point and aluminum insert installation. NOTE: To facilitate handling, Easton recommends that a field point be screwed into the insert before heating and inserting. CAUTION: Do not overheat aluminum shafts or points! This is especially true with thin wall UltraLite shafts which heat up more quickly than other aluminum shafts. Excessive heat (over 400°F [200°C]) will cause recrystallization and could permanently soften or damage any size aluminum shaft.

1. Clean the inside of the shaft with a cotton swab dipped in 91% isopropyl alcohol to remove the fine cutting dust. Let the shaft dry thoroughly before bonding.
2. With a small gas flame, apply enough heat to the end of the shaft to readily melt a ring of Easton's hot melt adhesive on the inside of the shaft. NOTE: Use Easton's Hot Melt Adhesive only. Arrow points can come out in the target mat if adhesives with lower melting temperatures are used.

CAUTION: Do not overheat!

3. Grip the point or insert with pliers and heat the shank end just enough so that when it is pushed partly into the shaft, the ring of adhesive is melted. Push the point or insert about 1⁄4" (6 mm) into the shaft.

CAUTION: Do not overheat points!

4. Heat the exposed portion of the point or insert shank just enough so a thin layer of hot melt adhesive can be applied to the exposed shank of the point or insert.
5. After applying the adhesive, heat and remelt the adhesive on the shank of the point or insert.
6. Without delay, while the adhesive is still fluid, slowly push the point or insert into the shaft until it seats against the end of the shaft. Wipe off excess adhesive on a paper towel before hot melt hardens.

REMOVING POINTS AND ALUMINUM INSERTS -When removing an aluminum insert, first thread an RPS Field or Target Point into the insert.

1. Lightly heat the exposed end of the point for 3-5 seconds over a small gas flame.

CAUTION: Do not overheat the component or the shaft

2. Immediately grip the point with a pair of pliers.
3. Twist and pull out the point (and insert if any).
4. If the point or insert cannot be removed, reheat for 3-5 seconds and try to remove again.
5. Repeat procedure #4 until adhesive softens just enough to remove the component.

INSTALLING CARBON COMPOSITE INSERTS –

MATERIALS NEEDED FOR INSTALLATION OF CARBON COMPOSITE INSERTS

- 91% isopropyl alcohol
- paper towels
- cotton swabs
- flexible, two-part, 24-hour epoxy (such as AAE epoxy)
- wood toothpick or match stick

For an accurate, high-strength installation, be sure the shaft ends are cut square. Follow the shaft cutting instructions carefully.

1. Clean the inside of the shaft with a cotton swab dipped in 91% isopropyl alcohol to remove the fine cutting dust. Let the shaft dry thoroughly before bonding.
2. Evenly spread a drop of epoxy around the inside of the first 1⁄4" of the shaft with a wood toothpick or match stick. NOTE: A twenty-four hour flexible epoxy such as AAE® Epoxy is best. Fast-drying epoxies are often brittle.
3. Apply a small amount of adhesive to the entire surface of the insert.
4. Install the insert, rotating it as it is pushed slowly into place. Wipe off excess adhesive.
5. Stand the shaft on the nock end while drying to prevent epoxy from entering the threaded area of the insert.

REMOVING CARBON COMPOSITE INSERTS - Carbon Composite Inserts can be removed by slowly heating the shaft (aluminum shafts only) and breaking down the bonding adhesive with heat. CAUTION: Do not overheat the shaft !

1. Put an RPS Field or Target Point into the insert.
2. Lightly heat the end of the aluminum shaft for 3-5 seconds over a small gas flame.
3. Grasp the point in the insert with pliers and try to pull the insert from the shaft.
4. Repeat steps 1 and 2 until the adhesive bond is destroyed by the heat and the insert pulls free. Remember, excess heat will destroy the shaft.
5. Immediately, while the shaft is still hot, clean the inside of the shaft by removing any adhesive residue with a bore cleaning brush or small blade.

PREPARING ALUMINUM SHAFTS FOR FLETCHING -Unless your fletching jig has an adjustable nock indexing feature, you may choose to fletch your arrows with the nocks Temporarily installed. After fletching, properly index and bond the nocks so that your style of vanes clears your particular arrow rest. NOTE: If the nocks are installed without adhesive the UNI and Super UNI Systems allow you to rotate the nock to obtain proper alignment at any time.

Cleaning with Non-chlorinated Ajax® & Water -

1. Rub the shaft in the area to be fletched with wet Ajax on a wet paper towel. NOTE: Do not use chlorinated cleansers.
2. Rinse the shaft and repeat cleaning until water no longer beads, but “sheets” on the shaft surface.

Cleaning with Solvents -

1. Carefully wipe down just the area of the shaft to be fletched with MEK, lacquer

thinner, or acetone until no residue shows on a clean white paper towel.
2. For the best bond, follow with a wipe of 91% isopropyl alcohol using a clean white paper towel.
CAUTION: Do not use MEK, lacquer thinner, or acetone with the nock installed. Keep these solvents away from nocks, shaft identification marks, and UNI Bushings. Use protective gloves to keep solvents from penetrating the skin and use proper ventilation.
NOTE: Petroleum solvents can accumulate between the bushing and the shaft wall and weaken the adhesive bond. Also, the vapors from trapped solvents could cause the polycarbonate A/C/E or 3-D Super Nocks to fracture when shot. Be sure the shaft has dried thoroughly before installing nocks.

