

LMA Registration Number	
Aircraft Type / Name	
Aircraft Classification	Fixed Wing Power / Powered Glider / Pure Glider / Helicopter / Multirotor
Work Type	Modification / Repair
Weighed MTOM (kg)	
Operator	
Builder / Repairer	
Inspector(s)	

This checklist shows the compliance of modification or repair to the model aircraft above in accordance with the design requirements that apply to large model aircraft being designed, constructed and flown under the LMA Over 25kg Scheme. Only the requirements impacted by the scope of the modification / repair need be considered and compliance recorded.

Inspection Number	Inspection Stage	Inspector Name	Inspector Signature	Inspection Date
1				
2				
3				

System / Structural Area to be changed or repaired	
Description of change or repair	

SUBPART A – GENERAL - No compliance statements needed

SUBPART B – PERFORMANCE

This column
Y, N or N/A
And inspection
number

DR-LMA-2000 Approved Operating Limitations	
Test flights recommended of -	
Are any special operational limitations needed for the aircraft? If so, define limitations-	

DR-LMA-2100 Mass and centre of gravity	
Description of weighing and C of G measuring process carried out-	
Weighed MTOM (with all batteries & equipment fitted & all tanks full)	kg
C of G position / range -	

SUBPART C – DESIGN AND CONSTRUCTION

DR-LMA-3000 Structural design loads	
DR-LMA-3010 Structural strength	
Are the loads on the aircraft structure appropriate to the aircraft type understood by the repair / modification designer?	
Have all loads appropriate to the aircraft type been taken into account in the design of the aircraft repair / modification?	
Has the structure repair / modification been designed to be able to support limit and ultimate loads appropriate to the aircraft type?	
DR-LMA-3020 Structural durability	
Are any special inspections in addition to the standard annual inspection needed? If so, list here-	
DR-LMA-3100 Aeroelasticity	
How is flutter planned to be controlled (e.g. control surfaces mass and / or aerodynamically balanced, minimised free play, sufficiently powerful servo(s))?	
Is the free play on all control surfaces minimised?	
Are all servos and control linkages adequately stiff and strong?	
Is the structure and are all control surfaces adequately stiff?	
DR-LMA-3200 Design and construction principles	
Summary of the modification / repair structural design-	
Is the detail design and construction of the aircraft modification / repair of an appropriate quality?	
Impression of construction quality-	

Are all access panels, doors and canopies designed to not open in flight?	
DR-LMA-3210 Protection of structure	
If needed, is the structure protected (e.g. wooden seaplane varnished internally)?	
Is maintenance access possible to all parts and structure that may need maintenance?	
Does sufficient clearance exist between the structure and moving parts?	
DR-LMA-3220 Materials and processes	
Wooden Structure Modification / Repair	
Brief Description of the wooden modification/ repair process-	
Are the wood types used appropriate, with grain direction appropriate, free of knots and other defects?	
List wood types used-	
List adhesives used-	
Are all bonded joints of an appropriate quality?	
Composite Structure Modification / Repair	
Brief Description of the composite modification/ repair process-	
Are the cloths, fibres and resins used compatible?	
List cloths, fibres and resins used-	
Are all parts properly made, with no dry spots or excessive resin?	
Are fibre direction(s) and the layup of laminations appropriate for the parts?	
Are core materials (foam, honeycomb, balsa etc) appropriate and appropriately oriented & located for the parts?	
Are all bonded joints of an appropriate quality?	
Metallic Structure Modification / Repair	
Brief Description of the metallic modification/ repair process-	
List metals used-	
Are the types and grades of metal used appropriate?	

General Structure	
Does the modification / repair design account for material variability of all materials used and the effect on materials from the operating environment?	
If any critical modification / repair processes are used are they understood and controlled / recorded appropriately? Briefly describe process and if necessary attach copy of process & records-	
Are the types and grades of fasteners used in the structure appropriate for their intended use and loading?	
Is the covering applied to the structure appropriate to the aircraft type and applied to an appropriate quality? Describe covering materials used-	
DR-LMA-3330 Transportation, reconfiguration and storage	
Are any special maintenance actions / inspections in addition to the standard maintenance schedule needed? If so list here-	
Does the design prevent the aircraft from being assembled incorrectly?	
DR-LMA-3400 Landing Gear systems	
Is the design and construction of the landing gear adequately robust and strong for the intended operation of the aircraft?	
Summary of landing gear design and construction materials, including wheels tyres and brakes-	
Do steering wheel(s) steer positively with a sufficiently robust steering mechanism?	
Does the landing gear retract and extend without jamming and positively lock in the takeoff / landing position?	
Retraction mechanism type & power-	
Brake power source- Do the brakes work reliably and symmetrically?	
DR-LMA-3410 Buoyancy for UA for take-off and landing on water	
If intended for operations on water does the aircraft have sufficient buoyancy to support take-off and landing in water conditions?	
DR-LMA-3500 Protection Against High Energy Electrical Sources	
If LiPo batteries of more than 12S fitted (or other batteries greater than 50v DC) are fitted, are adequate warnings and appropriate shielding installed?	
DR-LMA-3600 Fire protection	
Are fuel tanks & fuel lines located and routed clear of hot exhausts and similar hot parts that may melt tanks / lines and ignite the fuel?	
Do all fuel vents and overflows discharge clear of hot engine / exhaust parts?	

