

**WPR18FA143**  
**Assembly Q&A**

Questions & responses via email 6/1 - 6/4 2018

| # | NTSB Question   | Co-Owner (Eason) Response  | Co-Assembler (Walker) Response   |
|---|---|--|--|
| 1 | I didn't see anything about Horizontal stab/elevator installation – please describe that installation/process as you recall it, including structural attach and control attach & checks | Tee-tail, with a [stablator]. As I recall, it fit down into place, and was fastened by tightening the counter-balance.                 | I do not recall the installation of the Horizontal stab or elevator combination other than it appeared normal. I believe a standard type of installation with appropriate safety mechanism. I didn't note anything of concern or unusual design.   |
| 2 | Was the horizontal stab/elevator installation only accomplished once, or were they installed (partially or completely) and then either fully or partially disassembled/removed          | It was installed during the annual in Merced on 2/10/2018, removed and then installed again when we put the glider together in Avenal. | It was only installed once that day that I observed. I was present at the annual inspection in Merced, California where I believe it was installed, removed and put back in the trailer a few weeks earlier. I was working on the annual inspection of my sailplane as well, but assisted in the removal of the fuselage from its' trailer for that annual inspection. I also looked at the general condition, appearance and structure of the Lark. |
| 3 | Describe any difficulties or other issues /abnormalities associated w the H/S & elevator installation/assembly & checks   | I didn't see any abnormalities, and didn't see any reaction from Jan to make me think there was any issue.                             | Didn't note any difficulties or abnormalities from what I observed.  |
| 4 | Were the H/S & elevator attach and control links able to be visually inspected subsequent to installation/assembly  | I don't recall specifically, but I don't think so.   | I can't recall.  |

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| <b>5</b> | Re the wing attach, I didn't see anything in either statement about control system (flaps, ailerons, & 'dive brakes/spoilers') attachments and checks. Again, please describe to the extent possible | All control system attached via some kind of quick link. They appeared secure.   | Aileron controls were attached and checked for security. There are two small doors for connection and then inspection of the Aileron controls. They go on bell cranks with ball type attachments and safeties that are used on other sailplanes. Flaps and airbrakes I do not recall their attachment mechanisms. Is I recall we did a complete check, and I/we noted that another glider had done a check on his ailerons' after assembly and was very careful about that installation as others had had theirs come loose even after a positive control check. That glider it must be done by feel and pulling on the attachment as visual inspection is not adequate. |
| <b>6</b> | Was the wing installation only accomplished once, or were they installed (partially or completely) and then either fully or partially disassembled/removed   | One time, on 4/27/18 in Avenal.....UNLESS Jan assembled/partially assembled after he took the glider home, but I don't think he did. | The complete wing was only assembled once with the partial retraction of left wing to insure proper alignment of the lift pins as previously stated. This is not unusual for gliders because of the tight tolerances for repeated assembly and disassembly.  |
| <b>7</b> | As I understand it there are at least 2 special tools to install the wing, but I didn't see either one. Can you describe (or even sketch) the two tools with applicable dimensions                   | I only recall one tool, but there may have been two.   | I do not recall the tools as I was behind the trailing edge of the wing and not readily visible to me.   |
| <b>8</b> | Do you know where those two tools are currently located  | They were left in the trailer. Richard Walker was going to take pictures yesterday and send those to you.                            | They should be in the gliders' trailer. I should be able to gain access this weekend and photograph them.  |

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| <b>9</b>  | Describe the access provisions and limitations (if any) to the fwd and aft 'lift pins'   | I don't recall.   | They are pins visible on the wing that go into receptacles in the fuselage. They are the fixed pins in the wing that slide into the fuselage in front of and behind the main spar. The aft one I have had referred to as a drag pin when no drag spar is present. I believe what you refer to as lift pins I would call wing pins. These attach the wings together and to the fuselage. (Clarification on my part for communication purposes) The wing pins/lift pins used two pins similar to those on a Blanik L-13. I couldn't see how they were attached exactly, but appeared to drop into holes in the wing and secured into the fuselage by threaded ends. The center pin I believe is used to bring the wings together and secure the wings together also. |
| <b>10</b> | Describe the access provisions and limitations (if any) to the central pin that runs (vertically) through both wing clevises   | I believe two small access panels in the fuselage, at the wing roots.             | Access is by removing a panel behind the pilot and then inserting the pin vertically with a safety over the top.   |
| <b>11</b> | I understand that after the central pin was secured, one or more of the 'lift pins' were 'adjusted' – describe the sequence and details and reason(s) as best possible | I don't recall  | The wing/lift pins are turned down with a wrench that was described as either a hex wrench or Allen style wrench and turned several times till tight. I do not know how many turns or how those are secured as they were not in my view at that time.  |
| <b>12</b> | Describe any difficulties or other issues/abnormalities associated w the wing and wing control systems installation/assembly & checks                                  | My experience is very limited, everything about the installation appeared normal. | The only difficulties were those that described in item 6.   |

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| <b>13</b> | Does anyone recall approximately how many turns of the central vertical pin were needed to secure the wing, or what torque value was reached? | I don't recall.  | I don't know.   |
| <b>14</b> | Were either the central pin or any of the lift pins able to be visually inspected subsequent to installation/assembly                         | I don't recall.  | I could only see the top of the central pin and watched the safety applied. The wing/lift pins were out of my sight.  |
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|           | <b>ADDITIONAL COMMENTS</b>  | It's just that I wasn't trying to learn this assembly, this was just to assist Jan. I was there to lift heavy stuff, while he assembled. | The only part of the installation that presented a problem was the alignment of the left wing. As I stated before this didn't seem out of the ordinary for the second wing installation, especially since this was the first time installing the wings since it was purchased. At least that I know of. |
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