Cleaning with 91% Isopropyl Alcohol -
(Recommended for shafts with UNI or Super UNI Bushings already installed)
1. Use 91% alcohol as a primary cleaner on shafts with UNI or Super UNI Bushings installed. 91% alcohol will not affect the A/C/E or Super Nocks or the bushing adhesive.
FLETCHING ALUMINUM SHAFTS –
1. Because of the preapplied activator on Easton Diamond Vanes, no cleaning is required if AAE Fastset™ adhesive is used. If another brand of adhesive is used, or for other brands of vanes, wipe the base of the vanes with MEK or lacquer thinner to remove any mold release chemical from the vanes.
2. When preparing for fletching, observe these precautions and instructions:
· Do not touch cleaned areas of the shaft or vanes with your hands or other objects.
· Fletch as soon as possible after the shaft has dried. If shafts stand unfletched for over 8 hours, repeat the cleaning process.
· Do not attempt to fletch on very humid days.
3. Shafts cleaned as described above can be fletched directly using Saunders® NPV, Fletch-Tite®, AAE Fastset ®, or similar fletching cement. For added adhesion, a thin dip of lacquer or coating compatible with the cement can be used.
CAUTION: Do not dip shafts with UNI Bushings or Super UNI Bushings in lacquer or use petroleum solvents to clean the fletching surface.
Notes on Fletching Aluminum Shafts
1. Use Saunders® NPV, Fletch-Tite®, AAE Fastset® or similar fletching cement.
2. Set the rear of the vane 1-1⁄4" from the bottom of the nock groove.
3. Attach fletching at an offset to the centerline of the shaft. To assure proper clearance, take into account the type of arrow rest being used. Do not use an angle of offset so great that the farthest right or farthest left corner of the fletching loses contact with the shaft. There should be no open spaces between the shaft and the ends of the base of the vane.
4. Allow cement to fully harden before shooting. Follow manufacturer’s instructions for full cure time.

ALUMINUM/CARBON COMPONENT INSTALLATION –

Installing One-piece Points and Aluminum Inserts –

EQUIPMENT AND MATERIALS NEEDED FOR INSTALLATION OF POINTS AND ALUMINUM INSERTS

- 91% isopropyl alcohol
- paper towels
- cotton swabs
- Easton hot-melt
- torch or burner

The instructions that follow can be used for either One-piece Points or for aluminum inserts. For aluminum inserts, screw a point into the insert before you begin installation.

After cutting your A/C* Shaft to length as described, follow the point installation procedure carefully to prevent overheating the point. Overheated points can destroy the shaft's epoxy bond between the carbon and the aluminum tube. Use only Easton hot-melt adhesive.

1. Clean approximately two inches inside the point end of the shaft using a cotton swab dipped in 91% alcohol. Repeat the process until a fresh cotton swab is free of cutting dust residue. Let the shaft dry thoroughly before bonding.

2. Carefully heat a stick of Easton's hot-melt adhesive over a small gas flame; then apply a ring of hot adhesive to the inside of the point end of the shaft.

CAUTION: Do not apply heat directly to A/C shafts.

Use Easton's hot-melt adhesive only. The melting point of Easton's hot-melt adhesive is low enough that the shaft will not be damaged during installation and high enough to keep the point securely bonded during the frictional heating caused when the arrow penetrates the target mat. Arrow points can come out in the target mat if lower melting temperature hot-melt adhesives are used.

3. Hold the end of the point with your fingers. (Do not hold with pliers because it is then possible to overheat the point.) Heat the exposed portion of the point or insert until you feel it getting warm. It should be just hot enough to melt the adhesive.

CAUTION: Do not overheat points. If the point becomes too hot to hold in your fingers, it is too hot to put in the shaft. Set the point on a noncombustible surface until cool.

4. Heat the hot-melt adhesive and apply a generous layer of adhesive to the shank of the point or insert.

* "A/C" Shaft refers to all models of aluminum/carbon shafts. Current models are X10, A/C/E, A/C/C, and HyperSpeed.

5. After applying the adhesive, quickly remelt the adhesive on the shank of the point or insert. Reheat it enough that when it is pushed into the shaft, the ring of adhesive in the shaft is melted.

6. Without delay, while the adhesive is still fluid, install the point or insert into the shaft with a clockwise twisting motion until it seats against the end of the shaft.

NOTE: Do not force a point or insert into an A/C shaft.

7. With a paper towel quickly wipe off excess adhesive while it is still hot.

CAUTION: Do not apply heat directly to A/C shafts or overheat points! Overheating points installed in A/C shafts can destroy the bond between the carbon and the aluminum tube. Applying heat directly to A/C shafts can destroy the carbon fiber/epoxy matrix.

Removing Points and Aluminum Inserts –

1. Grasp the shaft about 1⁄2" back from the component. There should be 1⁄2" to 3⁄4" of shaft between your fingers and the component. (Screw a point into the aluminum insert before heating.)
2. Lightly heat only the exposed portion of the component in a small flame for 3-5 seconds.

CAUTION: Do not apply heat to A/C shafts directly.

3. When you feel the shaft just start to warm under your fingers, grip the component with a pair of pliers. Twist and pull on the component to determine if the adhesive has melted. (Or use a small wire hook to remove the UNI Bushing.)
4. If the component does not move, continue to heat in five second increments and twist the component after each heating period with pliers until it rotates and can be pulled free of the shaft.

Installing Carbon Composite Inserts –

EQUIPMENT AND MATERIALS NEEDED FOR INSTALLATION OF CARBON COMPOSITE INSERTS

- 91% isopropyl alcohol
- paper towels
- cotton swabs
- flexible two-part, 24-hour epoxy (such as AAE epoxy)
- wood toothpick or match stick

For an accurate, high-strength installation, be sure shaft ends are cut square. Follow shaft cutting instructions carefully.

