

Australian Standard<sup>®</sup>

---

**Maintenance of fire protection  
equipment**

**Part 6: Management procedures  
for maintaining the fire-precaution  
features of air-handling systems**

---

This Australian standard was prepared by Committee BD/41, Mechanical Ventilation and Air Conditioning. It was approved on behalf of the Council of the Standards Association of Australia on 25 May 1983 and published on 8 August 1983.

---

The following interests are represented on Committee BD/41:

Association of Consulting Engineers Australia  
Australian Institute of Health Surveyors  
Australian Institute of Refrigeration, Air Conditioning and Heating  
Australian Uniform Building Regulations Coordinating Council  
Building Owners and Managers' Association of Australia  
Council of the Air Conditioning and Mechanical Contractors Association of Australia  
Department of Health, N.S.W.  
Department of Local Government and Lands, N.S.W.  
Department of Public Works, N.S.W.  
Department of Public Works, W.A.  
Department of Housing and Construction  
Firefighting authorities  
Fire Protection Industry Association of Australia Ltd  
Insurance Council of Australia Ltd  
Metal Trades Industry Association of Australia  
Royal Australian Institute of Architects

---

**Review of Australian Standards.** To keep abreast of progress in industry, Australian Standards are subject to periodic review and are kept up to date by the issue of amendments or new editions as necessary. It is important therefore that Standards users ensure that they are in possession of the latest edition, and any amendments thereto.

Full details of all Australian Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Australian Standards, addressed to the head office of Standards Australia, are welcomed. Notification of any inaccuracy or ambiguity found in an Australian Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

---

*This standard was issued in draft form for comment as DR 81160.*

Australian Standard<sup>®</sup>

---

**Maintenance of fire protection  
equipment**

**Part 6: Management procedures  
for maintaining the fire-precaution  
features of air-handling systems**

---

First published . . . . . 1983
--------------------------------

## PREFACE

This standard was prepared by a subcommittee of the Association's Committee on mechanical Ventilation and Air Conditioning, which was concerned about lack of guidance available to building owners regarding maintenance of the fire-precaution features of air-handling systems.

The fire-precaution features of air-handling systems in buildings not only need to be designed, installed and operated in accordance with AS 1668, Part 1, but also need to be maintained at an adequate level of performance to ensure their availability in emergency, hence safeguarding the occupants and minimising property damage.

In the preparation of this standard, consideration was given to the following:

- (a) Poor management being the cause for the failure of a large number of maintenance programs associated with building services.
- (b) Air-handling systems being designed to suit the requirements of individual buildings, which implies that the detailed maintenance required varies from system to system.
- (c) Maintenance procedures having to be sufficiently flexible to take account of the particular features of an item of equipment and the environment in which it is installed.
- (d) Unnecessary attention being as detrimental as insufficient maintenance in certain cases.
- (e) potential cost implications.

Accordingly, this standard is aimed at the management aspect of maintenance programs. Mandatory requirements for simple inspections are laid down. For initiating more complex inspections and corrective actions, appropriate routines are suggested.

NOTE: Attention is drawn to Appendix C, which includes as Table C1 a 'typical maintenance schedule' based on the typical maintenance routines included in Appendix B. It was not practicable to reproduce Table C1 in a sufficiently legible form for easy reference. However, Table C1 is available separately from SAA on a heavy paper in wall-chart size (A2) - it should be ordered under the reference 'AS 1851.6C'.

### © Copyright — STANDARDS AUSTRALIA

Users of Standards are reminded that copyright subsists in all Standards Australia publications and software. Except where the Copyright Act allows and except where provided for below no publications or software produced by Standards Australia may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from Standards Australia. Permission may be conditional on an appropriate royalty payment. Requests for permission and information on commercial software royalties should be directed to the head office of Standards Australia.

Standards Australia will permit up to 10 percent of the technical content pages of a Standard to be copied for use exclusively in-house by purchasers of the Standard without payment of a royalty or advice to Standards Australia.

