### **TenPoint Crossbow Technologies**<sup>™</sup>

### **ACUDRAW™ INSTRUCTION MANUAL**

To prevent injury to yourself or others, or damage to your crossbow, read this manual along with all other operating and safety instructions included in your crossbow package before assembling, loading or using the crossbow.



### **THIS MANUAL COVERS:**

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the mark of perfection<sup>m</sup>

## **ACUDRAW<sup>™</sup> WARNINGS**

The ACUdraw is a powerfully built yet sensitive mechanism. To avoid damaging the unit or injuring yourself or others, carefully read and heed these warnings.

### **A**WARNING

- Don't use your ACUdraw to uncock your crossbow. It is dangerous to do so because you must disengage the safety pawl to crank counter-clockwise. The safest way to uncock your crossbow is to fire a spare arrow equipped with a practice point into a target or into rock-free ground (only if your state permits you to carry a practice arrow – check your regulations first).
- Always check your draw cord prior to using your ACUdraw to insure that it is not frayed or worn the cord may break and send the claw flying with extreme force. If it shows any wear, DO NOT use the mechanism.
- Don't crank your ACUdraw without first engaging its safety pawl (lever). If the crank handle were to slip out of your hand, it would spin out wildly and could cause bodily injury or property damage.
- Never leave the claw in the trigger box's string slot after cocking the crossbow. Always return it to its storage position. If you forget to remove it and inadvertently load an arrow and fire the crossbow, the bowstring will wildly launch the claw (shoot the claw), causing potentially severe bodily injury and property damage.

## **ACUDRAW<sup>™</sup> OPERATING PRECAUTIONS**

The Operating Precautions are equally as important as the Operating Instructions. Read these to ensure that you do not injure yourself or damage your ACUdraw.

• **Never** place your foot in the stirrup when cranking the ACUdraw. While the draw cord can hold over 700-pounds of weight, it is subject to fraying and cutting. If it were to break while cocking the mechanism, the claw would shoot forward with extreme force resulting in possible injury.



- Never over-crank the mechanism. Stop cranking the mechanism immediately after the trigger's safety knob moves to SAFE (white dot) to avoid damaging the crossbow and/or over-stressing the draw cord. The ACUdraw's gear reduction mechanism is so strong that it can lift the trigger box from its mount in the barrel and/or break the
- If you choose to crank your ACUdraw with a battery-powered screwdriver or drill, select a variable speed model that operates between 4.2- and 12-volts and has a clutch or low torgue setting. Do not use an excessively powerful battery-powered model or a direct current model. While the draw cord is more than adequate to handle normal use, a high-power drill can overpower the cord and the entire unit.
- Once your crossbow is cocked, **never** attempt to release the safety pawl without first applying a small amount of clockwise pressure to the crank (approximately 1/4-inch to 1/2-inch). Once you disengage the safety pawl, carefully unwind the mechanism no more than 2 1/2 to **3 turns** (this is the only time you may crank the mechanism in reverse) to relieve the string tension before removing the crank and returning the claw to its storage position. Continuing to unwind the mechanism more than 2  $\frac{1}{2}$  to 3 turns after the string tension is relieved will **damage your ACUdraw.** With the tension relieved and the crank removed, do not forget to return the claw to its storage position (photos 1 & 2). Leaving the claw inside the trigger's string slot may result in "shooting the claw", which can cause severe injury to you and/or damage to the bow.

draw cord if you over-crank it.



TenPoint Series Crossbow: Return the claw to its storage position. **DO NOT** over-tighten! The claw resting position (claw holder) is hardened metal, but it will break if over-tightened.

# **ACUDRAW<sup>™</sup> OPERATING PRECAUTIONS** (Cont.)

- **Never** crank the ACUdraw in reverse (counter-clockwise) when the claw is fully extended or in its storage position. Doing so will damage the retraction spring.
- **Don't** over-crank the ACUdraw unit when returning the claw to its storage position. Doing so can result in breaking the hardened metal claw resting place (claw holder). One to two CLICKS are normally sufficient to secure the claw in the claw holder.
- Don't allow the ACUdraw cord to get hung-up on any portion of the crossbow, scope or other accessories while cranking the ACUdraw unit.
- Make sure the front of your crossbow's arrow retention spring is not sitting so low that the ACUdraw's string claw catches it instead of passing under it. If the spring is sitting too low, bend it up just enough for the claw to pass under it.

