**UAV Flight Readiness Review – Fixed Wing Aircraft**

Cal Poly Pomona UAS Lab

All aircraft must be inspected by a UAS lab member approved by the UAS lab manager before flight.

Team: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_ Inspector: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Signature:\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| **Requirement** | **Pass/Fail** | **Notes** |
| Structural Checks | | |
| Wing, fuselage, and empennage structures will withstand reasonable forces. |  |  |
| Control surfaces and hinges are structurally sound. |  |
| Control surface horns are secured to control surfaces without room for deflection |  |
| Landing gear will withstand reasonably hard landings. |  |
| Motors are securely attached to vehicle with no vibrations. |  |
| Motor/prop combo spins easily without hitting other components. |  |
| Propeller is mounted correctly. |  |
| In general, the airframe structure is deemed flight worthy. (Note any issues if applicable.) |  |
| Avionics Checks | | |
| Electrical circuits are properly attached and insulated. |  |  |
| Wiring does not impede actuator movement. |  |
| Servos are not powered through Pixhawk servo rail. Power is supplied through external rail. |  |
| Battery is not damaged (bloated or undervoltage.) |  |
| Autopilot orientation is set properly. (Look at artificial horizon in the GCS while tilting the copter). |  |
| Avionics components are securely attached to the airframe. |  |
| Aircraft Control/Stability Checks | | |
| Center of gravity is roughly ¼ chord. |  |  |
| Control surfaces move in the correct directions in all flight modes. |  |  |
| All control surfaces are properly trimmed and have proper upper/lower limits. |  |  |
| Motor control operates properly. (Spin direction and throttle levels) |  |  |
| Pixhawk Checks (If Using Pixhawk) | | |
| Controller has an assigned mode switch in agreement with pilot preferences. (For first flights use Stabilize-AltHold-Loiter) |  |  |
| Control system has a failsafe for radio loss. (Should be on by default. Check ArduCopter params. Default behavior: RTL). |  |
| Control system has an emergency stop assigned to a radio switch. |  |
| Aircraft passes all arming checks. |  |