

Pilatus B-4

Procedures for safe disassembly of the glider and then putting the various components into the trailer.

(Trailer 6)

Initial Preparation:

Pick a loading location with sufficient room behind the trailer. As each wing stores in the trailer on the opposite side from its location on the glider, the glider must be positioned well back from the trailer to provide the necessary maneuvering room for the wings while being maneuvered into the trailer.

The trailer may be left hitched to a prime mover, or simply parked with the wheels chocked. However, neither is absolutely necessary. As all component loading is done with the trailer box tipped such that the rear end is firmly on the ground, this provides plenty of stability.

Remove the lower pin securing the trailer box tilting mechanism immediately below and behind the scissor jack that tilts the trailer box. A hammer and a brass drift punch will be found in the box on the floor in the front of the trailer. Use these tools to remove the pin – ***do not hammer directly on the pin with the hammer – always use the brass drift punch!*** Use the crank also found in that box to tilt the trailer box until the rear of the box is firmly on the ground.

Remove the rear door of the trailer and store along the right side of the trailer. (Suggest the door be “leaned” on the fender on that side, and not “leaned” against the side of the trailer itself, as this is likely to “scratch the paint.”) ***Caution: During door removal, tip the top of the door out a bit and disconnect (if not already disconnected) the wiring plugs to be found immediately behind the left side of the door at about mid-level.***

Remove the plywood loading ramp if found on the floor immediately inside, and position this ramp with the metal tabs over the two small metal posts in the back sill of the trailer bed. (This ramp may have previously “been found” up front when that end of the trailer was first unloaded.)

Extraction of the tail-plane trolley and fuselage dolly:

Remove the pip pin from the lateral sway brace located on the top center of the trolley frame. (Immediately store the pip pin back in either piece of hardware – don’t “carry it away.”)

Remove the wing nut from the threaded pin found protruding through the aluminum angle on the right end of the red painted trolley base. (Immediately "capture" this wing nut with the clip found on the short chain located immediately adjacent – don't "carry this away" either.)

Extract the tail-plane trolley, and maneuver to a position directly behind the left side of the trailer, such that the removed tail-plane may be installed in the trolley.

Roll the fuselage dolly out of the trailer, and push under the nose of the fuselage as snugly as possible.

Preparation for disassembly:

Position a wing stand under each wing tip.

Remove gap seal tape from the turtle deck and wing roots.

Remove the canopy and turtle deck, and position in a safe place well away from the "working area" (suggest alongside the right side of the trailer).

Removal and temporary storage of the horizontal tail-plane.

Disconnect the elevator pushrod (with built in "spring loaded pin" and a "backup safety clip").

Remove the "T-Handle" tool from its storage position on the aft vertical frame member of the tail-plane trolley. Screw this tool into the end of the tail-plane retention pin in the top of the vertical fin. Extract the retention pin fully, and return the T-handle with pin attached to storage on the tail-plane trolley.

Lift the tail-plane off the top of the vertical fin, and carry it around and install in the tail-plane trolley. Now maneuver the trolley to a position directly alongside the left side of the trailer, such that the carabiner on the lanyard on the center top of the trolley may be hooked into the tab with the hole in it on this side of the trailer.

Place the protective padding on the tail plane "spike."

Removal of the wings, and movement into the trailer:

De-rig the ailerons and spoiler pushrods from the control arms in the fuselage.

Install the aileron locks first, and then the wing tip dollies. The dolly on each wing should be installed between the grey vinyl stripes to be found under each wing (the center of the dolly will then be 32 inches from the wing tip.)

Remove the safety clips from the three main spar retention pins.

Remove the drag spar retention pins.

With a person on each wing tip, lift and wiggle as necessary to enable removal of the top center main spar retention pin.

With one person on the wing tip and two on the root (left wing) remove the lower main spar pin and carry the wing away from the glider and maneuver tip first toward the trailer.