## **ACUDRAW™ OPERATING INSTRUCTIONS**

Study these directions carefully. You can severely injure yourself and/or damage your ACUdraw, if you do not operate it according to these instructions.

(see photos 1-3).





Make sure the trigger's safety is in the forward, FIRE If you try to cock the crossbow while the safety is (red dot) position before cocking your crossbow.

to be cocked.

trigger box assembly and securely connect its string slots (photo 5 item H) to the bowstring (photo 6).



A-Cover B-Safety Pawl (Lever) C-Drive Hex **D**-Crank **E**-Claw in Storage Position

F-Draw Cord G-Guide Post H-String Slots



6 Point Series Crossbow: Return the claw to its storage position. **DO NOT** over-tighten! The claw resting position (claw holder) is hardened metal, but it will break if over-tightened.



1. Before cocking your crossbow, the safety knob must be in the FIRE (red dot) position. Otherwise, the string latch will not engage or hold the bowstring. If you try to cock your crossbow with the safety in the SAFE (white dot) position, the DFI<sup>™</sup> (Dry Fire Inhibitor) will catch and hold the string, making the crossbow appear to be cocked. However, when the DFI<sup>M</sup> - instead of the string latch – holds the bow string, you cannot fire the crossbow. When cocked correctly, the bowstring will automatically set the safety and the string latch will grasp and hold the string

in the rear, SAFE (white dot) position, the bowstring will be held by the DFI™ and only appear



When you cock your crossbow correctly, the safety will automatically move to the rear, SAFE (white dot) position, and the string latch will engage the string.

2. Push the safety pawl (lever) (photo 4 item B) down to disengage it, lift the claw from its storage position behind the





Connect the string slots to the bowstring and lower the quidepost into the barrel's flight groove.

## **ACUDRAW<sup>™</sup> OPERATING INSTRUCTIONS** (Cont.)

Note: If your draw cord (photo 5 item F) and safety pawl are under tension while the claw (photo 4) is in its storage position (E), first relieve that tension by inserting the **crank** (D) in the **drive hex** (C) and applying a slight amount of clockwise (forward) pressure (approximately  $\frac{1}{4}$ -inch to  $\frac{1}{2}$ -inch) (photo 7). You will then be able to disengage the safety pawl and attach the claw to the crossbow string. You must remove the crank from the drive hex before attempting to extend the claw and draw cord.

The claw's **guide ridge** (G) located at the front of the claw will fit into the barrel's flight deck groove and keep the claw centered as you crank the mechanism. Make certain your draw cord does not get hung-up on your scope, the PowerTouch<sup>™</sup> trigger's brass safety knobs or any other part of the crossbow (photo 8).

Notice that the draw cord passes completely through the claw, ensuring that the claw remains centered as you crank the mechanism. This self-centering feature promotes shooting accuracy because it makes the mechanism cock your bowstring consistently straight time-after-time.

- 3. Lift the safety pawl to engage it. Insert the crank, or a battery operated drill or screwdriver (equipped with a 1/4-inch socket and a clutch or low torque setting) in the drive hex (photo 4 item C).
- 4. Stand the bow erect on its foot stirrup or place it on a table or platform in front of you and firmly hold the butt of the stock in your left hand.

For left handed cranking, simply turn the bow around so that the crank engages the hex on your left-hand side.

Do not put your foot in the stirrup when cocking the crossbow with the ACUdraw because if the draw cord breaks while the crossbow is being cocked, the claw will shoot forward resulting in possible injury to your foot.

5. With your safety knob in the **FIRE** (red dot) position, begin cranking the ACUdraw clockwise (or powering it forward with a battery operated drill or screwdriver on a low torque setting). It takes approximately 20-30 turns to cock the crossbow (photo 9), depending on the model purchased. You will know that the crossbow is cocked when you see the trigger safety move to the SAFE (white dot) position. You must stop cranking as soon as the trigger safety moves into the "SAFE" position. Severe damage to the trigger box and/or the ACUdraw unit may be caused by over-cranking the mechanism.



