

LAA INSPECTOR APPROVAL SCHEME

INFORMATION LAA/IAS/17 – APRIL 2017

(This information supersedes previous issues, which should be destroyed)

INTRODUCTION

The LAA inspector approval scheme is devised to be as simple as possible, but even so, it is still not possible to describe the normal limits of approval in the confines of an inspector's wallet-sized approval card. Hence, an inspector's approval card must be read in conjunction with the latest version of this document. This document is updated and reissued as required, and from April 2017 is LAA/IAS/17. This document is also posted in the LAA website Inspector Zone. See SPARS Procedures Section for further information.

LAA inspector approval cards define the type and scope of approval of the inspector concerned and indicate this by the entry of ticks in an approval matrix on the front face of the inspector's card. The codes used on the top line should be cross-referenced to the aircraft group-description on the back face of the card. See also important Notes 1 to 10 later in this document.

INTERPRETATION OF TEXT ON INSPECTOR CARDS

Inspection Categories: (Left Hand Column on Front Face of Inspector Approval Cards)

Build Stages

When ticked, this covers build stage inspections (of types covered in the aircraft groups defined in adjacent headings) as provided in the LAA Build Inspection Record issued to an LAA registered project. These stages do not constitute a CAA recognised 'certification', but are a confirmation for LAA purposes that an LAA inspector, acceptable for the task, has inspected the project at that stage and assessed it to be satisfactory in respect of conformity and quality.

Maintenance and Permit Renewal Recommendations

When ticked, this covers all maintenance, repairs and replacements (of types covered in the aircraft groups defined in adjacent headings, but see also Note 3) and includes aircraft 'rebuilt'. This approval can be for airframes only, engines only, or both. Only inspectors covered for the 'airframe' of the aircraft in question may sign Section 3 of a Permit Renewal application form recommending renewal of the Permit to Fly.

When engine approval is held in this category it covers, for certificated engine types (e.g. Continental, Lycoming) all routine maintenance, repairs and replacements up to, but not including dismantling of crankcase. For non-certificated engines, (e.g. VW, Rotax) it covers all routine maintenance, repairs and replacements including complete tear-down and rebuild subject to adequate tools, facilities and appropriate manufacturer's technical literature being available.

Inspectors should note that approval in this category allows the work involved in installing a major repair or a modification to be signed off from a 'conformity and quality' point of view. It does not permit an inspector to sign for the 'design' itself. The design of all major repairs and modifications must be approved by LAA Engineering. For procedures pertaining to the approval of major repairs and modifications, see SPARS Procedures Section.

Final Inspection Before First Flight

When ticked, this signifies that the inspector is approved to sign the relevant declaration in the LAA Build Inspection Record (or the Permit 'first issue' application form for older projects) of types covered in the aircraft groups defined in adjacent headings. This signature constitutes a recommendation that the LAA should authorise commencement of test flying. Approval to make this recommendation automatically includes the installed engine for any aircraft covered.

Aircraft and Engine Groups: (Top Line and Back Face of Inspector Approval Cards)

Note that there is inevitably significant overlap between many of the groups described below. For approvals not falling into any of the groups below, see Note 1.

A-A = All Fixed-Wing Airframes

Apart from the exceptions described in Notes 2, 9 and 10, this covers all fixed-wing airframes whether constructed of wood, metal and/or composite (fibre reinforced plastic). All other fixed-wing aircraft groups are sub-groups of A-A, (but see Notes 2, 9 and 10).

AC1 = Fixed-Wing Airframes – Simple Composite

Apart from the exceptions described in Notes 2, 9 and 10, this covers all fixed-wing airframes of primarily composite (fibre reinforced plastic) construction which are considered by LAA to be 'simple'. Note 8 provides a list of 'simple' and 'non-simple' composite aircraft types.

AC2 = Fixed-Wing Airframes – All Composite

Apart from the exceptions described in Notes 2, 9 and 10, this covers all fixed-wing airframes of primarily composite (fibre reinforced plastic) construction, not limited to just those in aircraft group AC1.

A-M = Fixed-Wing Airframes - Metal

Apart from the exceptions described in Notes 2, 9 and 10, this covers all fixed-wing airframes of primarily metal construction.

A-W = Fixed-Wing Airframes - Wood

Apart from the exceptions described in Notes 2, 9 and 10, this covers all fixed-wing airframes of primarily wooden construction.

