

INSTRUCTION MANUAL ONEIDA EAGLE BOWS

FOR BOWS

- Strike
- Tom Cat I, II, III
- Phantom
- Aero Force, Aero Force X80
- Lite Force, Lite Force Mag

C.P. Oneida Eagle Bows

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GETTING TO KNOW YOUR ONEIDA BOW

Congratulations! Welcome to the elite legion of Oneida Eagle Bow owners. You are now the owner of the world's smoothest, fastest, most precise arrow-launching instrument available today. With proper care and maintenance, your new Oneida Eagle Bow will provide you with years of trouble-free shooting enjoyment.

Before attempting to shoot your new bow, please read this owner's instruction manual carefully. It will guide you in the step by step set-up and adjustment procedure to obtain the maximum performance from your new Oneida Eagle Bow.

Figure 1 illustrates the names and locations of the major parts of the Oneida Eagle Bow. We will be referring to these parts throughout this text.

ONEIDA NOMENCLATURE

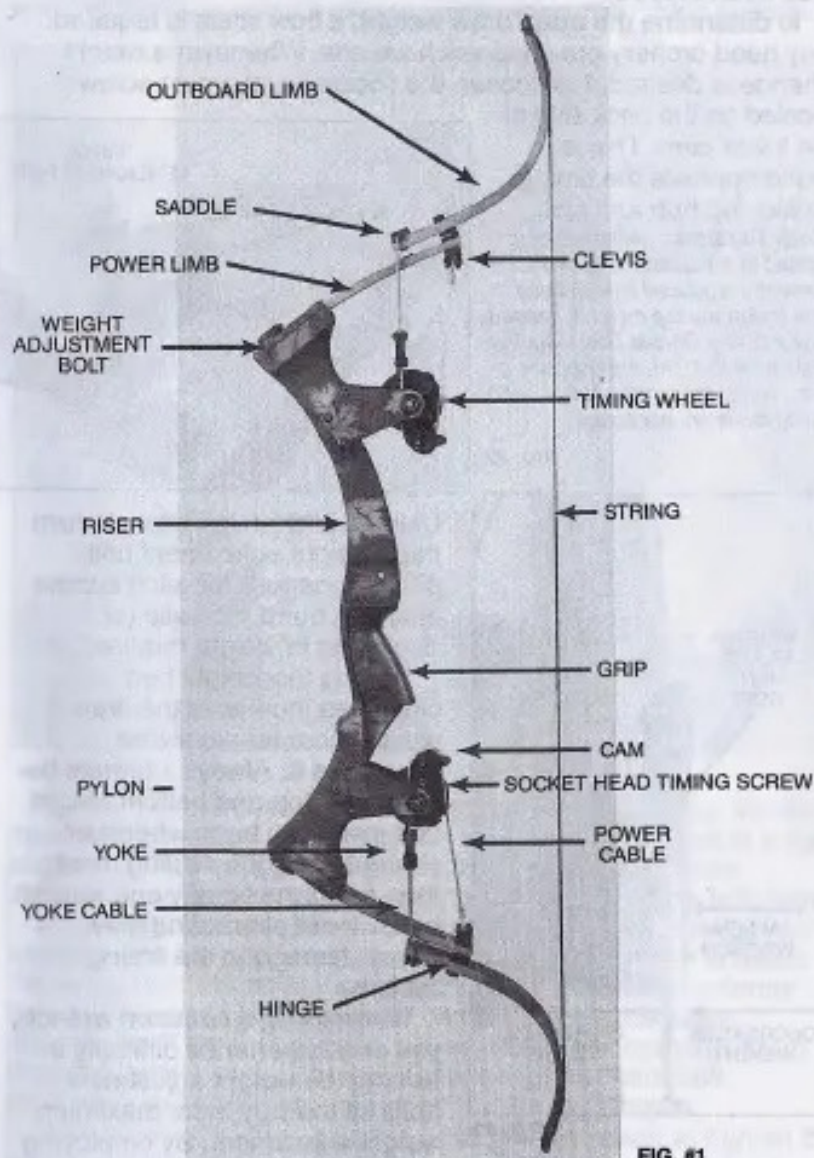


FIG. #1

Figure 1 illustrates the names and locations of the major parts of the Oneida Eagle Bow. We will be referring to these parts throughout this text.

SETTING UP THE BOW

When shipped from the factory, your bow has been set at approximately the middle of the weight adjustment range and has also been tillered.

To determine the exact draw weight, a bow scale is required. Any good archery pro shop will have one. Whenever a weight change is desired, first loosen the socket head timing screw located on the back side of the lower cam. This is found opposite the timing tensioning hub and slot.

(Note: The slotted timing wheel is located at the bottom end of a currently produced right handed bow and at the top on a left handed bow. For any Oneida Bow manufactured prior to 1990, the opposite is true.) Never loosen the button head timing cable anchor screw.

