The following procedure explains how to install the Upper Pulley Assembly for the Pro & Elite CrossTrainers.

**Parts Needed**
- Upper Pulley Assembly (Part # 721-1057)

**Tools Needed**
- ½” or ¼” Cold Chisel & Pair of large pliers
- Open Head Wrenches: (5/8) (1/2) (9/16)
- Ratchet Sockets: (5/8) (1/2) (9/16)
- Retaining Ring Remover
- Large Flathead Screwdriver & Phillips Screwdriver

**Estimated Time**
- 30 minutes to disassemble and reassemble the shroud
- 2 hours to complete reinstalling the upper pulley
- Total time 2 hours and 30 minutes

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**Removing Upper Pulley Assembly**

1. Remove the Dog Bone bolt from Lower Crank Arm Assy using a 5/16 Allen wrench (Fig. 1).
   *Note: Once the Dog Bone bolt has been removed the Leg Beam will shift forward due to the weight of the of it, so be careful not to wedge your hand between moveable parts of the Leg Beam assy.*

2. Remove upper shroud, lower shroud, and Guard Disk Plate on the left and right side using a Phillips screwdriver, ¼, and 3/32 Allen wrench
   *Note: See shroud removal instructions in the service manual for further instruction.*

3. Remove the Pedal Arm using a 3/16 Allen wrench to disassemble the screws (Fig. 2), then separate the Pedal Arm from the Pedal Base by pulling them apart from each other after the two bolts have been removed (Fig. 3).

4. Remove the Leg Beam cap using a 3/16 Allen wrench to disassemble the screw (Fig. 4).

5. Remove the e-clip from the Upper Crank Arm shaft by prying between the shaft and e-clip (Fig. 5).

6. Remove the Leg Beam by sliding it off of the Upper Crank Arm shaft (Fig. 6).
   *Note: If the Leg Beam assy has seized and will not come off pulling with your hands, then use a pulley puller to remove the Leg Beam assy from the shaft (Fig. 7).*

7. Remove the right Upper Crank Arm Cap by prying it off with a flathead screwdriver (Fig. 8).
8. Remove Upper Crank Arm retaining ring using a retaining ring remover (Fig. 9).

9. Remove both Upper Crank Arm bolts using a 5/16 Allen wrench to unscrew them from the crank.
   Note: Bolts are on the opposite sides of each other.

10. Wedge a chisel in the Upper Crank Arm gap and hammer the chisel in just enough to slide the Crank Arm off the shaft of the Upper Pulley Assembly (Fig. 10).
    Note: When hammering the chisel into the crank, do not let the chisel go so far down that it touches the crank shaft.

11. Once the chisel has been wedged into the Upper Crank Arm, slide the crank arm off the Upper Pulley shaft.
    Note: If the crank does not slide off easy, hammer the chisel in some more to create a larger gap in the crank.

12. Remove the plastic Disk Shroud by disassembling the two screws using a Phillips screwdriver.

Complete the same process above to remove the other side of the unit.

13. Remove the three idler pulley screws on the Brake Assembly using a 5/32 Allen wrench to disassemble them (Fig. 11).

14. After removing the idler pulley screws loosen the Brake tension bolt approximately three complete turns using a ½ inch socket & ratchet (Fig. 12).

15. Unplug all wires from the Load Control and Upper body electronics board mounted to the Brace Plate.

16. Remove the four Brace Plate bolts using a 5/8 open head wrench on the nut to stabilize it from turning and a 5/8 socket & ratchet on the head of the Brace Plate bolts to unscrew the bolt from the nut (Fig. 13).

17. Once the Brace Plate bolts have been taken off, completely remove the Brace Plate from the frame.
    Note: Be careful not to damage the electronic boards or wires when removing the Brace Plate.

18. Remove the four Lower Pulley Bolts using a 9/16 open head wrench on the nut to stabilize it from turning and a 9/16 socket & ratchet on the head of the Lower Pulley bolts to unscrew the bolt from the nut (Fig. 14).

19. Once all four nuts have been taken off the Lower Pulley Assembly, slide the bolts out and remove the Lower Pulley from the frame.
    Note: DO NOT TURN THE JACKSCREWS TO KEEP THE CORRECT MANUFACTURE TENSION ON THE TIMMING BELT (Fig. 15).

20. Remove the four Upper Pulley Bolts using a 9/16 open head wrench on the nut to stabilize it from moving and a 9/16 socket ratchet on the head of the Upper Pulley Bolts to unscrew the bolt from the nut.

21. Once all four nuts have been taken off the Upper Pulley Assembly, slide the bolts out and remove the Upper Pulley from the frame.
    Note: Be careful, once the last bolt has been removed the Upper Pulley Assembly will drop out and could cause damage to other components in the unit if it drops.
Installing Upper Pulley Assembly

1. Wrap the drive belt around the Upper Pulley and align the Pillow Block bearing with the holes in the frame.
2. Once the holes in the bearings and the frame have been aligned, mount the Upper Pulley down by sliding the bolts through the holes, and screw the nuts on hand tight (Fig. 16).
   Note: The bolts need to go back in the same position they were in originally in, to prevent the linkage arm from hitting the end of the bolt.
3. Tighten the bolts down using a 9/16 open head wrench on the nut to stabilize it from moving and a 9/16 ratchet socket on the head of the Upper Pulley Bolts then tighten.
   Note: Insert all four bolts before tightening. The bolts should be tightened to 50-foot pounds of torque.