Are and additional systems needed for safe flight designed and installed adequately for their intended function?	
Do any systems not needed for safe flight (e.g. bomb doors, lights) operate without causing a risk to the aircraft or uninvolved people / property?	
DR-LMA-5100 UAS power supply, generation, storage, and distribution	
Note – This applies to the stored power (electricity) for the onboard flight control / radio system	
Is all power supply wiring of an appropriate type and gauge and adequately routed?	
Are all switches and connectors appropriate for the expected load and appropriately installed?	
If one power supply fails during flight, will the remaining supply have adequate capacity and voltage / current capability for the remainder of a flight?	
Can the failure of one power supply be detected before or during a flight?	
Number of batteries: at: Ah of: Cells / Volts Battery Type / chemistry:	
DR-LMA-5200 UA Flight Control System	
Does The flight control system diagram identify all servos, receivers and other equipment with their model numbers?	
Is the overall design and installation of the flight control system (e.g. servos, receivers) appropriate to the aircraft and the intended operations?	
Is all flight control equipment adequately installed and cables appropriately sized and routed?	
Are all connectors used appropriate for the electrical load and secured against disconnection?	
Are all mechanical parts of the flight control system adequate for their task and adequately installed?	
Flight control frequency and output power: 2.4GHZ, 100mW / 868MHz, 25mW / Other –	
Does the failsafe meet the minimum requirement of preventing the aircraft from leaving the defined flying area in case of loss of radio control link?	
Describe failsafe action-	
Has failsafe operation been checked by turning the transmitter off with engine(s) / motor(s) running?	
DR-LMA-5300 Pressurised systems elements	
If compressed air systems are used, are the pressure reservoirs and piping adequate or commercially available parts used and all parts installed appropriately?	
Are any other pressurised systems are used, are they capable of withstanding appropriate operational and environmental pressures?	
DR-LMA-5400 Flight data recorder	
Is the aircraft fitted with a flight data recording system that records the GPS time/ date and the speed and 3-dimensional position of the UA at least every 2 seconds?	
Has the data recorder been tested and shown to be recording the correct data?	

SUBPART F – REMOTE PILOT CONTROLS

DR-LMA-6000 Remote Pilot Controls (Performance)	
DR-LMA-6100 Remote Pilot Controls (Human Factors)	
Is the radio control transmitter adequate for the type of flying operations envisaged?	
Are the transmitter controls set up so that the pilot can safely operate the aircraft?	
Are any telemetry alarms only for flight critical values?	

Transmitter make & model-	
If other pilot controls are provided (such as a ground control station) are they adequate for the type of flying operations envisaged and set up so that the pilot can safely operate the aircraft?-	

SUBPART G – UAS INFORMATION

DR-LMA-7000 Aircraft Information	
Is the standard maintenance schedule being used with additional inspections / maintenance required for the intended operations identified?	
Is the maintenance schedule to be used attached to this checklist?	

Final Inspection Checklist		
Items to be visually checked during final inspection before first flight post modification / repair as a final confirmation that the aircraft is completed and is ready for flight. This is intended as a thorough pre-flight check and not a complete re-inspection		
Structure Internal structure External structure and covering Control surfaces and hinges Structural joints		Powerplant & Energy Storage Installation Fuel system, ignition system, exhaust system, engine controls Engine / motor mounts Batteries, wiring, connectors
Flight Controls Receivers antenna orientation Servo wiring routing and security, power wiring routing and security Batteries and switches Servo attachments, hinges, brackets, push rods, bell cranks, control horns, balance weights, cables, pulleys, fairleads		Landing Gear Assembly and fittings Brake system Hoses and pipes Wheels and tyres Nose / tail wheel steering operates in correct sense Retraction / extension check
Full and free movement in correct sense of all controls, including any trim tabs		Aircraft LMA ID marked
Failsafe operation checked		Operator ID marked
Engine(s) ground run		Inspection Record Completed with all attachments

I have inspected the aircraft above and confirm by signing below that as far as can be reasonably ascertained the modification / repair to the aircraft complies to a satisfactory standard with all the applicable requirements listed above in accordance with the LMA Over 25kg scheme and can proceed to flight testing.

Inspector Name		
Inspector LMA Number		
Date		
Inspector Signature	"	