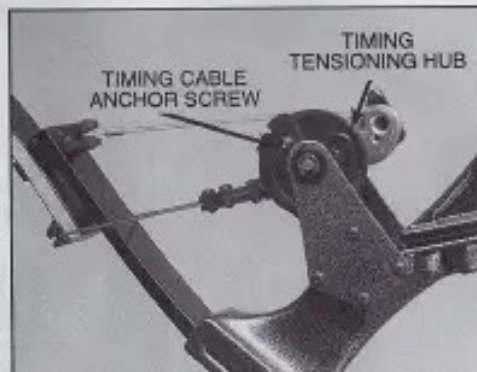


FIG. #2

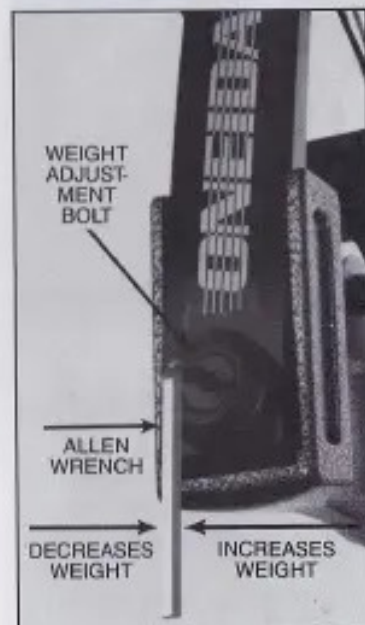


FIG. #3

Using a 3/16" Allen wrench, turn each weight adjustment bolt (Fig. 3) one turn for each approximate 5-pound increase (or decrease) in weight required.

Turning the weight bolt clockwise increases the draw weight, counter-clockwise decreases it. Always alternate between the top and bottom weight bolt every two turns whenever changing weight. Adding more than two turns on any one weight bolt without alternating may cause damage to the timing system.

When using a common wrench, you may experience difficulty in turning the weight adjustment bolts all the way in for maximum weight adjustment. By employing

a small diameter piece of pipe as an extension to the hex wrench, enough torque will be developed to easily achieve maximum weight. **(CAUTION: DO NOT DRAW THE BOW AT THIS POINT AS THE TIMING SCREW IS STILL LOOSE.)**

TILLER

With the approximate desired weight achieved, the next step is to tiller the bow. Tilling insures that both limbs and cams are working together without excess pressure on the timing system.

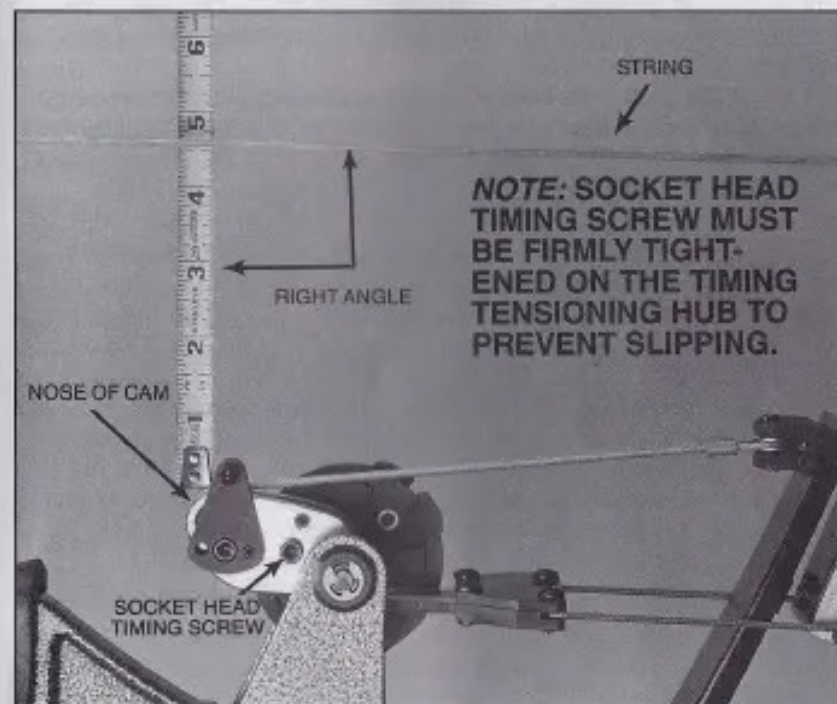


FIG. #4

To tiller the bow you need a ruler about six inches long. Measure the distance between the string and the nose of the cams at a right angle to the string (Fig. 4). If both cams measure the same distance from the string to the nose of the cam, the bow is in tiller.

If the distances are different, you have to adjust the weight adjustment bolts to get the distances even. If the top cam is closer to the string than the bottom cam, turn the top weight adjustment bolt counter-clockwise until both cams measure the same distance from the string. If the top cam is farther from the string than the bottom cam, turn the top weight adjustment bolt clockwise until both cams measure the same distance.

With the bow in tiller, use the 5/32" Allen wrench to tighten the screw on the back side of the lower cam so the timing wheel and cam move as one unit. **(NOTE: NEVER TURN A WEIGHT ADJUSTMENT BOLT EVEN SLIGHTLY WITHOUT FIRST LOOSENING THE SOCKET HEAD TIMING SCREW. TO DO SO COULD DAMAGE THE TIMING SYSTEM.)**

BRACE HEIGHT

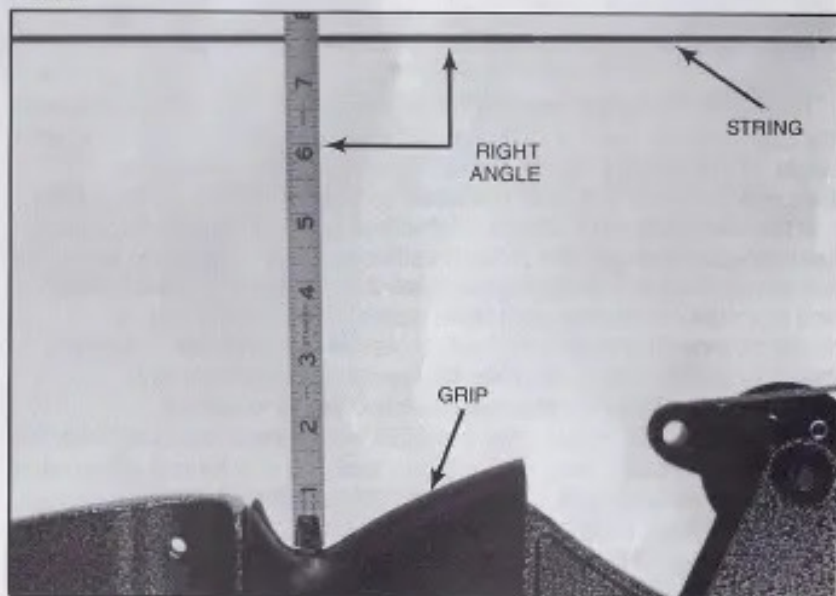
The brace height is measured from the middle of the string to the hollow section of the grip (Fig. 5). Measure the brace height on your new bow and compare the measurement, for the draw length of your bow, with the recommended brace height on the specification chart. If the brace height of your new bow is correct, move on to the next section.

