

N56LS Standard Cirrus Southern Eagles Soaring

Disassembly / Assembly Procedure

You landed out – so what now? First, hopefully you made arrangements with someone who has a hitch on their car to bring the trailer your way. It is located right next to the LGC hangar.

Once the trailer is on the field with the glider, here is what to do:

- 1) Bring the glider directly behind the trailer, nose first.
- 2) Prepare the trailer by cranking up the front to about 6 inches higher than the back. The combination for the combination lock on the back can be found scratched into the right side of the trailer fin. After opening back of trailer, remove the rack for the horizontal stabilizer from trailer, and put on side. Lower the rear jack with the wrench lying in back of trailer. Open the doors and put the protective carpet in place.
- 3) Fold out ramp behind trailer and put fuselage dolly in position. Lock fuselage dolly with small levers to prevent sliding forward when moving the glider on. Place 2 wing stands (in front of trailer) in reach to place under wings. Place wing carts on each side of ramp. Have wing wheel dollies available. Unscrew anchor nuts from wing carts.
- 4) Slide fuselage on ramp. If tail-dolly was attached, take it off first. Best to have 3 people, so that 1 can hold wings level, one can hold dolly, and one pushes forward. The back end of the dolly should come to about 3 inches in front of gear door. Put 1 wing stand under each wing. Raise wing stand enough so that the wing is lifted up a little. (Maybe 10-15 pounds of pressure). Also put wing wheel on each wing.
- 5) Remove horizontal stabilizer: Raise pin underneath tape cover with hook or pliers. Slowly with a twisting motion raise it up. Hold on to the string attached to the washer that this pin goes through. When the pin comes out the washer can fall into the tail if the string is not held! Move the fixture that the pin was securing forward and take the horizontal off with the rear end lifted first. (Pull gently and lift to separate). Place the horizontal on the trailer rack for it, and put string with washer around stem on horizontal before securing it with the bungee cord.
- 6) Open canopy and raise wheel. Now disengage hotelier couplings from ailerons and spoilers. Start with aileron right side, the spoiler right side, then aileron left, last spoiler left. For each connection, there is a safety pin that needs to be pulled out before the coupling can be disengaged. The safety pins are attached to the couplings with a flexible string – so they will dangle free afterwards. It is pretty much impossible to see what you are doing – best to be familiar with the couplings on each side before trying this the first

time. Reach in and find pins by feeling. It helps to jiggle the control (aileron or spoiler) back and forth a little while disengaging. No large forces are necessary (or desirable).

7) After all 4 controls rods are disengaged, you are ready to take the wings off. First, remove the mouse-trap looking safety from the main pin. Then one person needs to lift one wing up with enough pressure to unload the weight off the main spar so that the pin can be pulled out. This pressure is about 10-20 pounds (+weight of wing).

8) Close the canopy !! Also make sure that the large locknuts on the wing carts are removed and in reach before proceeding. Then remove right wing first. One person at wing tip gently rocks a little back and forth and pulls on tip at the same time. One person (better 2) at wing root hold on to the spar as the wing comes out. Pull out wing fully then rotate to vertical position. Walk the tip to the back and place root on wing cart. The spar hole goes through pin on cart and the cart is secured with big nut. Then lift wing cart into trailer and slide in. The wing dolly wheel is on the lateral side of the cart track! This wheel needs to come to rest in the matching depression in the trailer floor (otherwise trailer won't close later). At front of trailer check that the pin on the wing protrudes through the holding device on trailer. Use small wing nut to secure wing root to holding device. Foam pads get stuffed around the control rods so they don't flap around during transport.

9) Same procedure with left wing.

10) To slide fuselage into trailer, first unlock the little levers that kept dolly in forward position on ramp. Align fuselage exactly with long trailer axis then gently push in. Do NOT use rudder to lift fuselage ! When the fuselage is fully in tail wheel rests in depression. Place latch over tail to prevent it from bumping up during transport. Slide in foam to protect rudder on each side.

11) Place rack with horizontal on left side of fuselage and secure with threaded bold.

12) Flip up ramp and close trailer up. Before closing front of trailer check that the spoilers are in.

Now you have a glider in the box, and you might need to assemble it again!

Assembly is pretty much reverse of disassembly. Left wing goes on first now. Both wings should be carefully aligned and pushed in while holding upwards pressure so that spars don't rub on fuselage. One person holds up wing on each side with about 10-20 pounds of pressure and the main pin then should slide in easily. If it doesn't make sure you have fore-and aft alignment correct, wings all the way in, an have person on wing tip gently raise wing a bit more or a bit less while pushing main pin through spars. The pin should be greased at all times. Put mouse-trap safety on right after pin is put in place !

Now there comes a hard part: Connect all 4 controls with matching hoteliers and slide in safety pins through vertical holes. If you haven't done this many times before, closely look at connections BEFORE putting wings on.

And another tricky part: Put the horizontal back on. With leading edge down slide into place. The fork (in the fuselage) needs to grab the horizontal control bar (? Correct name for this?) on both sides.

Tape the wing roots with white electrical tape.

Last not least – a CRITICAL ASSEMBLY CHECK is absolutely required. Make sure the main pin is fully inserted and secured with safety. One person at the front then moves each control to the full range while another person holds gentle pressure against that control surface: Aileron left, Spoiler left, elevator, rudder, Spoiler right, elevator right. Your life depends on all controls being securely hooked up!!

At all times, do not lose the little parts floating around: wing nuts, bolts, tools. Check the area before departing !!