

AirCam CHECKLIST

AirCam 912iS

START-UP

- 1) Pre-flight Complete
- 2) Tie downs and chocks removed
- 3) Note Hobbs time
- 4) Rear seat occupant, remove and stow hat
Check shirt pockets to ensure they are empty
- 5) Avionics off
- 6) Master (key) on
- 7) Auxiliary fuel pumps off
- 8) Turn **ON** Lane A and Lane B switches (both engines)
- 9) Wait for engine monitor system display (EMS) to boot up.
- 10) Advance throttle approximately 1 ¼" (45-50% on EMS which requires start power to view)
- 11) Apply brakes
- 12) Clear props and blast area behind
- 13) Toggle and hold start power momentary switch, left for left engine or right for right engine
- 14) Toggle engine starter momentary switch left or right to crank the desired engine
- 15) Upon engine start-up release starter and start power switches
- 16) Adjust throttle for smooth idle and check oil pressure 29-73 psi. If min oil pressure is not achieved within 10 sec of start-up, shut down the engine by turning off both lane switches immediately.
- 17) Check status of warning lights OK
- 18) Increase engine RPM above 2,500 for 5 seconds and check battery voltage. (Triggers Gen B shift to charging airframe main buss.)
- 19) Alternate starting left and right engines first.
- 20) Repeat steps 10-18 to start the second engine.
- 21) Warm up engines at 1,800 -2,200 RPM
- 22) Avionics master on
- 23) Intercom check
Note: If engine does not start immediately, check Lane A and B switches on, check main fuel pump breakers in and check for correct fuel pressure with momentary switch activated.
- 24) Do not crank more than 10 sec without giving the starter a cool down break

ENGINE RUN-UP

- ✓ Clear behind
- ✓ Point aircraft nose into wind if possible
- ✓ Apply brakes (on land)
- ✓ Control stick full back
- ✓ Auxiliary fuel pumps off
- ✓ Left engine increase throttle to 4,000 RPM
- ✓ Turn off Lane A switch and check for smooth operation with rpm increase or decrease of no more than 250 RPM
- ✓ Turn on lane A switch
- ✓ Turn off Lane B and perform the same checks as on Lane A
- ✓ Check left engine warning lights are both out
- ✓ Retard engine throttle to idle and check RPM 1,400 – 1,700
- ✓ Right engine increase throttle to 4,000 RPM and perform lane checks the same as on left engine
- ✓ Retard engine throttles to idle and check RPM 1,400 – 1,700

Check operation of Aux fuel pumps with the following procedure:

- ✓ Adjust left and right engine speeds to 2,000 RPM.
- ✓ Turn on left and right Aux fuel pumps and check left and right fuel pressure within limits
- ✓ Turn off left and right main fuel pumps by pulling the breakers
- ✓ Check for smooth operation and fuel pressure within limits on left and right engines.
- ✓ After 5 seconds reactivate both the left and right main fuel pumps by pushing both breakers back in
- ✓ Turn off Aux fuel pumps

PRE TAKEOFF

- ✓ Seat belts fastened
- ✓ Ensure all phones and loose gear secured
- ✓ Verify both fuel tanks – 1/3 minimum
- ✓ Flaps up for normal take off
- ✓ Trim set
- ✓ Auxiliary fuel pumps on, left & right
- ✓ All Lane switches on (forward) for left and right engines
- ✓ No warning lights illuminated.
- ✓ Altimeter set
- ✓ Radio to correct frequency
- ✓ Strobes on
- ✓ Controls free & correct
- ✓ Oil temps min 120F
- ✓ **When canopy is installed:** Check all four doors closed and properly latched and canopy closed and latched (all 6 latches down)
- ✓ Lift-off at 43 MPH IAS
- ✓ Normal Climb 60 mph IAS

LANDING

NORMAL

- ✓ Fuel pumps on
- ✓ Flaps up
- ✓ Approach at 60 – 65 mph Higher speeds permissible in gusty conditions

SHORT FIELD LANDING

- ✓ Fuel pumps on
- ✓ Use Full flaps for short and rough field landings
- ✓ Approach at 50 mph plus 5 minus 0

Note: when using flaps remember to reduce flaps to 25 degrees for takeoff. 25 Degrees of flap is verified when the inner trailing edge of the flap aligns with the wing trailing edge to aft fuselage sweep cable. Use of flaps for landing is not recommended in gusty conditions.

Note: If left or right fuel quantity indication is 1/8 or less avoid steep descents.

EMERGENCY PROCEDURES

ENGINE FAILS TO SHUT DOWN WITH LANE SWITCHES MOVED TO THE OFF POSITION

- ✓ Reduce throttle to idle
- ✓ Turn off auxiliary fuel pump and pull the circuit breaker on the main fuel pump

PROP STRIKE IN FLIGHT

- ✓ If a prop strike occurs in flight, causing a high level of vibration, **identify** which prop has been damaged. Bring one engine to idle and the other one to full

power. If the prop damage is causing vibration the powered-up engine will see an increase in the intensity and frequency of vibration. If altitude and single engine performance allow, shut down the engine that is vibrating and land as soon as possible. If not, maintain full power on the smooth engine and reduce power on the vibrating engine to the minimum level required to maintain flight. Find a safe place to land as soon as possible.