If incorrect, the simplest method of changing your brace height will be to draw the bow and place it between the two limb compression brackets of the Oneida Bow Press (Fig. 10). Remove the string from the bow; add twist to the string to raise the brace height, or remove twist from the string to lower the brace height.

If an Oneida Bow Press is not available, you must loosen the socket head timing screw and back off the weight on the bow by turning both weight adjustment bolts counter-clockwise the same number of turns until the string is relaxed. **(NOTE: ALWAYS ALTERNATE BETWEEN TOP AND BOTTOM WEIGHT ADJUSTMENT BOLTS EVERY TWO (2) FULL TURNS WHENEVER CHANGING WEIGHT.)** Then remove the string from the bow; add twist to the string to raise the brace height, or remove twist from the string to lower the brace height. **(NOTE: Adding five (5) twists in the string will increase the brace height approximately 1/16". Subtracting turns in the string will lower the brace height.)**

Turn the weight adjustment bolts clockwise the same number of

FIG. #5



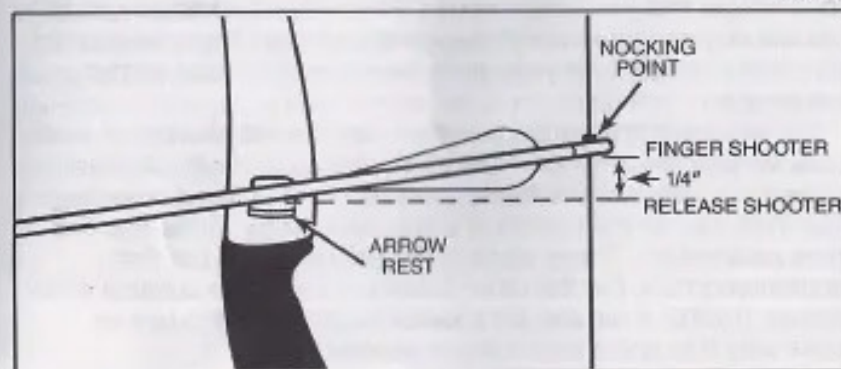
turns it took to relax the bow; check the tiller and adjust accordingly. Tighten the socket head timing screw, and the brace height should be correct. **ALWAYS** keep the brace height within the recommended range for the draw length of your bow; otherwise, the weight and draw length will be affected. Consult the Specification Chart for your model bow for correct brace height range.

ARROW REST

Although there are many excellent arrow rests on the market today, we at Oneida Labs have a basic recommendation. A release shooter has freedom of choice of rests as long as he achieves good clearance. Resetting of nocks may be necessary with some rests to insure good vane clearance. A finger shooter, we feel, should use a non-downward yielding rest. This would include any of the flipper-type rests such as the Oneida Ticonderoga Rest. (The flipper rest you choose must allow enough horizontal adjustment to achieve center-shot positioning of the arrow with the new overdraw risers.) A flipper-type rest, we believe, gives the best results when used in conjunction with a Catskill Button cushion plunger.

When installing the rest, be sure that the arrow shaft centers over the middle of the 5/16-24 tapped hole in the riser. Following the directions that come with the cushion plunger, adjust the tension until about 6 to 8 ounces of pressure is required to depress the plunger. Screw the cushion plunger into the 5/16-24 tapped hole in the riser until the button end of the plunger protrudes from the window side of the riser (1/4" for the Tomcat II, 3/8" for the Phantom II, and 9/16" for both the Strike Eagle and the Aero-Force). These starting points will put your arrow shaft very close to center shot and may require only a slight further adjustment.

FIG. #6



NOCKING POINTS

The most commonly used nocking point is a little rubber lined brass or aluminum horseshoe-shaped clamp that attaches to the bow string to insure that you nock your arrow in exactly the same position on the string every time. A finger shooter should start with the nocking point on the string in such a fashion as to position the bottom of the nock end of the arrow between 3/16" and 1/4" above a point on the string that is a 90° angle to the arrow shaft sitting on the rest. (Fig. 6) A release shooter will want to start right at a 90° angle off the rest.

When clamping the nocking point into position, clamp it firmly, but not too tightly. When so clamped, you will be able to actually screw the nocking point up or down on the string serving to adjust the nocking point while tuning for arrow flight.

SELECTING AN ARROW

Selecting the proper arrow to go with your new bow may seem like a monumental task at first. When, in reality, it is quite easy. Because the vast majority of archers use aluminum shafts, we at Oneida Labs have recommended aluminum shaft sizes in our arrow chart to help you in selecting the proper arrow to match your bow.

