

Bill James (TX) - With more Vari-Ezes coming out of garages, some thoughts on wing alignment and installation might still be in order. Some of this is also pertinent to Long-EZs.

The main spar cannot be accurately installed to the Vari-Eze fuselage without the wings correctly attached!—including tightening the taper pin bolts. This is because of the way the wing attach fittings are initially positioned by hand on each of the raw wing spars—there is room for slight differences between the two wings. This is not a problem though, if the wings are correctly positioned RELATIVE TO EACH OTHER for the raw center spar to be microed into place between them, per plans.

MATING Vari-Eze WINGS TO THE CENTER SPAR:

1. Build the wings.

2. Build the raw center spar.

3. Read plans again. Position the wings relative to each other. I did this in the back of a friend's hanger.

a. Use the center-wing top template provided in the plans. Duplicate it. Make two additional wing top templates—one for the root and tip. Duplicate these. There are now three templates on each wing—use a level on all to determine how identical the two wings are.

b. Mark the waterlines on the root and tip. Attach wooden extensions (yardsticks or screen mold, etc.) to extend the waterlines out a couple of feet fore and aft.

c. Then "fence" around the perimeter with string up to the wood strip waterlines and WATERLEVEL each string "plane"—root and tip, up to the appropriate waterline. One span wise string in front of, and one behind for the wing roots, and an all encompassing rectangle for the tips. Temporary fence stanchions were used at the corners for the string. I used plastic buckets to hold up the wings. Try 'quarts' for the tips and 'fives' for the root, plus shims to get the anhedral right. Scooting them in or out raised the wooden waterline extensions up or down to the water leveled string nicely. After all waterline extensions are leveled to the string, spend some time checking out the six wing top templates and see what you have. "Five minute" or bondo the buckets to the wings and floor. (A water level was made with a garden hose and two one foot clear plastic tubes from the hardware store.) I think Long-EZs only need one string "plane".

There are probably better string and wing supports than those mentioned above. Be creative. Care spent in this positioning exercise will make you happy later.

4. Carefully install raw Vari-Eze center spar to wing attach fittings—per plans. Re-check positioning two dozen times, especially after the cat walks over the assembly.

INSTALLING MAIN SPAR TO FUSE-LAGE

 Read plans again. Level airframe.
Install wings to spar, completely. Just dropping in the top taper pins is not enough!

3. When positioning spar/wing unit in fuselage, use WATERLEVEL, wooden waterline extensions and six wing top templates while shimming and floxing the spar in place, per plans (including measurement between wingtips and nose). Check position of fuselage and wing/spar unit three hundred times, especially after the neighbor leans on the plane while telling you about his/her flying exploits. Install winglets so that they both point up when the wings are on the airplane.

This would be a good time to confirm canard tip position relative to water leveled wings. Some choose to wait until this point to drill the canard attach holes.

All of this is in SUPPORT of the plans. Be totally up to speed on the plans and CPs.



Hot Pipes?

Vance Atkinson (TX) - To protect your cowl from hot pipes go the local motorcycle shop and ask for "Moto Tile"

It is very thin aluminum on one side and about 3/16 thick sponge foam on the other. Peel the protective paper off the foam part and stick to your cowl. Works great. I use it on my gear legs down around the disc area and secure it with safety wire.

Its been there 12 years now and no melt down of the gear leg. It is pliable and will conform to most everything. It comes in strips about 12 inches long and 4 inches wide, the cycle guys use it to protect their legs from burns down by the exhaust pipes.

Complete Long-EZ Kit

Plans, newsletters etc. Foam blocks blue, urethane sheets and Klegecell kit. Brock hardware kit incl. nose gear mechanism, fork assembly, all wheels, brakes, master cylinders and axles, nose gear strut, fuel valve, fuel caps, drain valves and fuel pump, boring tool, control group hardware, including sticks and Heim joints, rudder pedal assembly, tubing hardware, gear mounting hardware, dynafocal motor mount.

Canopy, Task fuel strake kit, Kevlar cowls, 2 rolls UNI, 1 roll bid, seat belts, all firewall metal. Hardware kit for the canard and more.

Klaus Savier 805-933-3299 LSE@WEST.NET \$4,000

FAA Aircraft IDs

Carl Denk (OH) - I read a notice on DUATS that some aircraft designators had changed; here is the current canard type designators for flight plans:

Designator	Model name
COZY	COZY, CLASSIC
DEFI	DEFIANT
LGEZ	LONG-EZ
VEZE	VARIEZE
VELO	VELOCITY



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