1. Clean the inside of the shaft with a cotton swab dipped in 91% isopropyl alcohol to remove the fine cutting dust. Let the shaft dry thoroughly before bonding.
2. Evenly spread a drop of epoxy around the inside of the first 1⁄4" of the shaft with a wood toothpick or match stick.

NOTE: A twenty-four hour flexible epoxy such as AAE® Epoxy is best. Fast-drying epoxies are often brittle.

3. Apply a small amount of adhesive to the entire surface of the insert.
4. Install the insert, rotating it as it is pushed slowly into place. Wipe off excess adhesive.
5. Stand the shaft on the nock end while drying to prevent epoxy from entering the threaded area.

Removing Carbon Composite Inserts - Carbon Composite Inserts are permanently installed with epoxy and cannot be removed without risking damage to the shaft. Attempting to remove the inserts voids the shaft guarantee.

Unless your fletching jig has an adjustable nock indexing feature, you should fletch your arrows with the nocks temporarily installed without adhesive. After fletching, index the nocks properly so the fletching clears your arrow rest. If you wish, use one of the recommended adhesives to attach your nocks.

NOTE: If no adhesive is used the UNI System allows you to rotate the nock to obtain proper alignment at any time.

1. Carefully wipe down just the fletching area of the shaft with M.E.K. or lacquer thinner using a clean, white paper towel. If your nock is already permanently installed, use 91% isopropyl alcohol in place of all other solvents. Continue wiping the surface with solvent until no dirt or carbon residue shows on a clean portion of the paper towel. Remember to use protective gloves to keep solvents off the skin and use proper ventilation. Do not soak carbon or aluminum/carbon shafts in any solvents.

CAUTION: Do not use lacquer thinner, M.E.K., or acetone with the nock installed. Keep these solvents away from nocks and shaft identification markings. Petroleum solvents could accumulate between the bushing and shaft wall and weaken the adhesive bond. Also, the vapors from trapped solvents could cause the polycarbonate A/C/E Nocks to fracture.

2. For the best bond, follow with a wipe of 91% isopropyl alcohol using a clean paper towel.

3. Because of the preapplied activator on Easton Diamond Vanes, no cleaning is required if AAE Fastset™ adhesive is used. If another brand of adhesive is used, or for other brands of vanes, wipe the base of the vanes with MEK or lacquer thinner to remove any mold release chemical from the vanes.

When preparing for fletching, observe these precautions and instructions:

a. Do not touch cleaned areas with hands or other objects.

b. Fletch soon after cleaning. If shafts stand unfletched for over 8 hours, repeat the cleaning process.

c. Do not attempt to fletch on very humid days.

Fletching A/C Shafts

EQUIPMENT AND MATERIALS NEEDED FOR FLETCHING

- 91% isopropyl alcohol
- paper towels
- fletching jig
- fletching adhesive

Fletching for A/C target shafts should be as small as necessary to get good flight and grouping.

. Remember to always clean the shaft before attaching any style of fletching.

1. For Spin-Wing Vanes® use the 2-sided adhesive tape supplied. For Easton Diamond Vanes no cleaning is required if AAE Fastset™ or any cyanoacrylate adhesive is used. When installing other brands of vanes, wipe the base of the vanes with MEK or lacquer thinner to remove any mold release chemical.

For plastic vanes or feathers, cyanoacrylate adhesives such as Bohning® Instant Super Fletch-Tite, AAE Fastset® or, other instant fletching adhesives give the most secure bond. Saunders N.P.V. ® or Bohning Fletch-Tite® cement may also be used. Shafts must be properly cleaned before fletching.

CAUTION:

a. Cyanoacrylate instant adhesives (Super Glues) bond extremely well to carbon fiber, which can make vanes very difficult to remove without damage to the shaft surface. Easton recommends testing the adhesive on one A/C shaft before fletching an entire set to be sure the surface of the shaft is not damaged when the fletching is removed.

b. Some instant adhesives are brittle and can fracture if vanes are hit by another arrow. Loose vanes can drastically affect the flight and grouping of an arrow.

2. Set the rear of the vane 1-1¼" from the bottom of the nock groove.

3. Attach fletching at an offset to the centerline of the shaft. To assure proper clearance, take into account the type of arrow rest being used. Do not use an angle of offset so great that the farthest right or farthest left corner of the fletching losses contact with the shaft. There should be no open spaces between the shaft and the ends of the base of the vane.

4. Allow cement to fully harden before shooting. Follow manufacturer's instructions for full cure time.

Removing Fletching –

CAUTION: Do not soak any carbon shaft in solvents to remove the fletching or fletching adhesive. The solvents will slowly absorb into the shaft and weaken the resin that bonds the carbon fibers.

1a.When using instant adhesives, carefully peel off the vanes with a very dull knife and remove most of the glue, being careful not to scrape deep enough to damage the carbon fibers near the surface of the shaft.

1b.If you're using standard fletching cements, pull the vanes or feathers off by hand or with pliers.

2. Wipe fletching area with lacquer thinner to remove remaining glue residue. Do a final wipe with 91% isopropyl alcohol.

CAUTION: Keep solvents away from the nock and shaft logo. See the CAUTION about solvents under "Preparing Shafts for Fletching."

