

AUSTRALIAN SPORT ROTORCRAFT ASSOCIATION INC

AIRWORTHINESS DIRECTIVE



ABN 53 412 417 012

No: AD 2008.02

Date: 21st November 2008

**Subject: Supplement to 2 seat Sport Gyroplane Standard G561(e)
Internal fuel storage in cabin or pod equipped gyroplanes**

Background.

Some sport gyroplanes are fitted with either partial or full pods or have partial or full cabins within which fuel containers are located, usually necessitating the employment of a fuel inlet pipe extension to make the fuel cap externally accessible.

Investigations into 2 fatal sport gyroplane accidents involving fire have identified that structural deformation of the pod or cabin and frame is likely to result in extended fuel inlet pipes tearing away or being forcibly detached from in-cabin or in-pod fuel containers, (especially in instances where the external cap fitment is attached to the exterior of the pod or cabin), substantially increasing fire risk during accidents. Further, outgoing fuel lines leading away from such in-cabin or in-pod fuel containers might also in some circumstances tear away or be forcibly detached leading to hazardous spillage within the pod or cabin, albeit at lower rate than is likely to occur with the larger diameter inlet pipes.

Requirement.

As from the date of issue of this directive, compliance with 2 place gyroplane standard G561(e) will be assessed including these supplementary specific requirements:

- (a) Inlet arrangements - that any fuel inlet pipe extension will not be readily torn away from the in-cabin or in-pod fuel container in case of structural deflection or outright deformation during a hard landing, rollover or other high-energy ground impact and that any external filler cap on any such extension not be rigidly attached to any other part of the structure or the exterior of the cabin or pod; and
- (b) Outlet arrangements - that there is a minimum of 250mm surplus of fuel tube within the pod or cabin between the fuel container outlet fitting and the first point where the fuel line is cable-tied, clamped or otherwise affixed to the gyroplane frame or pod as an allowance to significantly reduce the likelihood of the fuel line being torn or detached from the fuel container outlet fitting in the hard landing or structural deformation accident circumstances described above in para (a).

Directive

If modification is necessary to re-establish compliance, modification is required at the earliest available opportunity but in any event it is to be completed not later than the accrual of 10 hours flight time after the date of issue of the AD. Compliance modification at the earliest opportunity is strongly recommended to avoid potentially jeopardising insurance coverage. Detected non-compliant operation beyond the transitional flight allowance could result in de-registration.

Notwithstanding that these requirements apply to 2 place gyroplanes it is also **STRONGLY RECOMMENDED** that the owners/operators of all sport gyroplanes review the fuel inlet and outlet arrangements on their current or under-construction machines against these identified risks and undertake whatever modifications are needed to minimise the likelihood of torn-away or forcibly detached fuel lines during hard landings or accidents.

Where modifications are necessary, such modifications should be annotated in the gyroplane logbook and signed off by an ASRA TA or other approved person.

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