



1. Effectivity

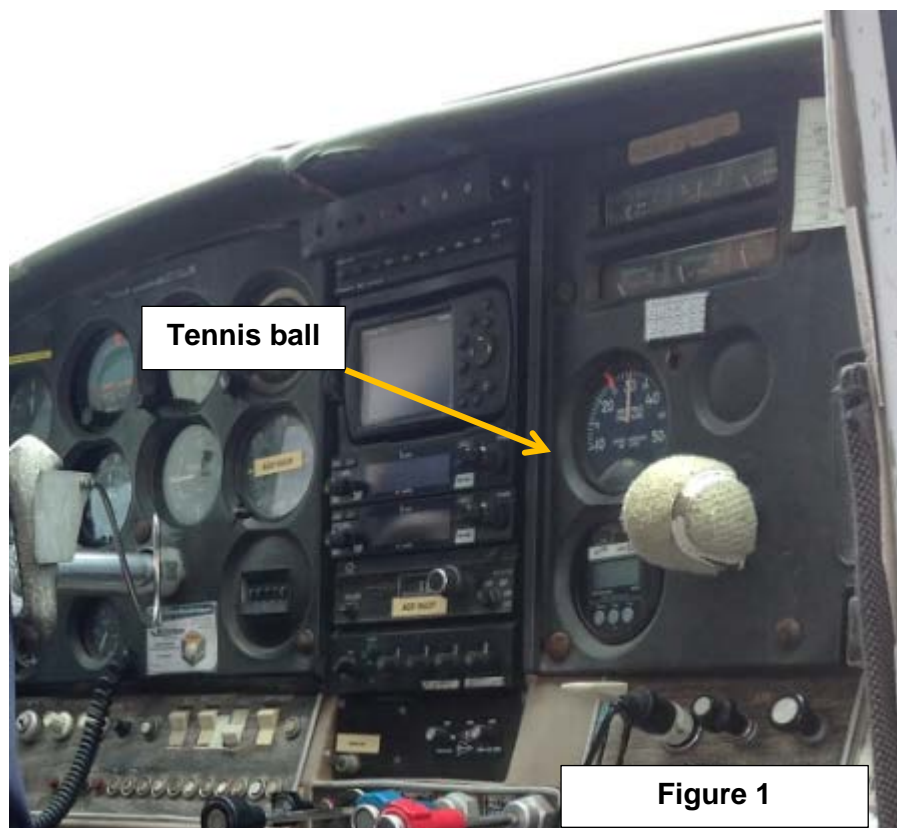
All aircraft that have been modified, including aircraft modified or adapted for special purpose operations.

2. Purpose

Remind all aircraft operators and owners of their obligation to ensure that their aircraft conforms to Type Design and are maintained in a serviceable and airworthy condition. Unapproved modifications render the aircraft unairworthy.

3. Background

During an audit of a Cessna aeroplane engaged in parachute operations, CASA discovered that the co-pilots roll and pitch control in one aircraft had been modified by removing the control yoke and covering the open end of the tube using a tennis ball (Figure 1).



The forward and aft motion of the control column had been disabled by disconnecting one end of the pitch control push-pull tube from the elevator control system, and the rod-end loosely secured to a convenient portion of the electrical loom under the instrument panel (Figure 2). The unapproved modification represented a significant threat to safety of flight.