3. Let the shafts dry before refletching per the instructions above.

Pulling Carbon Shafts from Target Mats - Particles from some target mats may stick on the shaft because of the heat generated during the frictional slowing of these high speed arrows. This frictional bonding may make the shaft difficult to remove from the mat. Several suggestions to help relieve this problem are:

1. Put a coating of hard paste wax or rub a bar of hard soap on the point end of the shaft as needed.

2. Use a cloth impregnated with silicone wax or similar material or use Saunders

Friction Fighter® silicone applicator to wipe the lower quarter of the shaft. Be careful not to use too much or too often as the silicone will prevent adhesive from adhering to the shaft if it migrates to the fletching area.

3. Use a piece of natural rubber sheet or a commercially available arrow puller to grip the arrow and make pulling easier.

NOTE: Always pull the arrow straight out of the mat.

Make sure no one is behind you when pulling arrows.

CARBON ICS COMPONENT INSTALLATION

Carbon Beman ICS* Shafts - Some models of Beman's Carbon shafts feature the Internal Component System (ICS). These shafts are made in a larger, more traditional diameter to accommodate internally fitted nocks and points. Even the industry standard RPS threaded points can be used. These shafts provide all of the benefits of carbon's light weight and straightness without the difficulties associated with narrow diameter shafts and externally fitted components. Currently, Beman's large diameter models of carbon shafts are the ICS Hunter and the Beman ICS.

Installing Points and Inserts

EQUIPMENT AND MATERIALS NEEDED FOR INSTALLATION OF POINTS AND INSERTS

- 91% isopropyl alcohol
- paper towels
- cotton swabs
- flexible two-part, 24-hour epoxy(such as AAE epoxy)
- wood toothpick or match stick

Install with Epoxy

Note that the ICS Hunter shaft can be fitted only with ICS Hunter inserts and RPS points. The Beman ICS (target) uses either ACC-60 one piece points or an ACC-60 RPS insert fitted with RPS points.

1. With a cotton tipped applicator (Q-Tip) dipped in 91% isopropyl alcohol, remove the carbon dust from the inside of the tube.

2. Put a small ring of flexible, two-part, 24-hour cure epoxy into the end of the shaft to a depth of 1⁄4", so it can coat the inside of the shaft as the point is pushed in. A match stick or toothpick may be used.

Do not put too much epoxy in the shaft.

3. Evenly coat the exposed insert or point shank with epoxy. If installing an insert, it is easier to handle if an RPS field point is first threaded into the insert.

4. Rotate the shaft while slowly inserting the point or insert into the shaft. Once the point or insert is fully seated, rotate the shaft two more complete revolutions to ensure a thorough covering of epoxy on the point or insert shank and inside the shaft.

5. Wipe off excess adhesive.

6. Stand the shaft with the point up, in an exactly vertical position. This maintains correct alignment of the point and also prevents adhesive from flowing into the threaded portion of the insert. Allow the epoxy to fully cure.

NOTE: Do not use hot melt adhesive on carbon shafts.

* “ICS” refers to all models of Beman shafts featuring an internal component system.

Removing Points and Inserts -Points and inserts installed with epoxy are permanently bonded and cannot be removed.

Fletching ICS Shafts

When preparing for fletching, observe these precautions and instructions:

1. Do not touch cleaned areas with hands or other objects.
2. Fletch as soon as possible after cleaning. If shafts stand unfletched for over 8 hours, repeat the cleaning process.
3. Do not attempt to fletch on very humid days.

Fletching instructions are the same as those used for Easton A/C shafts. For instructions.

EXTERNAL COMPONENT INSTALLATION

POINTS and STANDARD ADAPTERS

Some models of carbon Beman shafts utilize a component system that fits over the outside of the shaft. This style of attachment provides protection to the exposed ends of the carbon fiber filaments and adds strength to the shaft. To accommodate this, there are two methods of point attachment.

Beman One-Piece Target Points—These points have an outside diameter which fits over the outside of the shaft to provide protection and strength. In addition, the point shank fits inside the shaft to ensure good alignment.

Beman’s Standard Adapter—This attaches over the end of the shaft and provides a threaded fitting for industry standard 8-32 RPS screw-in points or broadheads.

Installing One-Piece Points

EQUIPMENT AND MATERIALS NEEDED FOR INSTALLATION OF ONE-PIECE POINTS

- 91% isopropyl alcohol
- paper towels
- cotton swabs
- flexible two-part, 24-hour epoxy(i.e. AAE epoxy or Beman epoxy)
- wood toothpick or match stick

Installing with Epoxy

Follow the instructions below for a secure and permanent bond:

1. Wipe both the front 1⁄4" of the shaft and the one-piece point shank with 91% isopropyl alcohol until a clean paper towel shows no residue. Let dry completely before bonding.

NOTE: Rubbing alcohol should not be used. It contains oils which could inhibit the adhesive bond.

2. Put a small ring of flexible, two-part, 24-hour cure epoxy into the end of the shaft, so it can coat the inside of the shaft as the point is pushed in. Do not put too much epoxy in the shaft. A thin coat is enough.
3. Thoroughly coat the exposed point shank with epoxy.

4. While rotating the point, slowly insert the point shank into the shaft. Once the point is fully seated, rotate the point two more complete revolutions to ensure a thorough covering of epoxy on the point shank and inside the shaft.
5. Wipe off excess adhesive.
6. Stand the shaft with the point up, in an exactly vertical position. To maintain correct alignment of the point, it must remain vertical and not lean at an angle during the cure time. Allow the epoxy to fully cure.

Removing Target Points - If installed with the recommended epoxy, one-piece points are permanent and cannot be removed without damage to the shaft.

Installing Standard Adapters

EQUIPMENT AND MATERIALS NEEDED FOR INSTALLATION OF STANDARD ADAPTER

- 180 or 240 grit sandpaper
- 91% isopropyl alcohol
- cotton swabs
- flexible, two-part epoxy
- toothpicks or wooden match sticks
- paper towels

Standard Adapters are installed to provide a method of attaching RPS Points and broadheads. Before installing adapters, be sure that the shafts have been properly chamfered if required.

