



## Composite Frame Care Kestrel Airfoil Pro Series

*Congratulations on your Kestrel purchase! The carbon fiber/epoxy composite of your Kestrel frame is significantly lighter and stronger than metals and, barring accident, will stand up to a lifetime of training and racing. But composite frames require slightly different care than metal ones. Even if you've been working on bikes for years, please take a few minutes to read the following guidelines before starting.*

### GENERAL

**Repair stands.** The mechanical action of a repair stand concentrates enormous loads in a small area. As with any fine bicycle, **clamp your Kestrel by the round seat post only to avoid damage to the frame.** If your Airfoil is equipped with an aerodynamic post, you may need to remove this post and insert a round (27.2mm) seat post with the seat post adapter supplied with your frame.

**Dropout spacing.** Your Kestrel Airfoil series is molded with 130mm dropout spacing to accept 130mm hubs. Do not stretch or compress your frame's dropout spacing more than 2mm. As it is impossible to bend the carbon/epoxy composite of your Kestrel frame, **do not attempt to cold set (bend) the frame or dropouts.**

**Seat post.** The Airfoil Pro frame only accepts the EMS PRO Aerodynamic Seat Post. Models made prior to 2009 accept both a 27.2mm diameter seat post and the EMS PRO Aerodynamic Seat Post. Minimum seatpost insertion into the frame is 70mm (2.75 inches). Maximum seat post insertion is 100mm (4 inches); the aluminum seat tube sleeve extends only this far into the frame and the seat tube tapers to a smaller diameter beyond that. *Inserting the seat post or reaming out the internal sleeve beyond this depth will damage the composite walls of the frame.* Seat posts may easily be cut down if a lower seat height is desired as long as minimum insertion is maintained. A standard fine tooth hacksaw will work. Be certain to remove any burrs on the post before reinserting into the frame. *Some seat post manufacturers may require a minimum insertion of more than 70mm.* It is highly recommended that you use **“Carbon Prep”** when installing your seat post. Most bicycle stores have this in stock. Apply a light coat on the seat post prior to installing it in the frame. It is very important to make sure that the “butterfly” wedge is inserted into the frame **BEFORE** tightening the binder bolt. Damage to the post and frame will occur if the wedge is not in place.

**Headset.** Your headset cups are bonded in at the factory. Simply install the bearings and the crown race onto the seat of the fork. Be sure to only use the Kestrel compression plug that is specifically designed for carbon fiber steerer tubes.



**Bottom bracket.** Grease bottom bracket threads and faces before installing bottom bracket cups. Follow the bottom bracket manufacturer's instruction regarding installation torque. *Caution: do not use Loctite or other thread locking compounds on the bottom bracket threads! Loctited cups require additional torque to remove, which may exceed the torque limit on the bottom bracket of your Kestrel frame.*

**Front derailleur mounting bracket.** Grease the threads of the mounting bolts before installation and make sure they are tight enough to keep the bracket from moving during front derailleur shifts. The bolts are threaded into aluminum threaded inserts, so be careful not to strip the threads. The bolts should be torqued to 2.5 Nm or 30 in-lbs. Some adjustment of the bracket position is possible by loosening the two mounting bolts and shifting the bracket relative to the frame.

**Front brake.** You must use the long brake nut supplied with the frameset to install your front brake. You also need to use any washers that come with your brake assembly. The brake may not tighten properly without the proper washers. Contact your Kestrel dealer if you do not have the long brake nut.

**Cable routing.** Your Airfoil Pro frame features internal cable routing. The rear brake cable housings terminate at cable stops on either end of the toptube; the cable runs bare inside the top tube. The shift cable housings terminate at cable stops at the top of the downtube and bottom of the down tube. Bare shifter cables run through the downtube and out through the Kestrel cable guide located at the bottom of the bottom. As with any bike, use ferrules on all cable housing ends, and lubricate all cables where they pass through any housing or "macaroni" guides.

When routing the derailleur cables, *take care not to cross the cables over each other inside the frame*, as poor shifting performance will result. When removing any shift or brake cable from your frame, be sure to first run sections of cable housing or other suitable tubing over the cable and through the frame tubes, then *carefully* remove the cable, leaving the "dummy" housing in place. Reverse this process to install new cables.

Cable routing on pre 2009 Airfoil frames run through "noodles" located under the bottom bracket. Pay special attention when feeding the cables so that no kinks in the cable develop that will result in poor shifting quality.

**Derailleur hanger.** The Airfoil frames come equipped with a replaceable derailleur hanger. If the hanger is bent or damaged in any other way, it should be removed and replaced. Contact your Kestrel dealer for assistance.



## **Paint**

*Caution: any paint stripper which will remove epoxy paint will damage the epoxy resin matrix which holds your frame together.* Do not use any paint stripper on your Kestrel frame. If you decide to have your Kestrel repainted, we recommend hand sanding to remove the decals and scuff the topcoat. Do not bake over 150 degrees F. Do not sand away any composite material. Do not sandblast, bead blast, plastic media blast, or blast with any other media. Blasting can remove structural composite material and could make your Kestrel unsafe.

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