AUSTRALIAN SPORT ROTORCRAFT ASSOCIATION INC

ABN 53 412 417 012

AIRWORTHINESS DIRECTIVE

No: 2009.01

Date: Sunday, 22 February 2009

Subject: Control/Push Rods and Rod Ends

Background.

Investigation into a recent fatal gyroplane accident has revealed the probable cause as being the detachment of spherical-bearing rod-ends from a control rod, resulting in loss of control. This particular system was unique in that one rod end used a right hand thread whilst the other was left handed. This setup allows the total length of the control/push rod to be easily adjustable simply by loosening the locknuts and rotating the control/push rod in the required direction. The disadvantage is that if the locknuts are not properly secured such that they preclude the spontaneous movement of the control/push rod due to vibration, it is possible for the control/push rod to become detached from one or both rod ends in flight rendering the gyroplane uncontrollable.

Directive.

With immediate effect, owners, pilots and operators of all gyroplanes registered with ASRA are required to comply with the following:

1. Where the rod ends associated with the control/push rods within the control system utilise right hand threads, the lengths of the control/push rods must be adjusted such that when the rod has been adjusted to provide the correct amount of head movement, a **minimum** of 50% of the total available thread (disregarding the thread used by the locknut) must be inserted into the threaded portion of the control/push rod (see Figure 1 below); **OR**
2. Where the rod ends associated with the control/push rods within a control system utilise a combination of left and right hand threaded rod ends, in addition to locknuts, a positive locking mechanism must be utilised to preclude the unwanted rotation of the control/push rod in the event that the locknuts are not properly secured.
3. When modifications in accordance with 1 or 2 above deemed necessary are complete, the work must be satisfactorily inspected by an ASRA Technical Adviser or other approved person and an appropriate entry made in the Gyroplane Logbook.

Furthermore, it is strongly recommended that whether or not modifications are necessary to comply with the above, that a “strong” thread locking compound be used on the threads of the rod ends after adjustments are made and before final assembly is complete.

Allan Wardill
Operations Manager

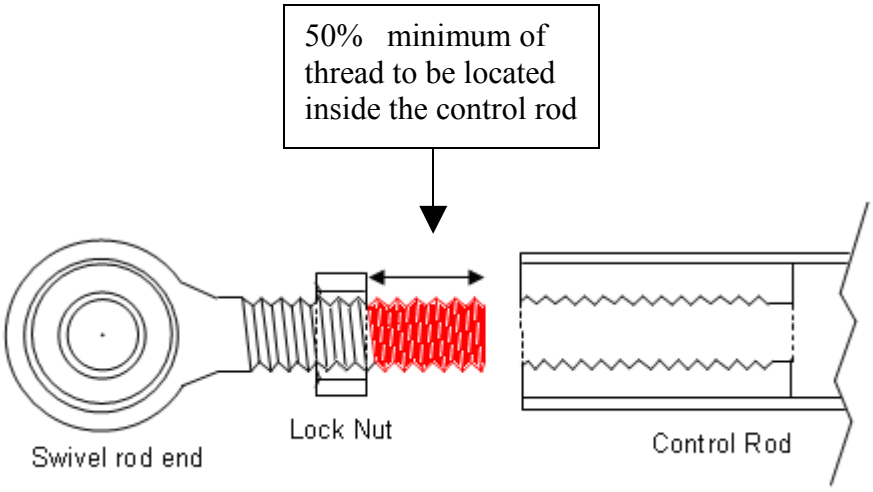

Figure 1.