1. Lightly sand the surface of the last 5⁄8" of the point end of the shaft with 180 or 240-grit sandpaper. Precutting the sandpaper into 5⁄8" wide strips simplifies this step.
2. Wipe the front of the shaft with 91% or higher concentration of isopropyl alcohol (available at most pharmacies) until a clean paper towel shows no sign of residue.

NOTE: Rubbing alcohol should not be used. It contains oils which may inhibit the adhesive bond.

3. Using a cotton swab, wipe the inside surface of the adapter with 91% isopropyl alcohol.

NOTE: Be sure the shaft and components are completely dry before bonding.

4. Thoroughly coat the front 1⁄4" of the shaft with flexible, two-part, 24-hour cure epoxy such as Arizona Archery Enterprises® epoxy. Do not put epoxy on the end of the shaft because the excess epoxy could be pushed into the threads of the Adapter.
5. Spread a thin film of epoxy on the front 3⁄8" of the inside surface of the adapter with a toothpick or wood match stick. Be careful not to push epoxy into the threaded section of the outsert.
6. While rotating the outsert, slowly push it over the end of the shaft. Once the outsert is fully seated, rotate the adapter two more complete revolutions to ensure a thorough covering of the shaft and component with epoxy.
7. Wipe off excess adhesive.
8. Check for alignment by rolling the shaft on the wheels of an arrow straightener or on

the top of a clean, flat table. If a visible wobble is present, pull the adapter about halfway off and then rotate and push in until fully seated and check again. If the adapter is still crooked, rotate the outsert about one-quarter turn at a time until it is straight.

9. Stand the shaft with the adapter up, in an exactly vertical position. To maintain correct alignment of the adapter, it must remain vertical and not lean at an angle during the cure time. Allow the epoxy to fully cure.

NOTE: Because shaft damage could occur from excess heat, do not use hot melt adhesive.

Removing Standard Adapters - Once installed with the recommended epoxy, Standard Adapters are permanently attached and cannot be removed without damage to the shaft.

CAUTION: Do not soak carbon shafts in any type of solvent to remove components or adhesive residue. The solvents slowly absorb into the shaft and weaken the resin which bonds the carbon fibers.

Preparing Shafts for Fletching -When preparing for fletching, observe these precautions and instructions:

1. Do not touch cleaned areas with hands or other objects.
2. Fletch as soon as possible after cleaning. If shafts stand unfletched for over 8 hours, repeat the cleaning process.
3. Do not attempt to fletch on very humid days.

If you are using Beman G-Nocks (same as Easton A/C/C “G” Nocks) with a Standard Adapter it is best to fletch your arrows with the nocks temporarily installed without adhesive. After fletching, index the nocks properly so that your style of fletching properly clears your arrow rest. If you wish, use an appropriate adhesive to attach your nocks.

1. Carefully wipe down just the fletching area of the shaft with 91% isopropyl alcohol using a clean, white paper towel. MEK or lacquer thinner is not used because it is incompatible with the glues used for attaching the Standard Adapter and with the plastic materials used in either style of nock.
2. If using Saunders® or Fletch-Tite® cement to attach your vanes, the fletching area must first be very lightly parallel sanded with 180 or 240-grit sandpaper then cleaned with 91% alcohol.

Fletching Carbon Shafts

EQUIPMENT AND MATERIALS NEEDED FOR FLETCHING

- 180 or 240 grit sandpaper (optional)
- 91% isopropyl alcohol
- fletching adhesive
- fletching jig
- paper towels

The fletching used for the target shafts should be as small as necessary to get good flight and grouping. . Remember to always clean the shaft before attaching any style of fletching.

1. For Easton Diamond Vanes, no cleaning is required if AAE Fastset™ or any cyanoacrylate adhesive is used. When installing other brands of vanes, wipe the base of the vanes with MEK or lacquer thinner to remove any mold release chemical.
For plastic vanes or feathers, cyanoacrylate adhesives such as Bohning® Instant Super Fletch-Tite, AAE Fastset®, or other instant fletching adhesives give the most secure bond. Saunders N.P.V. ® or Bohning Fletch-Tite® cement may also be used. Shafts must be properly prepared before fletching.
CAUTION: Cyanoacrlylate instant adhesives bond extremely well to carbon fiber, which can make vanes very difficult to remove without damage to the shaft surface. Testing the adhesive on one shaft before fletching an entire set is recommended.
2. Set the rear of the vane 1-1⁄4" from the bottom of the Nock groove. If using a Standard Adapter, set the rear of the vane 1⁄16 - 1⁄8" from the end of the adapter.
3. Attach fletching at an offset to the centerline of the shaft. Do not use an angle of offset so great that the farthest right or farthest left corner of the fletching loses contact with the shaft. There should be no open spaces between the shaft and the ends of the base of the vane. To assure proper clearance, take into account the type of arrow rest being used.

Removing Fletching

CAUTION: Do not soak any carbon shaft in solvents to remove the fletching or fletching adhesive. This can weaken the resin that bonds the carbon fibers.
1. When using instant adhesives, carefully peel off the vanes with a knife (not razor sharp) and remove most of the glue, being careful not to scrape deep enough to damage the carbon fibers along the shaft's surface.
2. If using standard fletching cements, pull the vanes or feathers off by hand or with pliers.
3. Wipe fletching area with lacquer thinner to remove any remaining glue residue. Do a final wipe with 91% isopropyl alcohol.
CAUTION: Keep solvents away from both the nock and the shaft logo.
4. Let the shafts dry before refletching.