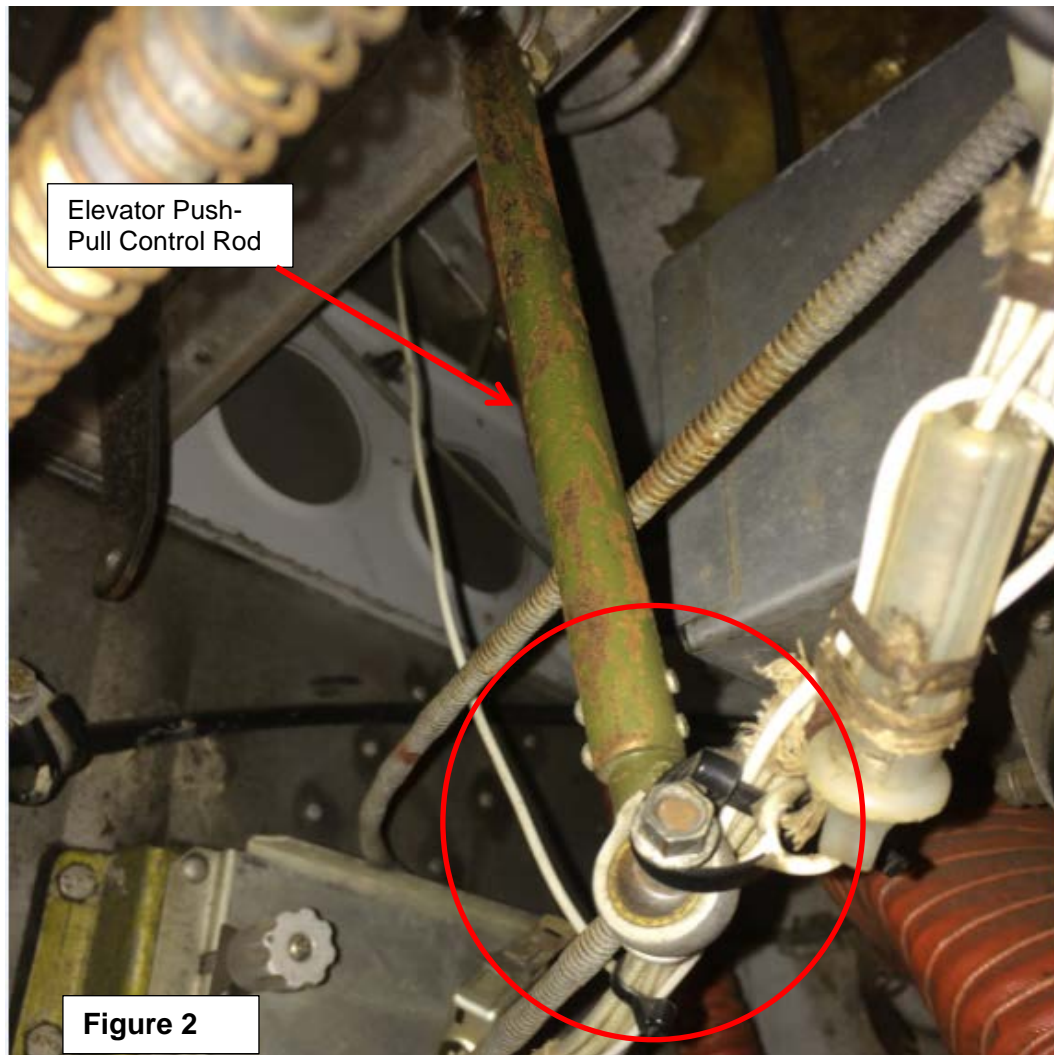


AIRWORTHINESS BULLETIN

Unapproved Modifications - Flight Controls,
Structures and Systems.

AWB 02-054 **Issue :** 1
Date : 22 January 2016

A person may modify or repair an Australian aircraft only in accordance with approved data, and the modification or repair must be certified for in the aircraft log book. (Also refer *"Dodgy Mods" Flight Safety Australia September October 2006*).



All modifications are required to be carried out in accordance with the approved data, which could be issued by the applicable aircraft manufacturer in the form of a service bulletin and service kit, or via other design approvals, such as a supplemental type certificate (STC); or an Engineering Order (EO) approved in accordance with Civil Aviation Regulation (CAR) (1988) CAR 35, or under the current Civil Aviation Safety Regulation (CASR) (1988) Subpart 21M requirements. Refer AC21-08; AC21-16 for more information regarding gaining approval for any modifications.



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Aircraft which are used in specialist operations typically incorporate a number of modifications. Each modification or kit should be approved for the specific aircraft type and model and fully and properly implemented, including the incorporation of the applicable Flight Manual Supplement for each modification or kit. One danger associated with incorporating multiple modifications or STC's, is the distinct possibility that a conflict can arise between independently approved modifications and result in unintended consequences and inadvertently introduce an unsafe condition.

An assessment should be made to determine if there are any modifications which, although individually approved, may be in conflict and jeopardise the safe operation of the aircraft on which they are incorporated. (Refer AWB 00-018 - Cessna 206 Aircraft - Multiple Supplementary Type Certificates).

The aircraft should be eligible for each modification. Check aircraft model and serial number eligibility in the STC, for example. A modification having CAR 35 or Part 21M approval should have the aircraft registration, model type and serial number in the document.

4. Recommendations

CASA recommends that owners, operators and maintainers carry out a physical examination of their aircraft and the aircraft's technical records to ensure:

1. All modifications have been fully accomplished in accordance with the approved data for the modification.
2. All unapproved and conflicting modifications are removed and the aircraft is returned to a serviceable and airworthy condition.
3. The aircraft has the applicable flight manual supplement(s) for the associated manufacturer's kit, or approved modification for the intended operation.
4. The airworthiness and operation of the aircraft is not adversely affected by the incorporation of multiple STC's and other modifications.
5. The continuing airworthiness requirements of each modification have been properly incorporated into the maintenance program.

5. Reporting

Report all instances of unapproved modifications to CASA via the SDR system.



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6. Enquiries

Enquiries with regard to the content of this Airworthiness Bulletin should be made via the direct link e-mail address:

AirworthinessBulletin@casa.gov.au

or in writing, to:

Airworthiness and Engineering Standards Branch
Standards Division
Civil Aviation Safety Authority
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