Bring the tip into the trailer, guiding the wing tip dolly wheel into the appropriate **white** marked guide rails. **Remember that the left wing stores on the right side of the trailer, and vice versa!**

Position a person inside the trailer alongside the wing tip rolling support dolly to closely monitor this support (and assist if necessary) as each wing is rolled into the trailer. **What is this person watching out for? Three things: First, that the dolly maintains its position on the wing as it is rolls forward (that is, that the wing does not "slip" in the dolly). Second, that the dolly does not tilt while transiting the metal seam plates between the guide rails that may tend to "trip up" the wheel under the dolly. And lastly, that the dolly wheel remains within the "white marked" rail guides as the wing goes in.** Note that there is a necessary interruption in these guide rails to permit passage of the fuselage dolly wheels. Thus, the **white marked** wing tip dolly guide rails are in two sections: forward and aft.

As each wing is inserted, **closely monitor the clearance between the wing trailing edge and the roof. Bringing the wing root inward toward the trailer centerline will improve the clearance.** As the wing tip nears the front end of the glider, lift the wing root up and into the cradles on the floor, and continue on in with the wing until the tip is firmly against the padding on the front trailer bulkhead. **It will likely be necessary to rotate the wing inward a bit while lifting into the cradles to provide the necessary clearance between the trailing edge and the inner roof surface.**

Lash the wings against the padding on the side walls through the drag spar fitting.

Install the protective padding on the aileron push rod.

Repeat with right wing.

Insertion of the fuselage into the trailer:

Slide the fuselage forward in its trolley until the left front side of the trolley just touches the vinyl "stop dolly here" label to be found on the left side of the fuselage.

Raise the tail sufficiently as to permit retraction of the main wheel.

Reinstall turtle deck and canopy.

Roll the fuselage in the dolly forward to the loading ramp. As the trolley is started up the ramp, the wheels should "straddle" the guide rails on the ramp.

Continue forward until the tail wheel contacts the rear edge of the "tail-wheel saddle". Lift tail and continue forward until the wheel may be dropped into the saddle. The fuselage dolly "stop" should be reached just at this time.

Dress the long tie down strap over the "lift handle" in the forward edge of the vertical fin and thread through the cam buckle on the other strap. Tighten.

Loading of the tail-plane trolley:

Unhook the carabiner from the eye on the side of the fuselage and stow in the eye bolt on the top rail of the trolley.

Bring the trolley around behind the trailer, and start the front wheel in between the green marked rails.

Position a person inside to stabilize the front of the trolley as it is rolled in, and to ***closely monitor the clearance between the padded nine inch "spike" protruding from the bottom of the horizontal stabilizer and the vertical tail-plane. It may be necessary to "tip" the trolley a bit towards the right side of the trailer as the "spike" moves past the vertical fin and rudder! Important, so watch this one closely!***

Maneuver the rear of the trolley as it is inserted such that the right wheel under the rear base of the trolley guides between the red marked rails. This will guide the trolley retention pin through the hole in the aluminum angle. Install the wing nut onto this threaded pin. Capture this wing nut with the clip found on the short chain located immediately adjacent.

Install the pip pin into the lateral sway brace located on the top center of the trolley frame.

Pick up the loading ramp, and put on the floor in the back of the trailer. (It may shift around a bit while trailering, but cannot hit and damage any piece of the glider.)

Finish Up:

Install the door on the rear of the trailer, remembering to "hook up" the light system wires just inside on the left side of the door.

Go to the front of the trailer and crank the scissor jack until the pin holes in the metal ears attached to the trailer box align with the pin hole in the trailer tongue. Insert the pin, and then the hitch pin safety clip. (It may be necessary to gently drive the pin through these holes with the hammer.)

Load wing stands, tie down straps, wing wheel, and any other support equipment and secure with rope to prevent shifting into either the fuselage nose or wings during transport. (Note: If by this time it is "getting dark," there is an interior light that may be switched on if the trailer has been connected to the prime mover.)

Check the function of the trailer lights if going off the airport.

"Say goodnight, Irene!"