Standards Australia will also permit the inclusion of its copyright material in computer software programs for no royalty payment provided such programs are used exclusively in-house by the creators of the programs.

Care should be taken to ensure that material used is from the current edition of the Standard and that it is updated whenever the Standard is amended or revised. The number and date of the Standard should therefore be clearly identified.

The use of material in print form or in computer software programs to be used commercially, with or without payment, or in commercial contracts is subject to the payment of a royalty. This policy may be varied by Standards Australia at any time.

## CONTENTS

	<i>Page</i>
SECTION 1. SCOPE AND GENERAL	
1.1 Scope . . . . .	4
1.2 Application . . . . .	4
1.3 Referenced documents . . . . .	4
1.4 Definitions . . . . .	4
SECTION 2. MAINTENANCE PROGRAM	
2.1 General . . . . .	5
2.2 Implementation . . . . .	5
2.3 Follow-up Action . . . . .	5
SECTION 3. MAINTENANCE ROUTINES	
3.1 General . . . . .	6
3.2 Levels of Maintenance Routines . . . . .	6
3.3 Frequency . . . . .	6
3.4 Performance Measurements . . . . .	7
SECTION 4. MAINTENANCE DOCUMENTATION	
4.1 General . . . . .	7
4.2 Maintenance Schedule . . . . .	7
4.3 Plant Register . . . . .	7
4.4 Plant History Sheet . . . . .	7
APPENDICES	
A Recommended Frequencies or Conditions for Levels 2,3 and 4 Routines . . . . .	8
B Typical Maintenance Routines . . . . .	9
C Typical Documentation . . . . .	12

## STANDARDS ASSOCIATION OF AUSTRALIA

**Australian Standard**  
**for**  
**THE MAINTENANCE OF FIRE PROTECTION EQUIPMENT**

**PART 6—MANAGEMENT PROCEDURES FOR MAINTAINING THE FIRE-PRECAUTION  
FEATURES OF AIR-HANDLING SYSTEMS**

**SECTION 1. SCOPE AND GENERAL**

**1.1 SCOPE.** This standard sets out management procedures for controlling the inspection and testing of required fire-precaution features associated with air-handling systems in buildings, to ensure their effective availability.

**NOTES:**

1. The procedures set out in this standard and all consequential corrective actions preferably should be carried out, but at least be supervised, by personnel recognized as being qualified in this class of work.
2. In the assessing of the need for corrective action, regard should be given to the various factors which may affect the precise performance from day to day. For this reason, critical limits of performance are quoted where appropriate. In this context a critical limit sets the level of a performance characteristic beyond which its effect could become detrimental to life safety.

**1.2 APPLICATION.** This standard applies to scheduled periodic maintenance procedures following completion of satisfactory commissioning or recommissioning tests for all fire-precaution features of air-handling systems which come within the scope of AS 1668, Part 1.

It is not intended to be applied to commissioning or recommissioning tests, although it may be used as a basis for such tests where appropriate.

**1.3 REFERENCED DOCUMENTS.** The following documents are referred to in this standard:

- |         |   |
|---------|---|
| AS 1668 | SAA Mechanical Ventilation and Airconditioning Code<br>Part 1—Fire precautions in Buildings with Air-handling Systems |
| AS 1670 | SAA Code for Automatic Fire Alarm Installations   |
| AS XXXX | Installation and Maintenance of Batteries in Buildings*   |

**1.4 DEFINITIONS.** For the purpose of this standard, the definitions given in AS 1668, Part 1 and the following apply:

**1.4.1 Specified performance**—the performance specified in the documentation against which the installation was approved.

**1.4.2 Testing**—operational checking (which may include measurements) to ascertain the level of performance of an air-handling item, plant or system for the purpose of maintaining its specified performance. Other types of testing such as production or commissioning testing are excluded from this definition.

\* In course of preparation.