E = All Engines in Fixed-Wing Aircraft

Apart from the exceptions described in Notes 2, 9 and 10, this covers all engines regardless of type, including two and four stroke, radial, rotary etc. and including engines in group 'A' and microlight aircraft and engines in plans-built, kit and factory-built aircraft. *Maintenance and Permit Renewal Recommendations* is the only inspection category available for engines. The inspection categories *Build Stages* and *Final Inspection Before First Flight* are not available for engines - see **Final Inspection Before First Flight** on page 1.

FBG = Factory-Built Gyroplanes

This covers LAA gyroplanes that have originally been manufactured by an approved company. Approval is available in one or both of two categories; *M - Maintenance and R - Airworthiness Review*. See Supplement to Inspector's Card Scope of Approval - Description.

FBM = Factory-Built Microlights

This covers LAA microlight aircraft that have originally been manufactured by an approved company. Approval is only effective if the inspector's approval also covers the aircraft type in question. The only inspection category available is *Maintenance and Permit Renewal Recommendations*, and this automatically includes the installed engine.

G = Gyroplanes & their Engines

Apart from the exceptions in Note 2, this covers all gyroplanes including their installed engine.

K = Kit Aircraft & their Engines

Apart from the exceptions in Note 2, this covers fixed-wing aircraft that have originally been supplied as a kit, and their subsequently installed engine. Applies to kits of wood, metal or simple composite construction (as in aircraft group AC1 above), but not all composite aircraft (as in aircraft group AC2 above). Not covered are plans-built aircraft such as Taylor Monoplane and factory-built aircraft such as Piper Cub.

M = Microlight Aircraft & their Engines

Apart from the exceptions in Note 2, this covers all microlight aircraft and their engines, including both plans-built and kit-built microlight aircraft. It also includes group 'A' versions of aircraft types which are available as microlights, e.g. Rans S6 series.

V = Vintage Aircraft & Their Engines

Apart from the exceptions in Notes 9 and 10, this covers all LAA 'vintage' factory-built aircraft such as Piper, Auster, Jodel, Jungmann, Taylorcraft, Aeronca etc and includes their engine. Not included is any aircraft built from a kit or plans.

4SA = Four-Seat Aircraft

This covers all four-seat (or more) aircraft, as defined by the maximum number of occupants for which the aircraft is intended to be cleared. Approval is only effective if the inspector's approval also covers the aircraft type in question. *Build Stages* is the only inspection category available for this aircraft group as *Maintenance and Permit Renewal Recommendations* and *Final Inspection Before First Flight* are covered by the generic aircraft groups.

NOTES

1. Non-Standard Approvals

Approvals which do not readily fall into any of the above aircraft and engine groups, normally those that are aircraft or engine type-specific, will be described using the last column and bottom line of the approval matrix on the front face of the inspector's card, and should be self explanatory. This space may also be used to complete an approval description in the event that an inspector's approval otherwise card is already 'full'.

2. Factory-built Microlights, Factory-built Gyroplanes and 4-Seat Aircraft Build Stages

Approvals to sign for *Maintenance and Permit Renewal Recommendations* for factory-built microlights and factory-built gyroplanes, and the approval for *Build Stages* of four-seat (or more) aircraft are not included in any of the generic aircraft approval groups. When approval is held for these groups it will be indicated by the use of codes FBG, FBM and 4SA as appropriate. The reason for this in the case of four-seat aircraft is to provide the LAA with an opportunity to highlight to an inspector the extra level of responsibility inherent with an aircraft potentially carrying a number of non aviation-aware passengers. Similarly, for factory-built microlights and factory-built gyroplanes being able to conduct commercial flight training, specific type experience is normally required prior to an inspector gaining approval in these aircraft groups. Inspectors wishing to inspect any of these aircraft should contact the Chief Inspector with a suitable written request.

3. Scope of Maintenance Approval

Inspectors with a box ticked under any of the groups AC1, AC2, A-M or A-W and correlating with the inspection category *Maintenance and Permit Renewal Recommendations* may also sign for maintenance on any other LAA aircraft airframe, including gyroplanes (but not including factory-built microlights, factory-built gyroplanes or aircraft referred to in Notes 9 and 10). This is as long as the maintenance does not include any structural repairs or any work to a gyroplane rotor system, and does not include Permit Renewal recommendations. This arrangement is in recognition of the fact that its usually irrelevant what material an aircraft is manufactured from if the task in hand is simply to service a system or change a component.