Installing Timing Belt:

1. Align the timing mark on the Timing Belt with the line on the Upper Pulley (Fig. 17).
   Note: There are two timing lines on the timing belt that are 47 teeth apart from each other. Make sure the top mark on the belt is in line with the mark on the Upper Pulley
2. Slide the Lower Pulley through the bottom loop of the drive belt, but do not mount the Lower Pulley to the frame yet.
   Note: At this time the Lower Pulley should be just hanging and, supported by the timing belt.
3. Adjust the Lower Pulley so the timing mark on it is aligned with the timing line on the belt.
   o If the timing line on the belt is not aligned with the timing mark on the Lower Pulley, hold the timing belt with one hand by the Upper Pulley to prevent throwing the Upper Pulley out of timing. With your other hand turn the shaft of the Lower Pulley until the timing line on the belt is aligned with the mark on the Lower Pulley (Fig. 18).
4. Once the Upper and lower Pulley have been timed properly then mount the Lower Pulley down by sliding the bolts through the holes, and screw the nuts on hand tight.
5. Tighten the bolts down using a 9/16 open head wrench on the nut to stabilize it from moving and a 9/16 ratchet socket on the head of the Lower Pulley bolts then tighten.
   Note: Before tightening the nuts down with a ratchet make sure all four bolts are in. Also the bolts should be tightened down approximately to 50-foot pounds of torque.

Installing Brace Plate and Electronics

1. Install the Brace Plate to the frame by aligning the holes in the Brace Plate with the holes in the frame.
   Note: When installing the Brace Plate be careful not to damage any of the wires.
2. Slide all four bolts through the Brace Plate and the frame, and tighten the nuts hand tight.
3. Install the Brace Plate to the frame by aligning the holes in the Brace Plate with the holes in the frame. 
   *Note: When installing the Brace Plate be careful not to damage any of the wires.*
4. Slide all four bolts through the Brace Plate and the frame, and tighten the nuts hand tight.
5. Tighten the nuts to 60 foot pounds of torque using a 5/8 open head wrench on the nut to stabilize the nut from turning and a 5/8 socket on the torque wrench.
6. Once the Brace Plate has been installed and torqued plug in all the wires to the electronic boards.

**Installing Brake Belt**

1. Wrap the Brake belt around the large plastic pulley that’s mounted to the Lower Pulley assy.
2. Align the Poly-V grooves on the Brake belt with the grooves on both pulleys.
3. Once the Brake belt has been aligned with the large plastic pulley and the small Brake pulley, tighten all three idler pulley bolts using a 3/16 Allen wrench.
   *Note: Tighten the bolts just enough for the washer too touch the idler pulley bracket, but do not apply any torque.*
4. Screw the tension bolt for the Brake belt back to it’s original tension using a ½ inch ratchet socket.
5. Once the Brake belt has been tightened back to its original tension, tighten the idler pulley bolts using a 3/16 Allen wrench. Note: After the Crank Arms and Leg Beam assemblies have been installed test the unit for slippage. If the unit slips then apply more tension too the Brake tensioning bolt (a half a turn at a time then test again).

**Installing Upper Crank Arms**

1. Screw the plastic Upper Shroud Disk back in with a Phillips head screwdriver.
2. Wedging a chisel between the Upper Crank Arm gap opening, and hammer the chisel in just enough to slide the crank onto the Upper Pulley shaft. Note: Make sure there is one spacer on each side of the Upper Pulley before installing the Upper Crank.
3. Slide the Upper Crank Arm onto the shaft.
   *Note: Make sure the Crank Arm is flush with the spacer that sits between the Crank Arm and the Pillow Block Bearing.*
4. Pull the chisel out from the Upper Crank Arm.
   *Note: It’s best to push the crank arm with one hand as you pull the chisel out with the other hand to prevent the crank arm from shifting forward.*
5. Install the retaining ring using the retaining ring tool by spreading it out and snapping it into the groove cut out around the end of the Upper Pulley shaft.
6. Screw both pinch bolts back into the Upper Crank arm using a 5/16 Allen wrench, and torque the bolts down to 50 foot pounds.
Part Replacement

7. Snap the Upper Crank Arm Cap back onto the Upper Crank arm on the other side.

   Repeat the same process for the other side of the unit.

Installing Leg Beam Assembly

1. Apply lubricant to the Upper Crank Arm shaft.  
   *Note: We recommend non-seize lubricant (Fig. 19 or Fig. 20).
2. Slide the Leg Beam onto the Upper Crank Arm shaft.
3. Snap the e-clip back onto the groove of the Upper Crank shaft using a pair of pliers (Fig. 21).
4. Screw the Leg Beam Cap back onto the shaft of the Upper Crank arm using a 3/16 Allen.

   Repeat the same process for the other side of the unit.

Once finished, test the unit for proper function.