AUSTRALIAN SPORT ROTORCRAFT ASSOCIATION INC

AIRWORTHINESS DIRECTIVE AD 2002.02



1 December 2002

Attention 95.12.1 Exemption holder (Two Place Gyroplanes),

With respect to past and most recent gyroplane accidents, the ASRA is following the USA Popular Rotorcraft Association example and taking the following temporary Emergency Action.

In an effort to make all two place gyroplanes as safe as possible, the ASRA is now requesting that all two seat gyroplanes operating under 95.12.1. use a horizontal stabilizer. We hope that everyone will voluntarily comply with this effort to promote safety. The following is what we are requesting of all two-seat owners'.

- a. Equip your aircraft with an appropriately effective horizontal stabilizer.
- b. When training under 95.12.1, stress to your student the need for a horizontal stabilizer.

This emergency action is temporary, pending release of a final determination for an international standard for minimum size and handling requirements. With today's improvements in performance and technology the ASRA and the PRA both agree that an appropriately effective horizontal stabilizer is paramount to safety for all gyroplanes.

The following is the latest version of HS minimum size suggested by the International ASTM Committee for Gyroplane standards, and complying fully with the following suggestion now may well avoid having to change your stabilizer again in the near future.

- 1. If the horizontal stabilizer has an airfoil shape and is located in the propeller wash, the volume must be 5% of the Rotor Volume
- 2. If the horizontal stabilizer has an airfoil shape and is located outside of the propeller wash, the volume must be 8% of the Rotor Volume
- 3. If the horizontal stabilizer is a flat plate airfoil shape and is located in the propeller wash, the volume must be 8% of the Rotor Volume
- 4. If the horizontal stabilizer is a flat plate airfoil shape and is located outside of the propeller wash, the volume must be 10% of the Rotor Volume
- The horizontal stabilizer volume is the product of the area of the horizontal stabilizer times the horizontal distance from the mean 1/4 chord point to the centre of gravity (CG) of the loaded aircraft.
- The Rotor Volume is the rotor blade area (not the disc area) times the blade diameter

(Obviously you must use the same units in all calculations).

Sincerely,

The ASRA Board