INSTALLING NOCK SYSTEMS

Nock Styles

There are three types of nocking systems used on Easton and Beman shafts—Taper fit (conventional nock system), Internal fit (includes UNI System and ICS System), External fit (used on some models of Beman Carbon shafts). Because shafts can be fitted with more than one style of nock system, all styles are covered in this one section.

CONVENTIONAL NOCKS Conventional nocks (taper-fit) are installed on the aluminum shaft models featuring swaged tapered nock ends.

Attaching Conventional Nocks on the Shaft

Use the following procedure to attach conventional nocks to shafts with a swaged nock

taper.

1. If the shaft has been dipped in lacquer or an old nock has been removed, use MEK or lacquer thinner on a clean, white paper towel and wipe the tapered end of the shaft until it is clean and free of old glue or paint. Hold the shaft in one hand and rotate it against the folded paper towel. Repeat this until all lacquer, glue or nock remains have been removed.

CAUTION: Nocks should not be cut off with a knife. Do not sand and do not scrape the shaft's nock taper. Uneven sanding or cutting into the taper by scraping can distort the precision cone shape and can make it difficult for nocks to be attached straight.

2. Apply a large drop of fletching cement to the clean nock taper surface.
3. Spread an even layer of cement around the taper with your finger tip.
4. Quickly, before the cement can dry, press the nock on the taper.
5. Once the nock is on the taper, rotate the nock several times counterclockwise to evenly spread the cement. Then, immediately rotate the nock clockwise (using a light downward pressure) until the nock groove is properly positioned and the nock is firmly seated on the taper.
6. Carefully wipe excess cement from the nock base. Check the nock for straightness and allow it to set at least two hours before shooting.

Removing Broken Conventional Nocks

1. Heat the conventional nock over a small flame.
2. When the nock starts to soften, gently grip the softened plastic with a pair of pliers and twist off.
3. Clean the nock swage (or UNI Extension) by wiping the taper with a clean cloth soaked in lacquer thinner until it is clean of all nock and glue residue.

CAUTION: Nocks should not be cut off with a knife. Do not sand and do not scrape the shaft nock taper. Cutting into the taper or distorting the precision cone shape by uneven sanding or scraping can make it difficult for nocks to be attached straight.

UNI SYSTEM

Universal Nock Installation (UNI) System (Internal Fit)

Aluminum shafts sizes smaller than 2012, as well as most sizes of A/C/C shafts, use the Standard UNI Bushing which has an inside diameter sized to fit A/C/E "G" Series nocks. Aluminum shaft sizes 2012 and larger use the Super UNI Bushing. This has a larger inside diameter which fits the Super Nock and the 3-D Super Nock. A/C/E shafts all have the same inside diameter as that of a Standard UNI Bushing, as does the -00 size A/C/C shaft, so no adapter is required. A nock can be inserted directly into the shaft.

Installing Carbon UNI Bushings

Carbon UNI Bushings should be installed with 24- hour flexible epoxy. Installation of Carbon UNI Bushings is similar to the installation of carbon composite inserts. The pencil technique for holding the bushing during installation (twist bushing onto pencil, Heat bushing and apply glue.) may also be used, but do not attempt to use hot melt. Use only flexible epoxy on carbon composite components.

Removing Carbon UNI Bushings

1. To remove the bushing, select an Allen wrench that is slightly larger than the hole diameter. Heat the wrench over a flame until hot enough to melt into the bushing. Push it into the hole in the bushing and let it cool.
2. Lightly heat the end of the shaft for 3-5 seconds over a small gas flame.
3. Grasp the wrench with pliers and rotate to break the bushing free.
4. Repeat steps 2 and 3 until the adhesive bond is destroyed by the heat and the insert pulls free. Remember, excess heat will destroy the shaft.

Installing Aluminum UNI Bushings

EQUIPMENT AND MATERIALS NEEDED FOR INSTALLATION OF UNI OR SUPER UNI BUSHINGS

- 91% isopropyl alcohol
- paper towels
- cotton swabs
- Easton hot-melt
- torch or gas burner
- pencil for “holding tool”

1. Lightly chamfer the inside of the core tube as described previously in the cutting instructions.
2. Clean inside the nock end of the shaft approximately one inch using a cotton swab dipped in 91% alcohol. Repeat the process until a fresh cotton swab is free of residue or cutting dust. Let the shaft dry thoroughly before bonding.
3. Heat a stick of Easton’s hot-melt adhesive over a small gas flame; apply a ring of adhesive inside of the shaft.
4. Twist the bushing onto the end of a sharpened wooden pencil.
5. Using the pencil as a UNI Bushing “holding tool,” heat the bushing just enough to apply a thin coating of hot-melt adhesive on the shank.

CAUTION: If the wood pencil chars, the bushing is overheated.

6. Lightly reheat the bushing to melt the adhesive and quickly insert it completely into the shaft.
7. Quickly wipe off excess adhesive, then remove the pencil after the adhesive has solidified.

CAUTION: Do not apply a flame directly to any Carbon or Aluminum Carbon shaft.

Instant-Set Glue Method

Some brands of quick setting glues are made to remain flexible after curing. These glues can be used to bond UNI Bushing to shafts. Bohning Instant Super Fletch Tight II™ and AAE Fastset Gel™ are two such glues.

To glue, spread a thin film of glue on the bushing. Start the bushing into the end of the shaft, then quickly push the end of the shaft against a wooden bench or block of wood. The insert must be pushed into the shaft quickly with a single stroke, before the glue can set up.