When looking at the arrow shaft selection chart at the back of this manual, you will notice that all aluminum shafts have a four digit size designation number. The first two digits represent the diameter of the shaft in 64ths of an inch. If the first two digits are 24, this means that the shaft is 24/64ths inches in diameter. The last two digits represent the wall thickness of the shaft in thousandths of an inch. If the last two digits are 13, then the wall thickness is .013 (thirteen one thousandths of an inch).

To select the proper shaft size for your bow, you must know the draw weight of the bow and the correct arrow length. Look for the column at the left of the chart that corresponds with the arrow point weight that you intend to use. Follow this column down until you are at the desired weight range of your bow. Proceed straight across to the right until you reach the column for your correct arrow length.

You will notice that in the box there are several choices of shaft sizes for your arrow length. The shaft size on top is the lightest for archers who want a little more speed and a little flatter trajectory. The shaft size on the bottom is a little heavier for those who like more penetration. Those sizes in the bold print are our first recommendation, but the other listed sizes are also suitable alternatives. (NOTE: A release aid shooter might be able to use an arrow with less spine than a finger shooter.)

VERI-EZE CAMS AND MODULES

Oneida's revolutionary break-through in cam design offers the archer the absolute ultimate in adjustability. By selecting the appropriate Veri-Eze module, you may vary the draw length of your bow over a 3-inch range and choose either 65% or 80% let-off.

Your bow is supplied with 6 sets of Veri-Eze modules, each of which is marked for identification. Included is a reference chart to show which module, when installed, will give you the draw length and let-off combination you require.



FIG. #7



FIG. #8

To change the Veri-Eze modules, simply loosen the set screw on the side of each cam with a 3/32" Allen wrench. (Fig. 7). With the same wrench inserted between the power cables, push downward at the front end of the module as shown in Fig. 8. The module is rounded on the underside, and as a result, the rear of the module will rotate upward and can be easily removed with your fingers. **NEVER PRY UP ON THE REAR OF THE MODULE AS YOU RISK BREAKING IT.**

Once you have removed the modules from the cam, you are ready to complete the draw change and/or let-off adjustment operation. Select the appropriate set of modules and insert them one in each cam. Press them firmly into place and hold until the set screw has been tightened. **CAUTION: Never draw the bow without both modules properly and completely installed.**

INSTALLATION AND ADJUSTMENT OF THE PERFECT DRAW CONTROL SYSTEM

1. Check to insure that the bow is tillered perfectly.
2. Be sure that the proper cam module for your draw length has been installed. Adjustment of the "Perfect Draw Control" (PDC) will be difficult if an improper cam module is used. If the PDC unit has previously been installed on the cams, go to step 12 for PDC adjustment.
3. Compress string and power cable on one end and connect with a 1-inch "S" hook as when changing the power cable. (Shown in figure #11 on page 16.)
4. The opposite power cable will be relaxed. Remove the retaining ring and clevis pin from the clevis to free the outer end of the power cable.
5. Remove the button head power cable retaining screw from the cam.
6. Insert the socket head screw into the body of the PDC unit, taking care that the head will drop into the side that is recessed to accept the socket head. (The stop peg will be aimed away from the cam.).
7. Notice that the PDC body has two set screw holes tapped in to accommodate the upper and lower cam. Always install the PDC unit in a manner that the set screw will be located inside toward the cam axle.
8. Screw the socket head screw into the cam on the opposite side from the timing wheels to replace the button head power cable retaining screw. Snug this only and locate the PDC as shown in accompanying figures A & B.

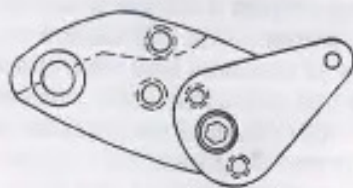


Figure A
For Tomcats, Phantoms, and
Short Aero-Forces

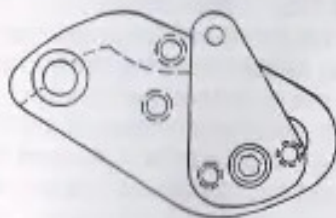


Figure B
For Medium and Long
Aero-Forces

9. Reconnect power cable to clevis with clevis pin and retaining ring.
10. Remove "S" hook from opposite power cable and string.
11. Repeat above procedure on opposing power cable to accomplish installation of the socket head screw and PDC draw stop unit on the other cam.
12. Be sure that the PDC mounting screw is just loose enough that the PDC will move when force is applied. Adjustment of the PDC draw stop is accomplished by slowly drawing the bow and coming to a normal natural anchor. If you feel some resistance short of your anchor point, continue draw until you reach your desired normal anchor. The PDC units will rotate on contact with the pylon.
13. Let the bow down and carefully tighten the set screws first, taking care that the PDC units are not accidentally moved. Then tighten the main socket head screws.
14. A second person will be helpful to insure that both pegs of the PDC are in contact with the edge of the pylon.



THE NEW PDC

The new pylon mounted P.D.C. (perfect draw control) replaces the cam mounted PDC and performs an improved function without interference with sights or wrist. The PDC provides a consistent and firm stop at your desired draw length every time. Yet it is easily adjustable throughout the range available on your bow.

To adjust simply loosen the allen head screw on the outside of the pylon. NOTE: take care not to loosen the wrong screw. Use the diagram to locate the correct screw. After locating - check inside the pylon for a round aluminum knurled disk 1" in diameter. Loosen screw slightly and move to desired position and retighten while holding onto PDC with your other hand.

