



Australian Government

Australian Transport Safety Bureau

# Safety Advisory Notice

To the amateur-built helicopter and mustering industries

Number: AO-2015-089-SAN-014

## Are you operating your amateur-built helicopter as designed?

Operating an amateur-built experimental helicopter outside the recommended design intent can potentially expose the helicopter to unintended stresses, and lead to the failure of critical components in-flight.

### What happened

On 28 July 2015, the pilot and owner of an amateur-built Cicaré CH-7BT helicopter, registered VH-JEW, was conducting a ferry flight from Indee Station to Roy Hill Station, Western Australia. When about 8.5 NM north-east of Roy Hill Station, the stabiliser assembly fractured leading to an in-flight break up and collision with terrain. The pilot was fatally injured and the helicopter was destroyed.

### Why did it happen

The ATSB examined the helicopter wreckage and identified that the stabiliser had separated in-flight from the tail boom as a result of fatigue cracking of the stabiliser mount. This was the second fatal accident in Australia involving in-flight stabiliser separation on a Cicaré CH-7B helicopter (*In-flight break-up involving Cicaré CH-7B, VH-SWQ 43 km north-west of Barcaldine Airport Queensland on 12 May 2014 (AO-2014-086)*).

During the course of the investigation, the ATSB found that a number of these amateur-built helicopters were being used for mustering operations, although the manufacturer stipulated that they were designed for recreational and sport use only. In addition, the ATSB established that both VH-JEW and VH-SWQ were fitted with external storage accessories, likely without the appropriate engineering assessment to ensure there would be no adverse effects on the performance, handling and structure of the helicopter. Although not the only contributors to the development of these accidents, operating outside the manufacturer's design intent and limitations has the potential to induce stresses on the aircraft, leading to premature wear and possible failure.

### Safety advisory notice

**AO-2015-089-SAN-014:** Operating an amateur-built helicopter within the stated design intent and limitations is essential for safe conduct of flight. The ATSB advises owners/operators to be aware of the risks associated with operating amateur-built helicopters outside the limitations prescribed by the manufacturer. For example, mustering operations and the addition of unapproved modifications, can potentially produce unintended stresses on the airframe leading to the premature failure of components.

Read more about this ATSB investigation: [AO-2015-089](#)



VH-JEW (Source: Andrew Miles)

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