



Australian Government
Civil Aviation Safety Authority

OFFICE OF THE DIRECTOR OF AVIATION SAFETY

Trim Ref: G110/346

16 April 2010

Mr Peter White
State Coroner
Coroner's Court of Victoria
436 Lonsdale Street
MELBOURNE VIC 3000

Dear Mr White

I refer to the findings of the inquest into the death of Mr Andrew Mull (Court Reference 1171/06).

In those findings you made a number of recommendations pursuant to section 72(2) of the *Coroners Act 2008* which were relevant to the Civil Aviation Safety Authority (CASA). CASA has undertaken a detailed consideration of those recommendations and our response is attached.

Yours sincerely

A handwritten signature in cursive script, appearing to read 'Jonathan Aleck', written in black ink.

Jonathan Aleck
Acting Associate Director of Aviation Safety

Coroner's recommendations

206. I recommend that the responsible federal authorities distinguish the position of kit build helicopters from the legal framework set up to apply to other so called 'experimental' aircraft, and that instead of existing arrangements, the need to develop a separate and different legal framework for kit build helicopter enthusiasts, is now recognized.

CASA response

The Australian regulations are harmonised with regulations that originated in the United States. These regulations form an integrated package of initial and continuing airworthiness requirements for all aircraft types and make no distinction between the forms of experimental aircraft, be they kit build or otherwise. Regulation 21.191(g) of the *Civil Aviation Safety Regulations 1998* (CASR) states that an experimental certificate may be issued for operating an amateur-built aircraft—that is an aircraft the major portion of which has been fabricated and assembled by a person who undertook the construction project solely for the person's own education or recreation. The US Federal Aviation Administration (FAA) accepts kit build aircraft under similar rules. Further, although this unfortunate accident occurred, CASA has no technical or empirical evidence that demonstrates a need to differentiate kit built helicopters from other kinds of kit built aircraft. CASA does not intend to develop a separate legal framework for kit build helicopter enthusiasts.

The issues which then arise should be addressed having primary regard to the physical safety of kit build helicopter pilots and to those others likely to be effected by an aircraft component or maintenance failure.

CASA response

CASA provides for the protection of other persons not engaged in sport aviation under the provisions of CASR 21.193 (c), which makes clear the fact that CASA may impose limitations on an experimental aircraft with the aim of protecting third parties. CASA does not intend to alter the fundamental basis of this part of the regulations, which recognise that recreational aviation participants are informed of the risks associated with recreational aviation and accept those risks.

207. Having regard to the inherent and significant risk that existing Rotorway Exec 162 kit build helicopters may constitute to their owner pilots, as well as to the public at large, I recommend that as an interim measure CASA issue an Airworthiness Directive under CASA Regulation Part 39 (and/or uses such other powers as it may deem appropriate),

CASA response

CASR 39.001 states that CASA may issue an airworthiness directive (AD) if an unsafe condition exists in an aircraft or aeronautical product of that kind, and the condition exists, or is likely to exist, or could develop, in other aircraft or aeronautical products of that kind. Despite the occurrence of this unfortunate accident, there is no evidence that existing Rotorway Exec 162 kit build helicopters, when properly maintained, pose an inherent and significant risk to their owner pilots. CASA does

not intend to raise an AD in this instance as CASA does not believe there is an unsafe condition identified with a sufficient degree of particularity to warrant or justify the issuance of an AD.

a) to prohibit the flying of all Rotorway Exec 162 aircraft with immediate effect, with such prohibition to remain in force until the manufacturer, satisfies design (and build) standards to be established by CASA, following consultation with the manufacturer, and until each owner demonstrates to CASA in a test which includes flight testing, that any particular individual helicopter satisfies that airworthiness standard.

CASA response

This recommendation would affect all of the Rotorway Exec 162 aircraft on the basis of a single accident involving a single poorly maintained example, operated by a very low-hour pilot, who arguably did not have the skills either to maintain the aircraft or the knowledge necessary to know when maintenance was required. The circumstances of the accident itself precluded any definitive findings being made as to the actual cause or causes of the accident. Had Mr Mull actually assembled the aircraft himself, and followed the guidance available in the appropriate Advisory Circular (AC 21-4(2)), or availed himself of the support available from the appropriate sport aviation body, it is arguable that he would have acquired the necessary knowledge and skills to enable him to avoid the conditions that resulted in the accident. Further, the recommendation is contrary to the express provisions of the legislation which provide for experimental aircraft to be issued with a certificate of airworthiness without having to go through the type certification process.

b) no further permissions are to be given for the building of, or future maintenance of, either existing or newly built Rotorway Exec 162 aircraft, by persons who are either non-LAME qualified persons, (or non-CASA approved, qualified persons).

CASA response

Under the provisions of regulation 42ZC of the *Civil Aviation Regulations 1988* (CAR), the builder of an experimental aircraft may be authorised by CASA or an Authorised Person to maintain his/her own aircraft. All maintenance is to be performed in accordance with the instructions contained in the aircraft's log book. The Sport Aircraft Association of Australia is currently conducting maintenance courses for amateur builders who have not built the aircraft themselves. CASA is currently investigating the possibility of amending the regulations, or the existing Maintenance Authority (MA), to include the requirement for all kit builders to undergo this training before they are eligible to exercise the privileges conferred by the MA.

c) no further pilot licences or licence upgrades or licence renewals, to fly Rotorway Exec 162 aircraft are to be issued until pilots receive appropriate endorsement level training in Rotorway Exec 162 aircraft, or in such other similar aircraft as may be approved by CASA.

CASA response

Under the current regulations there is no specific licensing permission issued for the Rotorway Exec 162. A person authorised to fly a helicopter that is covered by a type

or class endorsement specified in Civil Aviation Order (CAO) 40.3.0 is, ordinarily, authorised to fly the Rotorway Exec 162 type helicopter. Apart from the generally applicable regulatory provisions that require a pilot to be responsible for the safe operation of aircraft, there are no specific additional licensing, rating or endorsement standards that apply to flying a Rotorway Exec 162 type aircraft.

d) CASA places such additional limitations on the future licensing arrangements, relating to the Rotorway Exec 162, that CASA may consider are needed to provide a reasonable level of safety for pilots, passengers and any other person likely to be effected by component or maintenance failure.

CASA response

CAO 43.3.0 currently provides for any type or class of helicopter, piston engine powered or turbine powered. Since the Rotorway Exec 162 is powered by a piston engine, CASA is considering reviewing for adequacy the provisions of CAO 43.3.0 in relation to this type or class of helicopter.