Relieve the tension on the ACUdraw<sup>™</sup> unit before lifting the claw out of its storage position (approximately 1/4-inch to 1/2-inch).



Don't allow the draw cord to get hung-up on any part of the crossbow, scope or accessories.





Engage the safety pawl, insert the crank and begin cranking.

# **ACUDRAW<sup>™</sup> OPERATING INSTRUCTIONS** (Cont.)

removing the claw.

To relieve the tension, place a small amount of additional clockwise pressure on the crank (approximately 1/4-inch to <sup>1</sup>/<sub>2</sub>-inch), and disengage the safety pawl (photo 11). Trying to disengage the safety pawl without first relieving the pressure can damage the mechanism. Hold the crank securely as you disengage the safety pawl. Unwind the crank no more than 2 <sup>1</sup>/<sub>2</sub>- 3 turns to relieve the string pressure. Continuing to unwind the ACUdraw after the string pressure is relieved will damage the mechanism. Remove the crank handle only after the mechanism is no longer under pressure (photo 12).



Notice that the string is under heavy tension once the bow is cocked.

unwind the mechanism 2 1/2 to 3 turns to relieve the string tension.

- you turn the crossbow upside down.
- the claw holder.



claw forward.



Once you relieve the string tension on your cocked crossbow, remove the crank so you can slide the it will break if over-tightened.

6. Once cocked, you can see that the claw holds the bowstring under tension rather than the trigger's string latch holding the bowstring (photo 10). You **must** relieve that tension before attempting to disengage the safety or







After 2 <sup>1</sup>/<sub>2</sub> to 3 reverse (counterclockwise) turns you can see and feel that the pressure is off the claw. You can then remove the crank.

7. Slide the claw out of the trigger box until it clears the arrow retention spring (photo 13), and return it to its storage position (photos 14 and 15). An internal retraction spring will automatically spool the draw cord back inside the mechanism. The claw holder mounted behind the trigger box is designed so that the claw will not dislodge even when

#### Over-cranking the ACUdraw unit when returning the claw to its storage position can result in breaking the hardened metal claw resting place (claw holder). One to two CLICKS are normally sufficient to secure the claw to

TenPoint Series Crossbow: Return the claw to its storage position. **DO NOT** over-tighten! The claw resting position (claw holder) is hardened metal, but

6 Point Series Crossbow: Return the claw to its storage position. DO NOT over-tighten! The claw resting position (claw holder) is hardened metal, but it will break if over-tightened.

## **ACUDRAW<sup>™</sup> OPERATING INSTRUCTIONS** (Cont.)

You must remove the claw from the bowstring before firing the crossbow because the claw could fly in any direction causing an injury to you or a bystander.

#### **Reminder:** All TenPoint Crossbow models are equipped with a patented DFI<sup>™</sup> (photo 16), which prevents the bow from dry-firing if an arrow is not loaded. Remember, if you try to cock the crossbow with the safety knob in the SAFE (white dot) position, you will pull the string past the DFI™, which will hold the string in a position that appears as if it were cocked; however the bow will not be cocked, and it will not fire an arrow. To finish cocking the bow, move the safety to the FIRE (red dot) position and repeat steps 2-7. You will see the string latch and the safety engage as the safety knob moves into the SAFE (white dot) position.



TenPoint's patented DFI<sup>™</sup> (Dry-Fire Inhibitor).

8. You are now ready to load an arrow onto your crossbow.

### **ACUDRAW™ MAINTENANCE & CARE**

- Operate your TenPoint ACUdraw with care. Like any precision instrument, it must be maintained and operated properly to remain in good and safe working condition.
- Prior to each use, examine your ACUdraw carefully to make certain it is in good working condition.
- Keep your ACUdraw lightly oiled and dry when not in use. Avoid getting the mechanism wet. If it does get wet, remove the covers (photo 1 item A), dry it (you may want to use a hair dryer), and use a high grade lubricant such as TenPoint's Flight Rail/Trigger Lube™ (HCA-111) or Microlon's Precision Oiler (HCA-11106) to keep it operating smoothly and free from rust.
- Use TenPoint's String/Cable Wax (HCA-110) or String Wax and Conditioner (HCA-11007) to lightly wax the draw cord. At first sign of cord wear, do not use the ACUdraw.