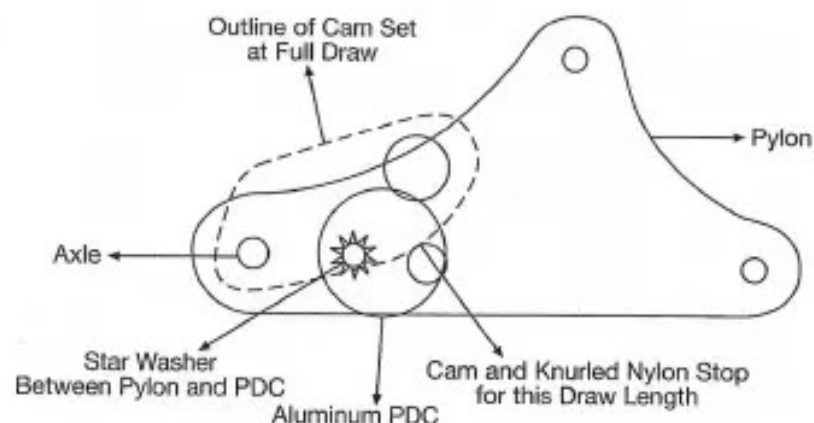
TIP: to find exact adjustment rotate the PDC toward the center of the bow so when drawing, the cam rotates the PDC back to your exact draw length. Then let the bow back carefully and retighten.

INSTALL AND ADJUST PYLON MOUNTED PDC

1. Install proper cam modules for your draw length and let off.
2. Check to insure that the bow is tillered correctly (pg 3 in owner's manual).
3. Loosen buttonhead screw holding round aluminum PDC located on inner side of pylon.
4. To adjust PDC: make sure that mounting screw is just loose enough that the PDC will move when a little force is applied. Slowly draw the bow to your anchor point. The cam will rotate the stop on the PDC until you have reached your comfortable anchor point.
5. Let the bow down carefully and tighten the buttonhead screw that is holding the PDC making sure that you do not accidentally move the PDC from your set adjustment.
6. Have another person check to see if both stops are up against the cam when you are at full draw. NOTE: stop should be set at farthest distance from the axle.

NOTES: The nylon knurled stop used is designed for safety and could shear off in the event of a power cable failure. Should the power cable break and shear the nylon stop, you can remove the PDC and replace with a new one available by calling the factory or simply remove nylon stub and install 1/4" x 20 nylon socket screw.

WARNING: Power cables do fail if not replaced in the recommended interval of 6,000 shots for a bow set at 80 lbs with a 9 grain arrow - ranging to 10,000 shots at 60 lbs with 9 grain arrow. If you shoot lighter arrows or at 80% let off, the cables may need replacement more frequently. Your owners manual describes the procedure. Occasionally check for frayed cables with a Q-tip paying close attention to the cable facing the nose of the cam and at the loop through the clevis at the power limb.



SAFETY FIRST ALWAYS

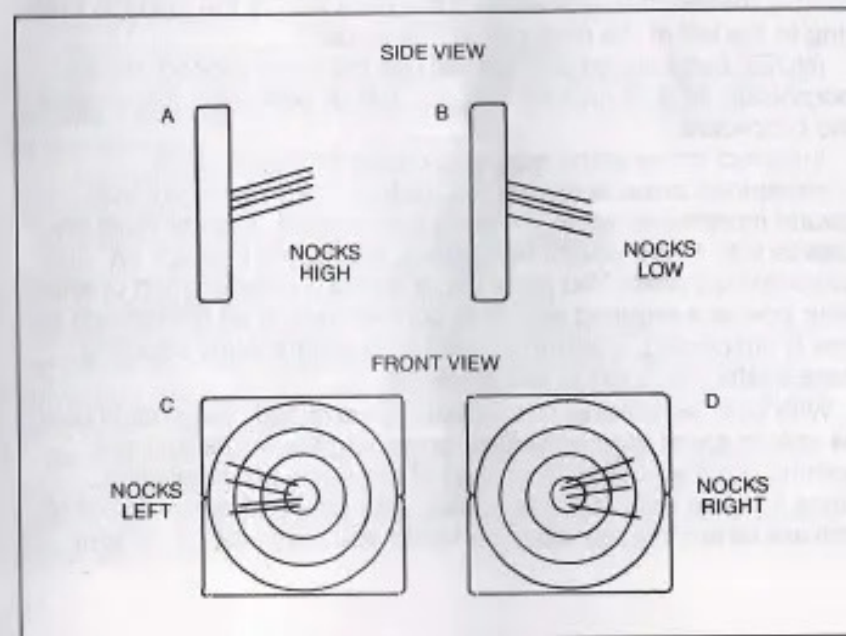
- Always be sure of your target and backstop. The backstop should be of a material that is capable of stopping arrows with no pass-throughs. It should be situated so the area behind is clear of pets, livestock, and human inhabitants, with no chance of an errant arrow causing damage to personal property.
- Prior to each outing, inspect your equipment. String and cables should be checked for evidence of wear. Loose nuts and screws on the bow and accessories, when found early, can prevent serious damage to equipment and even injury to the shooter.
- Inspect arrows and nocks regularly for cracks, dents, or straightness. Cracked nocks should be replaced, and fractured or dented arrows should be discarded immediately.
- Never draw back and release a bowstring without an arrow. This is called "Dry Firing" and doing so will greatly reduce the shooting life of your bow. It also may cause immediate damage to the bow and serious injury to the shooter.
- Always make sure that the outboard limb will not strike a foreign object during a shot sequence. The most common incidence of this is hitting an overhead branch while shooting from a treestand. This limb restriction may cause damage to the timing system.
- Use only arrows that properly match your bow. Shooting an arrow with too light a spine can damage your equipment and will result in inconsistent performance.
- Broadhead hunting arrows should always have their razor sharp edges covered with a protective hood. This serves to protect both equipment and user. (Bowstrings can be accidentally cut when afield and nearly all archery hunting injuries are self-inflicted by careless archers.)
- The use of archery equipment by any inexperienced minor or adult should be closely supervised by a knowledgeable archer until basics are learned.
- Never shoot an arrow straight up in the air.

