

ACUdraw Power Spring Installation (HCA-41106)

NOTICE: This kit includes two (2) 1/8" x .157 Low-head Socket Shoulder Bolts that are to be used on ACUdraw units with blue hubs, or ACUdraw PRO units with red hubs. Follow steps 1a – 29a, on pages 2-4 for units with blue or red hubs.

Units with Silver or Black Hubs:

1. Remove the two Phillips-head machine screws from each ACUdraw cover, and then remove the ACUdraw covers.
2. Pull the ACUdraw claw and cord all the way out. Attach the claw to the crossbow string.
3. Engage the safety pawl (up position) so the cord will hang loose. **Note:** You do not need to keep the safety pawl engaged if the power spring is broken.
4. Loosen the side screw on each hub (screw where the cord is attached) then remove both ends of the draw cord. **Note:** The string must be removed completely from both hubs to change a power spring.
5. Disengage the safety pawl and let the power spring unwind on its own. **Note:** If the power spring is broken the spring will already be unwound.
6. Loosen the upper right, cap-headed Allen screw on the left side plate and slip the loop-end of the power spring and the brass bushing off of the screw.
7. Pull the excess power spring wraps off of the axle then remove the button-headed Allen screw and the end of the spring from the axle.
8. Rotate the left hub until the cap-headed Allen screw is facing up. Remove the Allen screw and the hub.
9. Line up the flat end of the replacement power spring over the axle (make sure the axle has the recessed, flat area facing up) and insert the button-headed Allen screw into the spring and the axle.
10. Re-install the left hub and screw. **Note:** The hub screw on the left and right hubs should face the opposite direction (one facing up & the other facing down) when re-installing the left hub.
11. Holding the power spring close to the hub in your left hand, insert the hand crank onto the pawl gear and begin to rotate the crank **counter-clockwise**. Continue to rotate the crank until most of the power spring is wound onto the axle (approximately 20-25 full revolutions).
12. Insert the brass bushing into the power spring loop, then attach both to the upper right, cap-headed Allen screw. Tighten the Allen screw.
13. Rotate the crank handle **counter-clockwise** again until the spring tension feels fairly tight – then turn the crank handle **clockwise** two full revolutions (taking some of the tension off of the spring).

14. Engage the safety pawl. **Note:** At this point, keep the crank handle on the pawl gear so the power spring does not accidentally unwind.
15. Reinstall the draw cord on each hub.
 - a. Thread the first loose end of the draw cord into its corresponding string guide. Then, thread the cord end through the hub (insert the cord from the inside of the hub, exiting by the hub side screw).
 - b. Tie a knot in the end of the cord, then use a lighter to melt the cord coating. **Note:** Do not make the knot too large or it will rub on the ACUdraw cover making it harder for the cord to retract.
 - c. Wrap the cord under the hub screw (almost a full circle) and then tighten the screw.
 - d. Repeat steps a – c for the other side of the draw cord.
 - e. Disengage the pawl and make certain the draw cord is wrapping evenly on both hubs. **Note:** If the cord doesn't retract when you disengage the pawl, you may not have enough tension on the power spring (see steps 11 - 14) or the ACUdraw unit may not be positioned correctly in the stock.
16. Replace both ACUdraw covers and the Phillips-head machine screws. **Note:** Do not over-tighten the cover screws – the covers could crack/break or the ACUdraw cord may bind up and not retract.
17. Return the ACUdraw claw to the claw holder. Models with a standard claw holder may require a slight bit of tension to the draw cord (one to two **CLICKS** are normally sufficient) to keep the claw from moving or making noise in its resting position.

Units with Blue or Red Hubs:

- 1a. Remove the two Phillips-head machine screws from each ACUdraw cover, and then remove the ACUdraw covers.
- 2a. Pull the ACUdraw claw and cord all the way out. Attach the claw to the crossbow string.
- 3a. Engage the safety pawl (up position) so the cord will hang loose. **Note:** You do not need to keep the safety pawl engaged if the power spring is broken.
- 4a. Remove the two 6-32 x 3/8" Button-head Cap Screws from each hub cover plate, using a 5/64" Allen wrench.
- 5a. Use a 1/16" Allen wrench to remove the Low-head Socket Shoulder Bolts holding the draw cord in place. Discard both shoulder bolts after removal. Then, move both ends of the cord out of the way. **Note:** The string must be removed completely from both hubs to change a power spring.