Remove ACUdraw covers (A), dry the unit and lubricate if the mechanism gets wet.

# **ACUDRAW<sup>™</sup> TROUBLESHOOTING**

Not all issues associated with your ACUdraw will require service. This Troubleshooting section can help fix common problems with your ACUdraw.

#### My ACUdraw claw/cord retracts slowly or not at all.

 With a Phillips-head screwdriver, loosen each of the four (4) cover screws (two on the left side and two on the right side of the ACUdraw unit) - the covers may be too tight, putting pressure on the string hubs inside. Attempt to pull out and retract the claw and cord. If this does not resolve your issue, move on to the next possible solution.

## ACUDRAW<sup>TM</sup> TROUBLESHOOTING (Cont.)

\*Completely remove the four ACUdraw cover screws and both covers for the next steps

- Make sure the ACUdraw cord contains the same amount of wraps on each hub. If one hub has more wraps on it than the other side, un-wrap the excess wraps. Note: This usually happens when the claw is not brought back in a straight line over the rail and scope, but at a severe angle from the left or right side of the bow.
- broken power spring. Contact Customer Service.
- the unit.
- side of the unit) making sure they are not too tight.
- is only a very thin clearance between the hub and the string guides. Re-tighten the top side plate screws.

### My ACUdraw cord is fuzzy, fraying or cut.

- fingers, creating heat and melting the wax) if the cord is getting fuzzy.
- Do not attempt to use your ACUdraw if the draw cord is fraying or cut. Contact Customer Service.

#### My ACUdraw unit is making a loud, squealing noise when I manually draw or retract the claw and cord.

With a Phillips-head screwdriver, completely remove the two ACUdraw cover screws and cover on the right side of the unit (side with the safety pawl on it). Apply a light-weight oil to the pawl gear and the axle.

#### My ACUdraw will not "click" when I am cranking it.

With a Phillips-head screwdriver, completely remove the two ACUdraw cover screws and cover on the side where the safety pawl is located.

The safety pawl (engage lever) uses a spring that is also attached to a roll-pin located diagonally, down and to the right of the safety pawl. Locate the 3/32" Allen screw holding the pawl lever in place and tighten. Note: If the safety pawl screw is tightened too much, the lever will not stay in the disengage (down) position when you are trying to manually draw or retract the claw & cord.

### My safety pawl (engage lever) will not stay in the "up" position.

With a Phillips-head screwdriver, completely remove the two ACUdraw cover screws and cover on the side where the safety pawl is located.

- The safety pawl spring may have slipped off the roll-pin reattach the tail of the spring.
- The safety pawl spring may be stretched. For a replacement contact Customer Service.

### **A**WARNING

Attempt to pull out and retract the claw and cord. If the cord pulls out, but does not retract, you may have a weak or

 If the claw and cord are hard to pull out, the ACUdraw unit may not be seated properly in the stock causing the unit to bind up. Looking at the right side of the unit (side with the safety pawl on it), locate the three 1/8" Allen setscrews (one above the pawl gear, one below the safety pawl and the last one above, and slightly forward of the front (bottom) side plate screw). Only two (2) full threads should be visible on each of the three setscrews - adjust if necessary. Once adjustments are made to the setscrews on the right side, adjust the corresponding setscrews on the left side of the ACUdraw unit. Each setscrew on the left side should be tightened firmly enough to keep the unit from shifting in the stock - do not over-tighten. Minor adjustments, one setscrew at a time, may be required to adjust

When the setscrew adjustment doesn't totally correct the problem, check each of the side plate screws (four on each

If the claw and cord are completely bound up, check to make sure the string guides (one on each side, at the top of the unit - in front of the side plate screw) are not rubbing on the inside of the hub or buried in the string itself. If they are, loosen their top side plate screws and manually adjust them until they sit just above the hub. Make certain there

Apply a thin coat of wax to the entire length of ACUdraw cord and burnish it in (rub the cord briskly between your

## ACUDRAW<sup>TM</sup> TROUBLESHOOTING (Cont.)

## Every time I try to crank my ACUdraw, the claw will only draw the bowstring back a couple of inches, then the claw will drop back down.

The ACUdraw sear pin inside the unit is broken. This problem happens most often when people have been trying to uncock their crossbow with the ACUdraw unit.