Installing A/C/E “G” Nocks, X10 Nocks, and Super Nocks

(Directly into Shafts or UNI Bushings)

X10, A/C/E “G” Nocks, and Super Nocks are designed to be installed and shot without adhesive. If you prefer to use an adhesive, use a light removable glue such as Carter’s® rubber cement (for gluing paper) or FaberCastell® Glue Stick. Certain adhesives contain solvents that attack the polycarbonate nock material. When this occurs, the nock becomes brittle and can break when shot. Do not use typical fletching cements which usually contain M.E.K. (Methyl Ethyl Ketone), toluene, acetone, or lacquer thinner.

Installing without Glue

1.Push the nock into the shaft by hand or with a nock tool.

2.Rotate the nock while inserting it into the shaft.

NOTE: Do not attempt to rotate the nock Super Nock by inserting a coin or other instrument Tool between the ears of the nock.

NOTE: A tighter fit is used with Super Nocks because of their use as a hunting nock. As a result, a nock installation tool is necessary when installing Super Nocks.

Installing A/C/E and Super Nocks with Rubber Cement

1. Put a thin coat of Carter’s rubber cement or FaberCastell glue stick on the shank of the nock.
2. Slowly insert the nock into the UNI or Super UNI Bushing while rotating the nock.
3. Immediately remove the nock and let it air dry for 5-10 seconds.
4. Reinsert the nock into the bushing.
5. Rotate to get proper nock alignment if shafts are fletched.

Alternate Procedure Using Cyanoacrylate Adhesive

1. Slip the nock into the shaft until there is approximately 3⁄16" (5 mm) remaining before the nock is fully seated.
2. Place a very thin layer of instant adhesive around the exposed area. (Do not cover entire shank as it will make removal difficult.) Properly align the nock with the fletching before fully seating the nock.

CAUTION: This adhesive bonds very quickly.

3. Push the nock straight in, without turning, until seated.
4. Hold for five seconds or until the adhesive sets.

Alternate Procedure Using Thin Plastic Film

Another method for installing A/C/E and Super Nocks into UNI and Super UNI Bushings is to use a very thin plastic film such as plastic food shopping bags, dry cleaning bags, etc. The film provides an effective method for securing the nock in the shaft and also allows easy removal.

1. Place a small piece (3⁄4" circle) of the plastic film over the end of the nock to be inserted into the bushing.
2. Gently push the nock to get it started into the bushing.
3. Push and twist the nock until it is fully seated against the bushing.

4. Remove any excess plastic film from around the nock with thumb and finger nail.
If the shank of the nock punches through the plastic rather than stretching it into the gap between the nock shank and shaft, try a thinner plastic or put a slight chamfer on the end of the nock shank.
To chamfer the end of the shank, simply hold the nock at the top and pull the nock shank at a 45° angle across a flat sheet of sandpaper, or along a fine file, while rotating the nock. This procedure will allow the nock to "grip" the plastic rather than punching a hole through it.

Removing Broken A/C/E Nocks & Super Nocks

Pliers - Gripping the nock with a pair of pliers, twist and pull until the adhesive bond, if any, has loosened and the nock pulls free.
Multi Nock Tool - If the nock is broken off flush with the bushing or shaft end, use Easton's Multi-Nock Tool with Extractor. To remove, thread the tool down through the broken nock into the hollow core of the nock shank as shown in the illustration, and pull the nock out.
Screw or Cup Hook Method
If a Multi Nock Tool is not available, use this method to remove a nock that has broken off flush with the bushing.
1. Twist a small screw or a cup holder into the hollow core of the nock shank. 2. Pull the screw out with pliers to remove the nock shank.
Allen Wrench Method A/C/E nocks made prior to 1995 did not have a hollow core in the shank. To remove a pre-1995 A/C/E nock that has broken off flush with the bushing, use the following method.
1. Grip a small Allen wrench with pliers and heat it until it is hot enough to melt into the shank of the nock.
2. Push the heated Allen wrench into the broken nock shank.
3. After the nock shank cools and solidifies on the Allen wrench, twist the Allen wrench with pliers to break nock shank loose, then pull out.

BEMAN OVERNOCKS

(External Nocks)
Some Beman carbon shafts require nock systems that fit over the outside of the shaft. Beman provides two ways to accomplish this: The Beman Overnock, which fits over the end of the shaft, and the Nock Outsert, which is an adapter that fits over the end of the shaft and allows an Easton A/C/E "G" nock to be used.

Installing Beman Overnocks

Overnocks can be installed either without adhesive or with Carter's® rubber cement or FaberCastell ® glue stick. Do not use typical fletching cements which usually contain solvents incompatible with polycarbonate nocks. To be sure you are using a compatible adhesive, select adhesives that are recommended for A/C/E or Super Nocks.
1. If desired, apply a thin layer of compatible adhesive to the last 1⁄2" of the nock end of

the shaft.
2. Slowly push the nock on the shaft while rotating one full turn.
3. Check the nock for straightness by rolling on the wheels of an arrow straightener or on a clean, flat surface. If the nock is not straight, rotate the nock and check it. Repeat this process until the nock is straight.

Removing Overnocks

1. Lightly grip the body of the nock with pliers and twist off.
2. If pliers don't work, cut the nock off with a dull knife, being careful not to cut into the shaft surface.
3. Clean off any nock or adhesive residue with a dull knife. Do not cut into the carbon material. Wipe shaft well with 91% isopropyl alcohol before rebonding another nock.

