

AEROSPACE INFORMATION REPORT

SAE AIR811

REV.
C

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Superseded by ARP5600

Disposition of Wheels Which Have Been Overheated

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This document has been declared "CANCELLED" as of February 2006 and has been superseded by ARP5600. By this action, this document will remain listed in the Numerical Section of the Aerospace Standards Index noting that it is superseded by ARP5600.

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Tel: 877-606-7323 (inside USA and Canada)
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INTRODUCTION

The development and use of brakes with high temperature capabilities has resulted in instances of tire and wheel failures which were attributed to excessive brake heat. These instances have led to the establishment of more stringent wheel requirements and the addition of heat shields, safety devices, auxiliary cooling devices, brake temperature, and low tire pressure indication systems.

1. SCOPE:

This SAE Aerospace Information Report (AIR) has been prepared to assist those who are concerned with the removal, inspection, and disposition of magnesium and aluminum wheels which may have been subjected to excessive temperatures.

2. REFERENCES:

There are no referenced publications specified herein.

3. MAGNESIUM AND ALUMINUM WHEEL MATERIALS:

The effect of temperature and heating time on the mechanical properties of a material is a unique function of the material being used. It is, therefore, necessary that the wheel manufacturer supply the user with information as to how to detect wheel degradation due to excessive temperature as well as dimensional limits for the wheel. The wheel manufacturer should supply the user with nondestructive test methods and acceptance standard suitable for making proper part disposition.

4. REMOVING WHEELS FROM THE AIRCRAFT FOR INSPECTION:

4.1 Temperature Limitation:

If evidence exists, or if it is suspected that the wheel has been heated to temperatures in excess of the limit established, the wheel(s) should be removed from service for inspection.