FINAL INSPECTION BEFORE FIRST FLIGHT

This Technical Leaflet should be printed, initialled and signed as appropriate, and retained by the owner in their aircraft records.

LAA procedures require a special inspection, known as a 'Final Inspection Before First Flight' to be accomplished at the end of the build of an LAA project. This applies to all aircraft built within the LAA system and whilst owners of projects remain wholly responsible for the quality and conformity of the finished aircraft, this inspection is aimed at helping the owner ensure the aircraft meets accepted standards of build quality, conforms to the approved design and complies with various legal requirements. It is also intended to provide a review of the application prior to final submission to LAA Engineering, in order to minimise occurrences of rejected applications due to missing or ambiguous data.

Inspection in accordance with the following check-list must be accomplished by an LAA inspector who is approved to sign for 'Final Inspection Before First Flight' in a 'Group' which covers the aircraft concerned. The inspector must confirm satisfactory compliance with the requirements of this TL1.24 by initialling the attached checklist in the appropriate places provided and by signing Section 4 of the (new-style) LAA Build Inspection Record.

It is recognised that often, by necessity, certain work might remain outstanding at the time of application. This might be when the aircraft needs to be finally transported to the flying site, or when waiting for delivery of a particular component or process. Consequently the Build Inspection Record provides an optional statement for the inspector to sign allowing either confirmation that the final inspection check-list is satisfied in its entirety, or otherwise that certain items, as listed, are outstanding. When this second option is utilised, LAA Engineering may, depending on the circumstances, require confirmation of completion of the outstanding items before issuing a flight authorisation. LAA Engineering will respond accordingly in each case.

Section 4 of the (new-style) project Build Inspection Record also provides a Permit Maintenance Release (PMR) which the inspector is required to sign, in order to satisfy the LAA requirement that a PMR be issued at completion of build.

For projects registered prior to 2011, and having older style project build books (LAA project serial number xxx-15030 and before), appropriate forms will be provided as part of the Project Completion Pack, supplied on request at completion of build.

Inspectors completing this inspection may or may not be the same inspector who has signed off the build stages. It is expected that at the time of this 'Final Inspection' the aircraft build will be complete (bar outstanding items specified), but in order to conduct this inspection the inspector, as a minimum, will need access to the aircraft cockpit, engine bay, and also through all airframe panels normally available for the maintenance of the aircraft. Inevitably there will be a significant overlap of inspections but it is not intended that this inspection will necessarily involve a re-inspection of construction work. However, the inspector should be alert to any constructional or maintenance issue that give cause for doubt or concern, and be prepared to investigate to the degree required to reach satisfaction. It may be a number of years since the initial build stages were signed off and/or the aircraft might have passed around a number of owners (and inspectors) during the course of the project. These circumstances give good reason for approaching this inspection with eyes very wide open.

This 'Final Inspection' marks the significant transition from a lifeless project in a workshop to a live and fizzing 'flight ready' aircraft in the flight shed. It is important therefore that this inspection is carried out in a disciplined and dedicated fashion, and in a suitable environment. It is not necessary for operational checks to be repeated where satisfactory records already exist, but the inspector should review those records to ensure that they are adequate.

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G-Reg:	LAA Project Serial No:	Type Name:

Part 1 - Physical Condition
Inspect the aircraft internally and externally to the level of a very thorough and comprehensive pre-flight inspection. This should be done in comfortable and well lit conditions. Engine cowls and all normal maintenance access panels should be removed.

Part 1	Builder's initials (or N/A)	Inspector's initials (or N/A)
Structures:		
Internal structure		
External structure and covering		
Control surfaces and attachments		
Structural joint attachment assemblies		
Drain holes		
Canopy		
Landing Gear:		
Assembly and fittings		
Brake system		
Hoses and pipes		
Wheels and tyres		
Nose/tail wheel steering		
Operation, including retraction checks (or check record thereof)		

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Part 1	**Builder's initials (or N/A)**	**Inspector's initials (or N/A)**
Instruments:		
Vacuum system, venturies, filters, pitot static system		
Instrument and instrument installation		
Hoses, pipes and wiring		
Instrument operation and reading		
Compass swing (or check record thereof)		
Avionic installation, aerials		
Electrical System:		
Battery and installation		
Electrical wiring, terminals, fuses and circuit breakers		
Wiring connections and satisfactory routing, bundling and security		
Engine and Propeller Installation:		
Air induction system, fuel system, ignition system, magnetos, exhaust system, lubrication system, cylinder assemblies.		
Engine bearers and accessories.		
Hoses and pipes. Engine controls.		

Part 2 - Flying Controls

Part 2	Builder's Initials (or N/A)	Inspector's Initials (or N/A)
Attachments, hinges, brackets, rods, cranks, horns, balance weights, cables, pulleys, fairleads		
Cable tensions (or record check thereof)		
Safety and locking		
Full and free movement in correct sense of all controls, including trim tabs		
Range of movement (or check record thereof)		

Part 3 – Special Checks

Part 3	Builder's Initials (or N/A)	Inspector's initials (or N/A)
Firewall sealing		
Airframe lubrication		
Seat harness		
Placards and instrument marking (See TL 2.11)		
Registration (See CAP 532 - advise owner if not compliant)		
Cockpit crashworthiness		
Engine ground run (or check record thereof)		

Part 4 – Paperwork Review

Part 4	**Builder's Initials (or N/A)**	**Inspector's initials (or N/A)**
Check build records are orderly arranged		
Check airframe and engine log books (and propeller log book if required) are initiated and provided with suitable introductory log book entries		
Check this application (inspection record and supporting forms, including this checklist)		

Declaration: I declare that I have checked G-_____ in accordance with the checklist above and have found it to be satisfactory in all relevant areas.			
Builder's name:		**LAA membership number:**	
Signature:		**Date:**	

Declaration: I declare that I have checked G-_____in accordance with the checklist above and have found it to be satisfactory in all relevant areas.			
Inspector's name:		**Inspector number:**	
Signature:		**Date:**	

DO NOT SEND THIS FORM TO LAA ENGINEERING. IT IS TO BE KEPT WITH THE AIRCRAFT'S ESSENTIAL RECORDS