Falcon 4 Tandem Reassembly After Shipping

The Falcon 4 Tandem has a three piece leading edge, consisting of a front leading edge, a middle leading edge and a rear leading edge.

There are three different ways in which the Falcon 4 Tandem might be broken down for shipping, depending on the requirements for overall length imposed by the carrier.

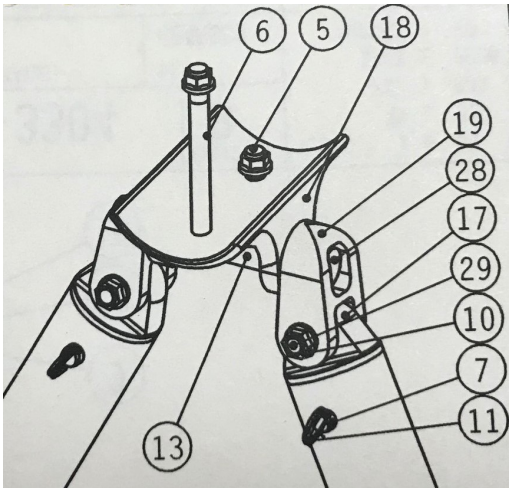
Most Domestic Shipments:
The glider will be shipped at an overall length of 163 inches. The breakdown will consist of disassembling each crossbar – leading edge junction, removing the clevis pin located forward of the crossbar junction that secures the middle leading edge section to the front leading edge section, and separating the middle and rear leading edge assembly as a unit from the front leading edge.

Most Export Shipments:
For export shipments that allow a shipping length of up to 157 inches, in addition to the breakdown procedure above, the rear leading edges will be separated from the front leading edges.

Some Export Shipments:
For export shipments that require a shipping length less than 157 inches, in addition to both breakdown procedures above, the keel will be shortened by disassembling and removing all of the keel center hardware – including the control bar apex bracket, kingpost base bracket and one bushing installed in the keel – and the rear keel will then be slid forward inside the front keel. With this method the glider can be shipped at a length as short as 148 inches.

To re-assemble the glider after shipping, first determine which of the three breakdown methods was used, and then reverse each procedure.

To Restore The Keel To Its Original Length
Slide the rear keel aft until the two sets of holes in the overlapped section line up.
Refer to the diagram in the Owner's Manual pictured below. You will need at least one special tool for this operation – a thin wall, 5/16" socket that has been ground down on the outside to a diameter of no more than 0.425" – as well as the other tools and parts shown below.



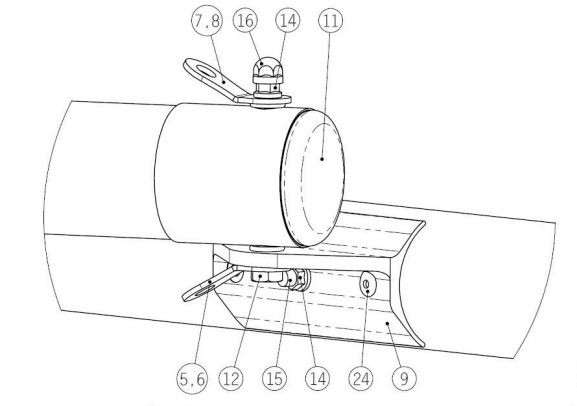


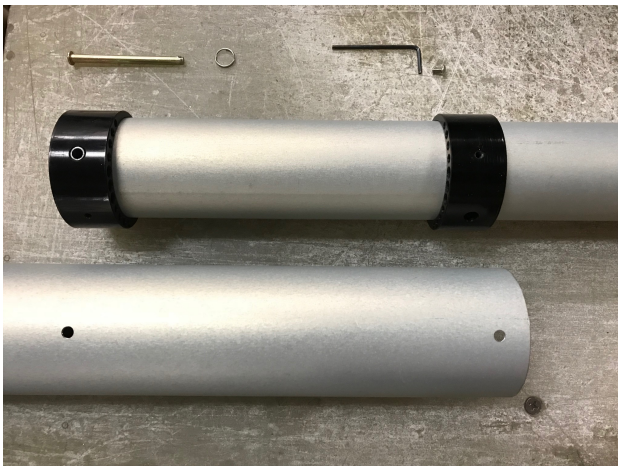
With the holes in the keel properly aligned, insert the aluminum bushing through the forward 3/8" diameter hole, thus securing the front keel to the rear keel. Use the longer screw and one of the ¼" clinch nuts to secure the control bar apex bracket to the bottom of the keel, and the kingpost base bracket to the top of the keel.

Insert the second ¼" clinch nut into the ground thin wall socket. You may want to put a very small amount of glue on the nut to reduce the chance of it falling out of the socket inside the keel. With the glider on its side, or on its back, insert the socket with the nut installed into the larger hole in the top of the keel, while inserting the shorter screw through the apex bracket and into the bottom of the keel. Take care when starting the nut on the screw that you do not cross thread the nut – turning the screw counter clockwise at first will help to seat the threads properly. You should not feel undue resistance when turning the screw into the nut until you have about two turns of engagement of the screw into the nut.

To Re-Install The Rear Leading Edge Into The Rear Of The Middle Leading Edge

First be sure you are working with the correct pieces. We will illustrate the installation on the RIGHT wing. The diagram below from the owner's manual depicts the right wing leading edge crossbar junction. The photograph below shows the right side middle leading edge (bottom) and right side rear leading edge with crescents (top) aligned in the relative position that they will be after installation. View is from the top of the leading edge looking down.



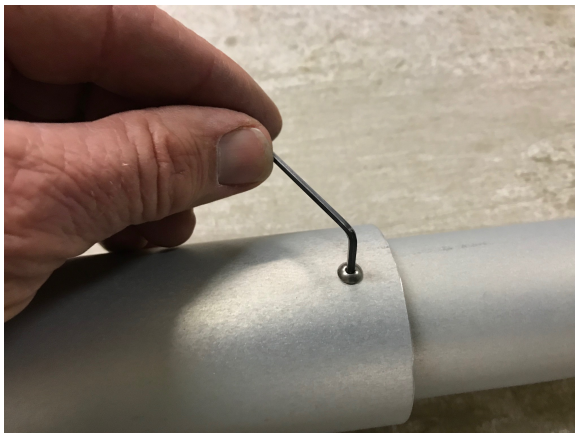


The small allen wrench for installing the button screw is provided as part of your spare parts kit. Note that the front crescent is secured in position by an installed bushing. Both crescents should be oriented so that the thicker part of the crescent is on top of the rear leading edge tube.

Slide the rear crescent aft (to the right in the picture to move it out of the way.

Slide the rear leading edge into the aft portion of the middle leading edge until the forward holes on each are aligned. Install the clevis pin in the forward hole from underneath and install the safety ring on the top of the leading edge.

Next slide the rear crescent into position and secure it with the button screw.

The next three pictures show the completed assembly of the rear leading edge to the middle leading edge. Note that the correct positioning of the crescents causes the leading edge tubes to align at approximately the 4:30 position on the circumference of the tube (when viewed from behind) where the natural area of contact with the sail is located.





To Install the Middle and Rear Leading Edge Assembly Into The Front Leading Edge
Note that the photos below were taken with the leading edge removed from the frame and from the sail for clarity. You will need to slide the sail forward to gain access to the assembly areas.
Again making sure that you are working with the correct leading edge, slide the middle and rear leading edge assy into the sail and then over the rear end of the front leading edge until the holes align. Install the clevis pin from the bottom, and install the safety ring. Finally, re-connect the crossbar – leading edge junction, attaching the top and bottom side wires, as shown in the earlier drawing.