TUNING — Bare Shaft

With the proper arrow and your new bow now ready to shoot, all you have to do is get your arrow flying off your bow correctly. There are two things to look for in the flight of your arrow. One is called porpoising which is the back end of the arrow wobbling up and down while flying through the air. The other is called fishtailing which is the back of the arrow wobbling from side to side while flying through the air. If you find that your arrows porpoise, fishtail, or a combination of both, follow these directions and you will have good arrow flight when you are done.

The first thing needed is a target like styrofoam, excelsior bales, or a plain old sand bank, that will not affect the way the arrow enters it. Use an arrow exactly like the ones you are shooting but with no feathers, and stand back from the target a distance of six feet to the front of the bow. Now shoot the featherless arrow into the target at approximately shoulder level. Without moving, look at the arrow sticking out of the target. Does the nock end of the arrow rest high or low, left or right, or perfectly in line with the arrow (Fig. 9)? If the nock end of the arrow is in alignment with the front of the arrow, your bow and arrow combination are in tune with each other. If the arrow sticks out of the target at an angle, adjustments for porpoising and/or fishtailing will be needed.

FIG. #9



PORPOISING

If the nock end of the arrow is high compared to the front of the arrow sticking out of the target, the nocking point on the string is too high. Hold the string firmly to keep it from twisting, and screw the nocking point down the string two (2) full turns and try another shot.

Continue screwing the nocking point down the string and taking shots until the nock end of the arrow is in line with the front part of the arrow sticking out of the target. Now, securely clamp the nocking point to the string. If the nock end of the arrow is low, just reverse the procedure and screw the nocking point up the string until the arrow enters the target correctly.

FISHTAILING

Now that you have corrected the arrow from porpoising, the arrow still may be fishtailing going into the target, leaving the nock end of the arrow either left or right of the front part of the arrow sticking out of the target. If the nock end of the arrow is to the right, loosen the locking nut on the cushion plunger and move the plunger 1/2 turn counter-clockwise, which will move the face of the plunger towards the riser. Retighten the locking nut and shoot another featherless arrow. Continue moving the cushion plunger counter-clockwise in 1/2 turn increments until the nock end of the arrow is in line with the front of the arrow sticking out of the target. Simply reverse this procedure if the nock end of the arrow is pointing to the left of the front part of the arrow.

(NOTE: Left handed archers will use the same procedures for porpoising as right handed archers, but for fishtailing, just reverse the procedure.)

Incorrect arrow spine may also cause fishtailing. If an underspined arrow is suspected, reduce the bow weight in 5 pound increments while shooting a bare shaft. If arrow flight improves with these weight reductions, this would indicate an underspined shaft. You must either select a heavier shaft or shoot your bow at a reduced weight to compensate. If an overspined arrow is suspected, 5 pound increases in weight while shooting bare shafts can confirm this situation.

With both porpoising and fishtailing corrected, you should now be able to shoot the featherless arrow into the target and see nothing but the nock with no part of the arrow shaft showing. Once this has been accomplished, your bow and arrow combination are tuned to each other perfectly. You may now shoot your

new Oneida Eagle Bow, knowing that you are getting the optimum performance from your equipment.

(NOTE: Variations in broadhead weight and in shooting styles may dictate experimenting with shaft sizes other than the ones suggested on the Oneida Labs Arrow Selection Chart.)

PAPER TUNING

An alternative to the previously described tuning method is known as paper tuning. This involves shooting arrows, with fletching, through paper at a range of 10 to 12 feet. Some sort of rigid frame over which to stretch an approximately 24" square sheet of paper will be required to paper tune. Newspaper, butcher's wrapping paper, or computer paper will suffice. Arrows should be shot at shoulder level and the tear patterns observed.

Vertical tears indicate a need for nocking point adjustment. A tear from low to high would require a lowering of the nocking point, a high to low tear, the opposite.

Horizontal tears are an indication that your arrows are either too stiff or too weak in spine. A tear from left to right for a right handed shooter (opposite for left hand) would dictate that you try one or more of the following to correct:

1. Change to weaker spined arrow shaft.
2. Increase the draw weight of the bow.
3. Move arrow rest in closer to sight window.
4. Try a heavier weight arrow point.
5. Decrease tension of cushion plunger.

A tear from right to left (opposite for a left handed shooter) indicates a weak spined arrow and would require that one or more of the following corrections be made:

1. Change to stiffer spined arrow shaft.
2. Decrease the draw weight of the bow.
3. Move arrow rest away from sight window.
4. Try a lighter weight arrow point.
5. Increase tension of cushion plunger.

A diagonal tear indicates the need for correction of both nocking points and the horizontal tear adjustments. First proceed by correcting the nocking point placement. Then, try correcting the right or left tear pattern.

Be advised that a perfect no-tear hole is not always possible, particularly for finger shooters. Slight tears, which correction techniques fail to eliminate, are acceptable and will not adversely affect accuracy.

Tuning problems can be the result of poor fletching clearance at the arrow rest. To check for this, dust with talcum powder or dry spray deodorant on the rest and sight window. Any contact in this area will be evident after the first shot. The reinstallation of nocks on the arrow in a slightly rotated position will often correct a fletch clearance problem. Some experimentation with different nock rotation positions may be necessary before the best clearance is attained. Applications of the dust on the rest must be done after each shot. Some types of rests might require adjustment to insure better fletch clearance.