6a. Disengage the safety pawl and let the power spring unwind on its own. **Note:** If the power spring is broken the spring will already be unwound.

7a. Loosen the upper right, cap-headed Allen screw on the left side plate and slip the loop-end of the power spring and the brass bushing off of the screw.

8a. Remove the black Allen screw inside the hub on the left side of the unit using a 9/64" Allen wrench. Then, remove the left hub.

9a. Pull the excess power spring wraps off of the axle then remove the button-headed Allen screw and the end of the spring from the axle.

10a. Line up the flat end of the replacement power spring over the axle (make sure the axle has the recessed, flat area facing up) and insert the button-headed Allen screw into the spring and the axle.

11a. Re-install the left hub and screw. **Note:** The hub screw on both the left and right hubs should be in the "up" position when re-installing the left hub.

12a. Holding the power spring close to the hub in your left hand, insert the hand crank into the pawl gear and begin to rotate the crank **counter-clockwise**. Continue to rotate the crank until most of the power spring is wound onto the axle (approximately 20-25 full revolutions).

13a. Insert the brass bushing into the power spring loop, then attach both to the upper right, cap-headed Allen screw. Tighten the Allen screw.

14a. Rotate the crank handle **counter-clockwise** again until the spring tension feels fairly tight – then turn the crank handle **clockwise** two full revolutions (taking some of the tension off of the spring).

15a. Engage the safety pawl. **Note:** At this point, keep the crank handle on the pawl gear so the power spring does not accidentally unwind.

Reinstall the draw cords on each hub.

Note: Do not reuse the Shoulder Bolts you removed in step 5a.

16a. Thread the ACUdraw cord under the roll pin and through the left string guide (if it came out during the last few steps).

17a. Wedge the knot of the draw cord into the indentation on the side of the left hub. Then wrap the cord counter-clockwise into the groove against the axle.

18a. Use a 1/16" Allen wrench to insert a **new** Low-head Socket Shoulder Bolt into the hole next to the cord knot, and over the cord. **Note:** Make sure to insert the shoulder bolt over top of the cord to anchor it securely into place.

19a. Reinstall the left-side hub cover plate making sure the oval indentation is positioned over the cord's knot. Use a 5/64" Allen wrench to insert the two 6-32 x 3/8" Button-head Cap Screws.

20a. Wrap the cord one time around the hub, counter-clockwise.

21a. Thread the ACUdraw cord under the roll pin and through the right string guide (if it came out during the last few steps).

22a. Wedge the knot of the draw cord into the indentation on the side of the right hub. Then wrap the cord clockwise into the groove against the axle.

23a. Use a 1/16" Allen wrench to insert a **new** Low-head Socket Shoulder Bolt into the hole next to the cord knot, and over the cord. **Note:** Make sure to insert the shoulder bolt over top of the cord to anchor it securely into place.

24a. Reinstall the right-side hub cover plate making sure the oval indentation is positioned over the cord's knot. Use a 5/64" Allen wrench to insert the two 6-32 x 3/8" Button-head Cap Screws.

25a. Wrap the cord one time around the hub, clockwise.

26a. Disengage the pawl and make certain the draw cord is wrapping evenly on both hubs. **Note:** If the cord doesn't retract when you disengage the pawl, you may not have enough tension on the power spring (see steps 12a – 15a) or the ACUdraw unit may not be positioned correctly in the stock.

27a. Place a cover over one of the side-plates. The draw cord must fit completely inside the slot cut in the front of the cover – do not let the cord become caught underneath the gasket. Insert the cover screws and tighten **just until** the cover is snug. **Do not over-tighten!** Over-tightening the cover screws may crack the ACUdraw or ACUdraw PRO cover or make the unit sluggish when trying to retract the ACUdraw claw.

28a. Repeat step 27a to attach the opposite side cover.

29a. Return the ACUdraw claw to the claw holder. Models with a standard claw holder may require a slight bit of tension to the draw cord (one to two **CLICKS** are normally sufficient) to keep the claw from moving or making noise in its resting position.