



AIRWORTHINESS BULLETIN

Night VMC and IFR Duplicated Power Source
Requirements

AWB 24-005 **Issue :** 2
Date : 13 April 2012

1. Effectivity

All Australian registered single engine aircraft engaged in IFR and certain night VMC operations.

2. Purpose

This Bulletin is to clarify the requirements of “duplicated source of power”: and “separate and independent source of power” as required by CAO 20.18 Appendix II, III, IV, VII and VIII.

3. Background

When two independent sources of electrical power for particular equipment or systems are required by regulation, continuity of electrical energy supply must be ensured by such means as duplicate electrical generating equipment, throwover switching, separately routed multichannel/loop circuits and/or Main/Emergency busses.

CAO 20.18 Appendix II, III and IV requires that aeroplanes operating under the Instrument Flight Rules (IFR), within certain operational limitations, are equipped with duplicated sources of power for the attitude indicators, heading indicator and turn and slip indicator.

CAO 20.18 Appendix VII and VIII require helicopters operating under the Instrument Flight Rules (IFR) and night VMC respectively, within certain operational limitations, to have a separate and independent source of power for the attitude indicator, standby attitude indicator or turn indicator.

Duplicated power sources or separate independent power source in single engine aircraft or helicopters is difficult achieve and demonstrate. Additional engine driven generators or vacuum pumps have been installed to comply with this requirement.

An alternate acceptable method of complying with this regulation has been to provide a separate emergency buss running directly from the battery to provide the required independence for these instruments.

Another alternative independent power source is to provide instruments with an internal battery sufficient to power the instruments in an emergency. This method requires additional maintenance activity to ensure the batteries ability to perform the essential task when required.



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4. Recommendations

Any single engine aircraft that is currently operating under the IFR or night VMC should be inspected to ensure that the power sources comply with the regulations for duplication/independence. Aircraft that don't meet the regulations should no longer operate under the IFR or night VMC until such time as modifications are undertaken to correct the deficiency.

5. Enquiries

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

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