It is not uncommon to have to re-tune when making the transition from shooting field points to shooting broadheads. The broadhead in flight creates totally different aerodynamics than the field points and may lead to a drastically different impact point of the arrow. Before attempting to tune your broadheads, make certain that they are mounted in perfect alignment with the arrow shaft. To check this, spin the broadhead on its tip on a hard flat surface. If the shaft or head wobble at all when spun, either the shaft is bent or the broadhead is crooked. In either case, proper tuning in this situation is impossible.

Precision tuning of your bow is truly a science and requires a lot of time and patience. The expenditure of sufficient amounts of both will pay the dividend of perfection.



GENERAL MAINTENANCE STRING

Before each shooting session, the string should be visually checked for frayed or broken strands or worn serving. To change a string, draw the bow and place it between the two limb compression brackets of the Oneida Bow Press (Fig. 10A & 10B). Remove the old string and replace with a new one of the same length.

If the Oneida Bow Press is unavailable, simply loosen the slotted timing wheel screw and turn the weight adjustment bolts counter-clockwise, alternating between the top weight adjustment bolt and the bottom one every two (2) full turns until the string becomes loose. Keep track of the number of turns on the weight adjustment bolts. Now you can remove the old string and replace it with a new one of the same length. Turn the weight adjustment bolts clockwise the same number of turns you backed them out; adjust tiller and brace height, install a new nocking point and any other string accessories.



FIG. #10A

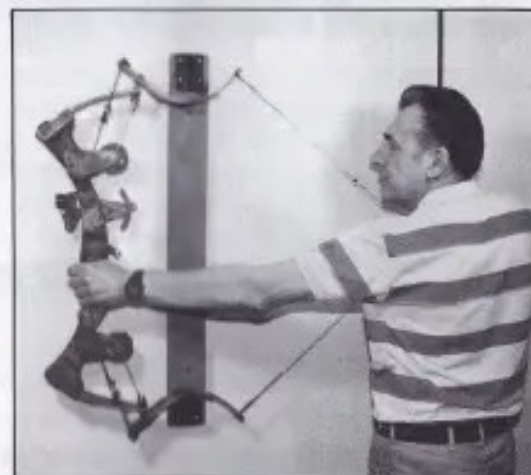


FIG. #10B

WARNING: Whenever necessary, **ALWAYS** use an Oneida Bow Press (shown above). **NEVER** attempt to use a conventional bow press when servicing an Oneida bow. These are intended for use on wheel bows and will cause *severe damage* to the Oneida riser and *void the warranty*.

POWER CABLE

Power cables are subject to wear and will require periodic replacement. They are NOT a warranty item but the replacement cost is minimal.

Check the power cable first by a visual inspection looking for broken strands of cable sticking up like whiskers. Then lightly run your finger slowly up and down the cable in the area where the cable bends over the sharp angle at the rear of the cam. You are checking for the frayed whiskers of broken cable sticking up in this area. **(CAUTION: The whiskers can cut your fingers, so move slowly and cautiously when checking for a worn cable.)** If the cable shows signs of wear, both upper and lower cables must be replaced.

To change the power cables, place the bow on a padded table so that the bow is resting with the string upward. Check the screw in the slotted timing wheel and make sure it is tight. Take a 1-1/2" S hook and hang it on the string so that it is over the middle of the lower power cable. Using both hands, one on each side of the S hook, grasp both the string and the power cable and squeeze them together so that you can hook the string and power cable together with the S hook (Fig. 11).

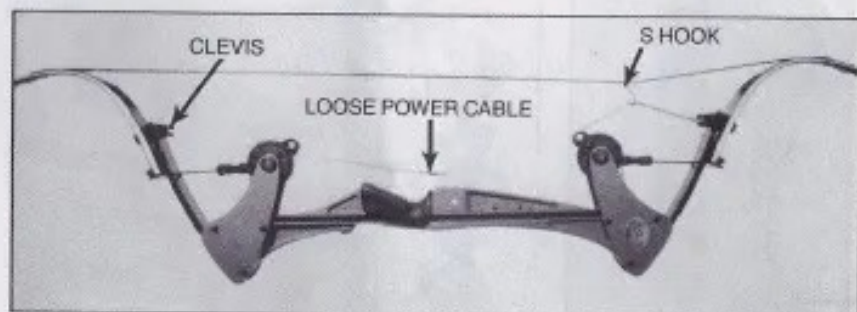


FIG. #11

Once the power cable and string are hooked together with the S hook on the bottom power cable, you will notice that the top power cable will be relaxed. Move up to the top power cable and remove the retaining ring from the clevis pin that holds the power cable into the clevis. Slide the clevis pin out of the clevis, and remove the power cable from the slot in the clevis. Remove the retaining screw in the cam that holds the power cable, and pull the power cable from the cavity in the cam. **WARNING: NEVER UNHOOK BOTH POWER CABLES AT THE SAME TIME. UNHOOK ONLY THE POWER CABLE OPPOSITE THE S HOOK.**

With the old power cable now removed from the bow, take the

new power cable and insert the swaged end into the cavity in the cam. Seat the swedge to the bottom of the cavity keeping the two cables parallel with the table top. The cable should now be sticking out of the cam with the clevis end of the cable lying toward the grip. Using your thumb, push down on the cable where it comes out of the cam, and at the same time, retighten the screw that holds the cable (and PDC if so equipped) into the cam. This keeps the power cable under the screw so that the screw does not chew up the new cable.