4. Signing for Own Work or Aircraft

There is no restriction on LAA inspectors signing off their own work, as long as the work is within the scope of their approval, except for the following. LAA policy is that whilst any suitably approved inspector, even if the owner, may carry out and sign off 'between-permit' work and sign off worksheets and Section 2 of the Permit Renewal application form, only inspectors who do not own or part own the aircraft may sign the Inspector's Declaration (Section 3) of the Permit Renewal application form, unless the inspector is also a licensed engineer. No inspector is permitted to sign off the build stages of any project that they own, or part own.

5. Approval Extensions and Authorisations

Inspectors are welcome to request an extension to their current scope of approval whenever they feel more experience has been gained or circumstances changed. Inspectors should write to the Chief Inspector with a suitable request, including a resume of experience that is relevant to the extended coverage requested. Amendments will be confirmed (or denied) by letter, effective straight away, with the inspector's card showing the change when next issued.

It is possible, in exceptional circumstances, to authorise an inspector to make a particular once-off certification that is outside the normal scope of their approval. Grant of such an authorisation would be subject to suitable experience and the availability of tools, manuals and facilities etc and good reason being given. Inspectors should apply, in writing, to the Chief Inspector on a case by case basis.

6. Maintenance of Standards

An inspector approval is issued because it has been shown, and believed by the LAA, that an individual has the necessary experience, qualification and good intention to be awarded such approval. However, inspectors should be aware that non-compliance with applicable procedures or failure to maintain adequate standards can lead to suspension or revocation of their inspector approval.

7. Certifications, Confirmations and Recommendations

Handed down by the CAA via LAA Engineering, the fundamental privilege afforded by the approval awarded to an LAA inspector is the ability to sign a PMR (Permit Maintenance Release). This is a legally recognised certification statement that is required after maintenance as a 'Condition' of a Permit to Fly. Only an LAA inspector can sign a PMR for an LAA aircraft and an aircraft's Permit would be rendered invalid if this Condition was not met, and flight would therefore be illegal. LAA inspectors are also approved by the LAA to sign various in-house certifications, confirmations and recommendations, such as project build stages, weight schedules, duplicate inspections and Permit Renewal application forms. The SPARS Procedures Section provides advice on most of these aspects.

The LAA inspector approval system is necessarily simple and it is inevitable that some inspectors will find that their approval covers them for work of a type for which they have little or no prior experience. The LAA does not expect, for example, that an inspector cleared to inspect 'all engines' will be likely to have a thorough knowledge of each and every type of engine in use in an LAA aircraft. It is therefore incumbent on inspectors to undertake inspection only of those tasks, airframes, engines etc. with which they are either already familiar or are prepared to research to an appropriate extent first. Inspectors are not obliged to 'inspect on demand', and inspectors being asked to oversee a project or inspection about which they feel uncomfortable should decline to be involved and point the LAA member in the direction of a more suitable inspector, or otherwise advise them to contact LAA Engineering.

8. Simple and Non-Simple Composite Types

For the purposes of defining the range of aircraft types covered by aircraft group AC1, below are lists of LAA composite aircraft classified as 'simple' and 'non-simple'. Composite aircraft types not listed below should be assumed to be 'non-simple' and would be covered by aircraft group AC2. If in doubt, inspectors should contact LAA Engineering for advice.

Simple: *CFM Shadow and Streak Shadow, Glastar, Jabiru, MCR-01, Pelican Club, Pulsar and Starlite, SkyArrow, Sting, Twister.*

Non-Simple: *Cozy, Europa, Glasair, Lancair, Rutan.*

9. Aircraft Not Included in Generic 'Aircraft Groups' Described in this Document

Due to particular maintenance needs various specific aircraft types are not included in any of the generic aircraft groups described in this document. Below is a list of aircraft types affected, current as of April 2017. This list is also shown in the website Inspector Zone, and will be updated there if further types are added subsequent to the issue of this document. Approval to inspect any of the aircraft identified in this Note 9 (including updated website list) will be signified by a Letter of Authorisation, on a type by type basis. Inspectors wishing to inspect any of these types should contact the Chief Inspector with a suitable written request.

Kraguj P2, Edge 540, DHC-1 Chipmunk, Miles Gemini and Scottish Aviation Bulldog.

10. Aircraft Approved for Night/IFR Flight

Permit Renewal recommendations and work involving certain specific 'critical' systems (see LAA night/IFR TLs) on aircraft approved for night/IFR flight need to be overseen by inspectors with a night/IFR endorsement on their inspector's approval. Endorsement is signified by individual letter. Inspectors seeking to obtain a night/IFR endorsement should contact the Chief Inspector with a suitable written request.