

SOUTH AFRICAN



CIVIL AVIATION  
AUTHORITY

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# REPUBLIC OF SOUTH AFRICA

CIVIL AVIATION AUTHORITY

## AERONAUTICAL INFORMATION CIRCULAR

CAA  
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**AIC**  
**21-23**  
**07-03-16**

### OPERATION OF AIRCRAFT

#### SAFETY

#### RAPID OR PROTRACTED DESCENTS: ENGINE CONSIDERATIONS

- ☞ Indicates changes.
- ☞ This AIC replaces AIC 21-23 dated 92-12-15 in total.
- 1. During protracted descents from altitude or rapid descents (emergency descents or after paradrops) cylinder head temperatures on piston engined aircraft often cool down to below acceptable operating temperatures – this is known as Super Cooling.
- 2. Subsequent rapid power changes have the potential to damage the cold engine.
- 3. The procedure to warm the engine after descents to normal operating temperatures is usually contained in the relevant POH (pilot operating handbook).
- 4. Pilots are reminded to follow this procedure to obviate damage to cylinders on piston engines after long or sudden descents.
- 5. In the absence of such a procedure, pilots are cautioned to progressively warm up the engine at least every 1000' feet and within the operational band.
- 6. Any application of power after such a descent must be done with caution. Carburettor heat, if required, can also be considered as a viable safety precaution prior to landing.

COMMISSIONER FOR CIVIL AVIATION