Once the screw is tight in the cam, fold the power cable around the nose end of the cam and slide the reinforced ring end of the cable into the slot in the clevis. Reinstall the clevis pin through the clevis and the ring in the power cable, and clip the retaining ring back on the pin. Remove the S hook from the string and power cable, and reinstall the S hook on the other end of the bow. Change the lower power cable using the same procedure.

With both power cables changed, draw the bow a few times to seat the swaged end of the power cables up against the screws in the cams. Now loosen the socket head timing screw, and adjust the tiller if it needs it. Retighten the socket head timing screw, and the job is finished. (On bows so equipped, PDC's require adjusting after power cable changes).

WARNING: RESTRICTING THE MOVEMENT OF THE RECURVE LIMBS WHILE SHOOTING WILL CAUSE DAMAGE TO THE TIMING SYSTEM. BE SURE BOTH LIMBS ARE CLEAR OF ANY OBSTRUCTIONS BEFORE SHOOTING. If a limb is slowed or stopped while making a shot, the tiller may have slipped. To check, make your tiller measurements. To adjust, loosen the socket head timing screw and the wheels will pop back into tiller. Check cable for proper tension.

TIMING SYSTEM

The timing system on your new Oneida Eagle Bow consists of two large timing wheels attached to both the upper and lower cams. One timing wheel with the socket head timing screw and tensioning hub has an adjustment slot in it, the other does not. Connecting these timing wheels are two cables that run around idler wheels under the pylons and through the center of the riser. The job of the timing system is to keep both the upper and lower limbs working together while drawing and shooting an arrow.

The only maintenance on the timing system is to make sure that the cables have the right amount of tension on them. If the cables are too tight, it puts undue stress on the timing system which could slow the speed of the bow and damage the timing system.

If the cables are too loose, it makes the bow noisy and allows the limbs to work independently of each other. This could make the cables jump out of the grooves, damaging the timing system.

Before adjusting the tension on the timing system loosen the socket head timing screw at the timing tensioning hub. To set the proper tension on the timing system cable, loosen the small set screw in the Boss on the large upper timing wheel for a right handed bow (lower timing wheel on a left handed bow). Insert a slotted blade screwdriver into the slot of the cable take up spool on the side of the timing wheel (Fig. 12) and turn clockwise until, with firm finger pressure on the timing cable between the large timing wheel and small idler behind the pylon, the cable may be flexed approximately 1/8". Retighten set screw approximately 1/4 of a turn after it seats on the cable take up spool.

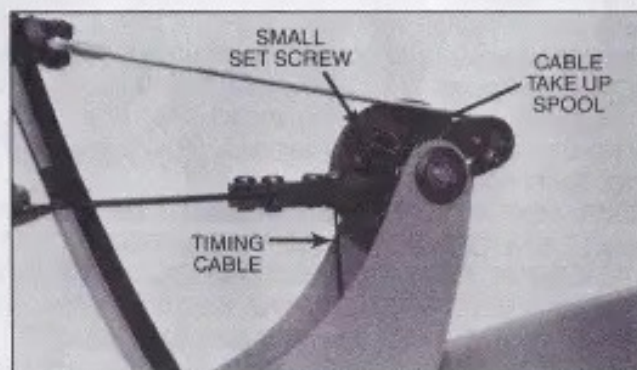


FIG. #12

LUBRICATION

There are only a few parts on the Oneida Eagle Bow that will require lubrication. We can recommend Rusty Duck® Protective Lubricant or Tri-Flow® for any of these routine maintenance lubricating jobs. The limb hinge and the timing idler wheels may need a few drops of lubricant every now and then for smooth operation and freedom from squeaks.

A drop of lubricant on a 2-inch segment of each power cable in the area that bends over the sharp angle at the rear of the cam will prolong the cable life. (NOTE: Excess oils attract dirt and debris. Be sure to wipe off any excess lubricant after each application.)

ARCHER'S DO'S AND DON'TS

- ALWAYS** Check the string and cables for wear before each shooting session.
- ALWAYS** Loosen the slotted timing wheel screw before any weight adjustment is attempted.
- ALWAYS** Maintain brace height in the factory recommended range.
- ALWAYS** Keep proper tension on the timing system cable.
- ALWAYS** Alternate between top and bottom weight adjustment bolts every two (2) full turns whenever changing the draw weight or tillering the bow. (Damage to the timing system may occur otherwise.)
- NEVER** Dry fire your bow (releasing the string without an arrow).
- NEVER** Store your bow in a hot environment such as a closed up car or trunk in summer.
- NEVER** Draw the bow with a loose slotted timing wheel screw.
- NEVER** Attempt to alter the draw length by using an improper length bowstring.
- NEVER** Set draw weight above its recommended limit.
- NEVER** Use a Fast-Flite, Accu-Flite or Omni-Flite string on an Oneida Bow Model H-250, H-500, Tomcat, or Tomcat II.
- NEVER** Restrict the forward motion of the recurve outboard limbs when shooting.
- NEVER** Draw your bow without the draw length modules installed properly.
- NEVER** Loosen the button head screw around which the timing cable loops. This screw serves to center and anchor the timing cable to the slotted timing wheel.

WARNING: Restricting the forward motion of the recurve outboard limbs when shooting will cause damage to the timing system. Be sure the path of both limbs are clear of any obstructions before shooting.

FACTORY SERVICE

Should you ever experience a problem with your bow that cannot be corrected by your Oneida dealer, it may become necessary to return it to the factory for service. Your dealer may do this as a courtesy or you may elect to make the return arrangements yourself.

Whenever a bow is being returned to the factory for service, a return authorization (RA) number must first be obtained by calling the customer service department at Oneida Labs at 231-743-2427