



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 clamping 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 bike is equipped with an aerodynamic post, you may need to remove this post and insert a round (27.2mm) seat post into the frame.

Dropout spacing. Your Kestrel Airfoil Pro frame is manufactured 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 as structural damage may result.*

Maintenance

Seat post. The Airfoil Pro frame accepts a 27.2mm diameter seat post. Minimum seat post 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 put pressure on the composite walls of the frame, potentially damaging it.* 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.*

The seat sleeve insert, seat post, and binder bolt should be greased during assembly and maintenance. To work on the frame in most repair stands, you must use a round 27.2mm post. Note that the seat binder clamp is bonded in place and is *not* removable.

Headset. When installing a headset, grease the insides and faces of the head tube where the cups go in, as well as the crown race seat of the fork. Cups should be professionally installed with a headset press that maintains correct alignment of the head cups during assembly. "Hiddenset" headset cup diameter is 44.0mm and may be professionally reamed to fit the 44.5mm Chris King "Perdido" standard. Crown race diameter is the standard 30.0mm.

Bottom bracket. Grease bottom bracket threads and faces before installing bottom bracket cups. Follow the bottom bracket manufacturer's instructions 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. A medium-strength locking compound is factory applied on the threads of the two mounting bolts. (We use Loctite-brand “purple” #222 MS.) Re-apply as needed. Also, make sure that the provided washers are in place under the bolt heads where they contact the frame’s carbon surface. Some adjustment of the bracket position is possible by loosening the two mounting bolts and shifting the bracket relative to the frame. Once the bracket is positioned, the bolts should be tightened down securely to prevent the bracket from moving during front derailleur shifts.

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 fully 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 front of the downtube and rear of the right-side chainstay. Bare shifter cables run through the downtube and into removable “macaroni” guides. The front derailleur cable is routed through the “macaroni” guide above the Bottom Bracket and directly up to the front derailleur. The rear derailleur cable is routed through the downtube, through the internal guide tube of the rear “macaroni” guide, and out through the cable stop at the rear of the chainstay. As with any bike, use ferrules on all cable housing ends, and grease 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.

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

The derailleur hanger screw (drive-side dropout) may of course be removed or replaced as needed. Be sure to fully tighten the screw when re-attaching. Please note that the smaller screws (two per side) which help secure the dropouts to the carbon structure are permanently bonded in place at the factory. *Do not attempt to remove or adjust these dropout attachment screws.*

Paint

Caution: any paint stripper that will remove the epoxy paint will damage the epoxy resin matrix that 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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