ATLAS TACS RIGGING W/ RIG BOX (SHOP NOTES, rev. C)

1. Assure TACS return spring is not rigged i.e. bolt removed or very loose.
2. Install rod end bearing in TCU ram. (See pg. 63 of TAG 1100-0101 MMS "Rigging instructions") Bury ½" of threads into the actuator ram. (There should be slightly over 1" from actuator ram end to rod end bearing centerline.)
3. Connect TCU rod end into the walking beam.
4. Assure that the short rod (# FC14030-1) is installed between the walking beam and the bellcrank but jam nuts are loose so rod length can be adjusted.
5. Adjust long TACS actuator rod (# FC14006-1) to the length specified in the rigging instructions noted above but do not install the long actuator rod at this time.
6. Connect the electronic rigging box connector to the TCU.
7. Assure that both switches on the box are off.
8. Connect a power supply capable of at least 5 amps @ 26 vdc to the rigging box.
9. If using an adjustable power supply, adjust output voltage of power supply to 26-28 vdc. (28 vdc preferable)
10. Align the voltage control knob on the rigging box with the white dot adjacent to the knob.
11. Manually move the TCU actuator ram to a neutral or roughly half extended position.
12. **Clear the area around the TCU, walking beam and bellcrank.**
13. Turn power switch on the rigging box to "ON".
14. TCU and walking beam will move to a home or faired position.
15. Adjust voltage readout on box to 4.000 volts (+/- 0.2 volts).
16. Turn the enable switch "ON". The TCU actuator rod may lengthen or shorten slightly and will be electrically held in place and move with the increase or decrease of the rigging box voltage displayed on it.
17. Slowly rotate knob on rig box clockwise to raise the voltage displayed until you achieve 10.0vdc (+/- 0.2v). This will extend the actuator ram on the TCU to its maximum extended length.
    Note: The rigging box is internally limited and cannot be adjusted to output more than 10.0v or less than 1.0v.
18. Measure up stop gap of the bellcrank at this point. If up stop gap needs to be increased, shorten the short rod slightly to achieve needed clearance. If clearance is greater than .015, then lengthen the short rod as needed.
19. Rotate knob counter clockwise to bring voltage down to the full down limit of 1.0vdc (+/- 0.2v).
20. Measure the down stop gap on the bellcrank at this point. If gap is less than .015", then attempt to balance the up and down clearances to be roughly equal by lengthening or shortening the short rod. If down stop gap is greater than .015", then move on to next step.
21. Dial in 4 volts on the rig box and turn the Enable switch off and then the Power switch off.
22. At this time pre-set the long rod to the dimension shown on pg. 64 of TAG-1100-0101 MMS and temporarily install with jam nuts loose so rod can be adjusted.
23. With the aileron pinned or held in flight rig position, turn on rigging box being sure to clear the TACS first and dial in 4.0v (+/- 0.2v) as displayed on the box. Turn on the Enable switch and TACS will move to its home/faired position.
24. Check to see that TACS trailing edge and winglet/aileron trailing edges align within tolerances. If adjustment is needed, then use the long rod only to adjust the TACS position (It is permissible to adjust voltage within tolerance to attain this)
25. Do not change the length of the short rod so as not to change the relationship previously attained between the TCU and the bellcrank.
26. After adjustments, return to the 4.000v (+/- 0.2v) output to check the faired position and verify alignment with aileron and winglet trailing edges.
27. Tighten and safety all jams nuts and associated hardware at this time.

ANY QUESTIONS, PLEASE CALL STEVE UECKER @ 208-597-4568 OR EMAIL – steveu@tamarackaero.com