Installing Nock Outserts

INSTALLATION OF NOCK OUTSERTS

EQUIPMENT AND MATERIALS NEEDED FOR INSTALLATION OF NOCK OUTSERTS

- 180 or 240 grit sandpaper
- 91% isopropyl alcohol
- paper towels
- cotton swabs
- flexible, two-part epoxy or cyanoacrylate adhesive
- toothpicks or wooden match sticks

Follow the instructions for installing Standard Adapters, however, only sand the shaft 1⁄2" from the nock end. Cyanoacrylate adhesives such as Bohning® Instant Super Fletch-Tite, AAE Fastset®, Loctite® 454 (or Super Glue®) can also be used to install Nock Outserts. These adhesives bond very quickly and only a small amount of adhesive is required.

Removing Nock Outserts

If installed with the recommended epoxy, these outserts are permanent and cannot be removed without damage to the shaft.

Installing G-Nocks in Nock Outserts

G-Nocks (A/C/E "G" Nocks) have a precision, snug fit in the outsert and a uniform fit on the string. For Target or Field shooting, they can be shot without adhesive or with a low-strength adhesive that will ensure that the nocks do not rotate. If you prefer to use an adhesive, you should use a light removable adhesive like Carter's ® rubber cement (for gluing paper) or FaberCastell® Glue Stick (or an adhesive that contains Naphtha and/or Hexane).

CAUTION: Do not use typical fletching cements that usually contain M.E.K. (Methyl Ethyl Ketone), toluene, acetone, or lacquer thinner on A/C/E Nocks, Overnocks or Nock Outserts. Certain adhesives contain solvents that attack polycarbonate nocks. When this occurs, nocks become brittle and can break when shot. To be sure you are using a

compatible glue, use the adhesive compatibility test.
Procedure
1. Apply a thin coat of the Carter's® rubber cement or FaberCastell® glue stick or other compatible adhesive on the shank of the nock.
2. Slowly insert the nock into the outsert while rotating the nock.
3. Rotate to get proper nock alignment.

Adhesives for Nocks, Nock Outserts, and UNI or Super UNI Bushings

The following chart lists the components that make up the nock systems, and suggests glues that may be used for each. The installation procedures for each of the components are covered in the accompanying text.

ADHESIVES FOR NOCK SYSTEM COMPONENTS

UNI Bushing or Super UNI Bushing:
Aluminum Shafts—Easton Hot Melt A/C* Shafts—Easton Hot Melt, 24-hour Epoxy, or flexible cyanoacrylates
Carbon UNI Bushing or Carbon Insert:
Use 24-hour flexible epoxy or flexible cyanoacrylates (Bohning or AAE)
A/C/E Nock, Super Nock, or 3-D Super Nock:
Can be installed without adhesive, or with Carter's rubber cement, FaberCastell Glue Stick, flexible cyanoacrylate adhesive (Bohning or AAE), or Thin plastic film
Conventional Nock:
Saunders NPV®, Fletch-Tite® Flex Bond®
Overnock:
Can be installed without adhesive, or with Carter's® rubber cement, FaberCastell Glue Stick, or similar glues.
Nock Outsert Standard Adapter:
Use 24-hour flexible epoxy or cyanoacrylate
* "A/C" Shaft refers to all models of aluminum/carbon shafts. Current models are X10, A/C/E, A/C/C, and HyperSpeed.

Checking Conventional Nock Straightness

1. Rest the shaft on the nails of your thumb and index finger (with the point against the palm of your other hand) and blow against the fletching. As the arrow spins, observe the nock rotation. A straight nock will spin without any wobble.
2. Roll the shaft on an arrow shaft straightener or a flat, smooth surface and watch for any nock wobble.
3. Use commercially available nock checking tools such as the Björn Bengtson nock alignment jig. If the nock is crooked, before the cement sets twist and press the nock on the taper and check again. If it is still crooked, remove the nock, clean the taper and install another nock.

ADDITIONAL INFORMATION

Adhesive Compatibility Test

Here is a simple test to determine if the nock adhesive you wish to use is compatible with the various nock materials.

1. Choose a nock as a test sample.
2. Apply a small amount of the adhesive you intend to use on the nock shank and spread the adhesive evenly around the shank.
3. Let the nock set for approximately ten minutes.
4. Grip the nock with a pair of pliers at the top portion of the nock (the part that fits outside the arrow).
5. Press the nock shank against a flat table surface and try to bend the nock shank to a 45° angle.
6. If the nock shank will bend without breaking, then the adhesive is compatible with the nock. If the nock shank breaks, do not use the adhesive.

Securing Screw-in Points

Due to the impact of the arrow, points may get loose during shooting. Grip the point with pliers and grip the shaft with a rubber shaft gripper to tighten the point. An alternate method is to screw in the points with a small dab of Easton hot melt adhesive.

Shooting Precautions

(All Types of Carbon Arrows)

WARNING: Check all carbon shafts for cracks or other damage before shooting. Although Beman shafts are the most durable and strongest carbon shafts produced, they are not made with a reinforcing aluminum core (like X10, A/C/E and A/C/C shafts). As a result, any carbon shaft is more susceptible to cracking or breaking if the arrow hits a hard object or is hit by another arrow. All styles of carbon shafts should be checked for cracking after each shot.

Procedure

Grip the shaft with one hand near the point and the other near the fletching. Rotate the arrow while bending it between the hands. If it feels flexible (rubbery), makes a creaking sound, or rotates strangely, do not shoot the arrow again.

Any carbon arrow that has cracked and is more flexible when twisted than a new arrow, could fracture upon release of the string (especially when shot from a high-energy compound bow) and seriously injure the shooter.