

## **ELECTRICAL GENERATION SYSTEMS – SINGLE-ENGINE AIRCRAFT**

### **1. Applicability**

- 1.1. Investigations into accidents and incidents involving loss of electrical power on single-engined aircraft have shown that the standards for warning of failures of generated power have not kept pace with such system developments and inadequacies are all too often apparent.
- 1.2. The purpose of this Notice is to publish a requirement that clear and unmistakable warning of the loss of generated electrical power (to the main bus-bar) aircraft as detailed in paragraph 2.1.1, by the introduction, where necessary, of retrospective modifications.

### **2. Requirements**

- 2.1. For all single-engined aircraft fitted with systems or equipment as defined in paragraph 2.1.1 of this Notice, compliance with paragraphs 2.2 and 2.3, or with a DCA approved alternative providing an equivalent level of airworthiness, is required.
  - 2.1.1. Compliance with this Notice will be required on single-engined aircraft equipped with electrically-operated systems or equipment the loss of which could prejudice continued safe flight and landing. Such systems or equipment include:
    - (a) electrically-powered mandatory flight instruments where no acceptable alternatives are provided;
    - (b) electronic ignition;
    - (c) electrically-operated landing gear;
    - (d) a minimum radio fit;
    - (e) any other system which could prejudice continued safe flight and landing.
- 2.2. A clear and unmistakable red visual warning shall be provided, within the pilot's normal scan of vision, to give indication of the reduction of the voltage at the aircraft bus-bar to a level where the battery commences to support all or part of the electrical load of the aircraft.
- 2.3. Guidance shall be given in the appropriate aircraft manual(s) on any actions to be taken by the pilot should the warning operate. See also paragraph 3.2.

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**3. Additional information**

- 3.1. The recommended voltage levels for operating the warning required under paragraph 2.2 of this Notice are 25 volts to 25.5 volts for a nominal 24 volt dc system and 12.5 volts to 13 volts for a nominal 12 volt dc system.
- 3.2. The battery duration should be sufficient to make a safe landing and should not be less than 30 minutes, subject to the prompt completion of any drills. This duration need only be a reasonable estimate and not necessarily calculated by a detailed electrical load analysis. However, when making this estimate, only 75% of the battery name plate capacity should be considered as available because of loss of battery efficiency during service.
- 3.3. Guidance information for achieving compliance with this notice can be seen CAAIP Leaflet 24-50. Owners and operators are recommended to contact the aircraft constructor or main agent for information regarding suitable means of compliance with this Notice.