CLASSIFICATION OF MODS AND REPAIRS

The classification of any design change as major is significant because it affects the level of certification activities which must be undertaken. The applicant for a modification, repair or concession is invited to make a determination of the classification of the change. This is reviewed and may be amended by LAA Engineering.

The criteria for determining how a design change is classified as major or minor is as follows:

A Design Change is classed as major if it significantly affects:

- Primary structure
- Primary Control systems
- Aerodynamic Surfaces
- Flight Characteristics
- Ground handling
- Limitations

All other design changes are classed as minor.

Primary Structure is defined as: Those portions of the structure, the failure of which would seriously endanger the aeroplane.

Important note

Both Major and Minor modifications must be approved by LAA Engineering. LAA Inspectors are not authorised to approve the design of modifications no matter what their classification.

DESIGN ASPECT	MINOR CHANGE EXAMPLE	MAJOR CHANGE EXAMPLE
Primary Structure	A substitution of materials or parts in the secondary structure	A substitution of materials or parts in the primary structure Any repair or new fastening which drills through primary structure
Fuel and Oil Systems	Substitution of a fuel system component with another aircraft approved component of the same capacity	Change to a different type of fuel or oil pump. Addition of new tank, flowmeter, injector, carb heat. Changing a metal fuel tank to a fibre-glass tank
Crashworthiness	Substitution of a piece of secondary structure with one of equivalent crashworthiness which has otherwise identical strength, stiffness and function as the original.	Addition of a new head strike hazard in the cockpit Change to incorporate a more comfortable seat structure
Flight Handling	Addition of a fixed control surface tab.	Addition of a new elevator trim system Addition of automatic flap / trim interconnect. Fitment of a heading hold auto-pilot or wing leveller.

CLASSIFICATION OF MODS AND REPAIRS

Aircraft Performance	Minor changes which have negligible or positive effect on a/c performance e.g.: Addition of fairings or spats. Addition of an externally mounted navigation light.	Change from fully enclosed canopy to open cockpit and windscreens Addition of a wind powered electrical generator Change to alternative approved propeller of different pitch
Propeller	Change from one type of propeller to another of the same pitch control type which may be of different construction (metal, composite, wood etc) but which is already approved for the engine.	Changing from one type of propeller to another of different pitch control type, construction or one which has not been previously approved for that engine. Change in Diameter.
Radio / Avionics	Permanent installations of CAA approved equipment in accordance with LAA Information Sheet 10.	Installation of or changes to permanently installed equipment outside the scope of LAA Information sheet 10.
Flying Control Systems	Changing from one type of control rod end bearing to another of aircraft approved type with same or better geometric characteristics and load capability.	Changing from an electric to hydraulic undercarriage retraction actuator Change from cable to push-rod control system
Occupant Restraint	Substitution of same design harness assembly of aircraft approved type and same or better load capability.	Change from a lap and diagonal harness to a four-point configuration A change in Safety Harness attachment detail.
Aircraft Aerodynamics	Addition of an externally mounted navigation light	Change to fin shape Modification to wingtip shape
Ground Handling	Change to a different type of aircraft approved wheel / tyre assembly of same or better performance and load capability.	Change in undercarriage geometry Addition or change to ground roll braking system
Power Unit (engine)	Insignificant change to engine model variant (e.g. O-360-A1 to O-360-A2)	Significant change to engine type or model (e.g. O-360-A1 to O-360-B1) Substitution of different mountings or accessories
Noise levels	No change, which affects noise is considered minor.	Any changes to exhaust system which significantly affects noise
Electrical system / Insts	Change to a different type of alt'r of same or greater output which is already approved for that engine. Re-routing the pipes in the pitot static system.	Addition of an alternator Change to fully electric engine management or monitoring