EMERGENCY IN FLIGHT INSPECTION OF DAMAGED PROPELLER

- ✓ Once identified and shut down - the damaged propeller may be visually inspected in flight to determine the severity of blade damage. When an AirCam engine is shut down in flight the prop will stop and one blade will be below the wing in view. With the lane switches off, on the stopped engine, the pilot may tap the starter on the dead engine turning the prop small amounts allowing the pilot to see each blade one blade at a time. (*Note: pilot must hold the start power switch in the direction of the stopped engine to activate the starter*) Using this technique, the pilot may assess the damage and determine if restarting the engine with the damaged propeller is an option.

ENGINE FAILURE IN FLIGHT

- ✓ Both throttles full forward
- ✓ Maintain 55 - 60mph indicated ASI
- ✓ Rudder as needed
- ✓ Both Aux fuel pumps on
- ✓ **Identify** the bad engine
- ✓ **Verify** – bad engine, point to the tach with low RPM
- ✓ 5 degrees of bank into the good engine
- ✓ Add 5 degrees of flap if additional climb performance is needed. The bad engine will produce zero thrust at normal idle at 55 -60 mph IAS. Anything above normal idle will yield some thrust and help climb performance. If engine RPM drops below 2,000 in flight and does not respond to the aux electric fuel pump then shut it down to reduce drag.
- ✓ Shut Down – if necessary
- ✓ Land at the nearest safe location
Note: If the bad engine completely shuts down on its own, you may attempt a restart with the Aux fuel pump on once the aircraft is in stable single engine flight. If the restart is successful or the bad engine continues to run, the pilot may opt to leave it running to improve climb performance. If the bad engine produces 3,000 rpm or more some improvement in performance will be realized. Check oil pressure, oil temperature and coolant temperature and continue to operate bad engine at pilots discretion. Operation with oil pressure, oil temperature and or coolant temps outside of recommended limits will likely damage the engine.

Vmc 43 mph IAS

Vsse Minimum Single engine speed 50 mph IAS

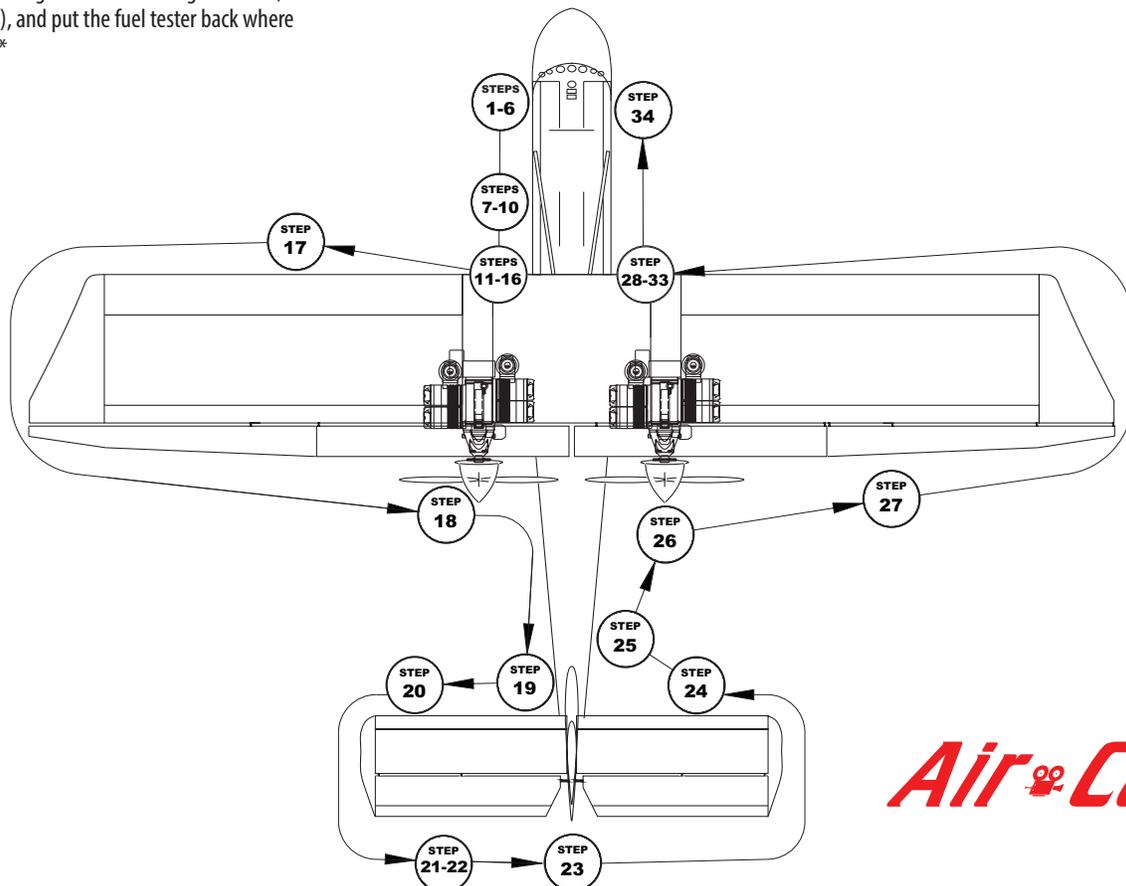
VYse 55 mph IAS with 5 degrees of flap

PREFLIGHT

- 1) Standing on the left side of the aircraft, adjacent to the forward cockpit, turn on the master and note indicated left and right fuel quantity.
- 2) Check function of flaps. You may leave the flaps down to facilitate closer engine inspection.
- 3) Check battery voltage greater than 12V. If less than 12V charge battery.
- 4) Turn off the master and check all engine ignition lane switches are off.
- 5) Check for proper control stick movement and function.
- 6) Check pitot and static tubes under nose and remove pitot covers if installed.
- 7) Move to left of rear seat and recheck ailerons and elevator for proper function with rear control stick. You cannot see the elevator moving once seated in the cockpit.
- 8) Check rear brake pedals and brake master cylinders for leaks and safe fluid level.
- 9) If flying solo latch rear seatbelt harness.
- 10) Check baggage area for loose cargo and secure as needed.
- 11) Climb up or use a ladder to view the upper left wing center section in front of the left fuel tank. Remove left fuel cap and verify fuel quantity matches the fuel gauge indication previously observed. Verify sufficient fuel for your next flight? Secure the fuel cap.
- 12) Inspect ELT antenna
- 13) Visually inspect left engine radiator, cooling fan, hoses and air filter.
- 14) Inspect the left wing root to wing center section gap-seal to insure it is properly secured.
- 15) Inspect left landing gear, tire, brake and lower wing strut attachments.
- 16) Sump left and right fuel tanks and gascolators, (four points), and put the fuel tester back where it is stored.*
- 17) Walk around left wing inspecting the wing leading edge, wing tip, Aileron, flap and wing struts.
- 18) Inspect left engine.
 - a) Inspect propeller blades for damage.
 - b) Inspect exhaust system for cracks and leaks and check all 8 exhaust springs for breaks and correct safety wire. Replace any broken springs or safety wire before next flight.
 - c) Look for signs of fluid leaks under the engine and on the ground below.
 - d) Check oil and coolant levels. (Only remove radiator cap when engine is cool)**
- 19) Inspect the aft fuselage and tail wheel.
- 20) Inspect the vertical and horizontal stabilizer surfaces and all exposed cables for condition and tension.
- 21) Inspect the Elevator trim tab on the left elevator for condition and excessive play in the hinges and actuating pushrods. Little or no play should be present.
- 22) Inspect the elevators.
- 23) Check rudder for free movement and good stops.
- 24) Inspect right horizontal stabilizer and exposed cables.
- 25) Inspect the right aft fuselage.
- 26) Inspect right engine.
 - a) Inspect propeller blades for damage.
 - b) Inspect exhaust system for cracks and leaks and check all 8 exhaust springs for breaks and correct safety wire. Replace any broken springs or safety wire before next flight.
 - c) Look for signs of fluid leaks under the engine and on the ground below.
 - d) Check oil and coolant levels. (Only remove radiator cap when engine is cool)**
- 27) Walk around the right wing inspecting the flap, aileron, wing tip, wing leading edge and wing struts.
- 28) Climb up on the wing struts and fuselage or use a ladder to make a visual check of the fuel quantity in the right fuel tank. Verify the fuel quantity matches the fuel gauge indication previously observed. Secure the fuel cap.
- 29) Visually inspect the right engine radiator, cooling fan, hoses and air filter.
- 30) Inspect the right-wing root to wing center section gap seal to assure it is properly secured.
- 31) Inspect right main landing gear, tire, brake and lower wing strut attachments.
- 32) Check front and rear seat positions for correct adjustment.
- 33) If aircraft is fitted with full enclosure; check canopy attachments and all doors for correct installation and condition. Verify cargo doors are properly latched.
- 34) Note Hobbs time before start-up.

* We recommend sumping all four fuel drain points in immediate succession to more easily facilitate proper disposal of waist fuel and identify any fuel contamination early in the preflight process.

** Get to know your engine. With no evidence of any fluid leaks, coolant can be checked once before the first flight of the day. Oil can be checked before the first flight of the day and when fueling on a cross county flight. Be sure to burp the engine before adding oil to prevent overfilling of the oil tank. If oil is needed add Aeroshell SPORT PLUS 4. Never add more than 1/3 of a liter before rechecking the oil level.



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