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AS 1851—2012 (Incorporating Amendment No. 1)



## Routine service of fire protection systems and equipment



This Australian Standard® was prepared by Committee FP-001, Maintenance of Fire Protection Systems and Equipment. It was approved on behalf of the Council of Standards Australia on 20 November 2012.

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The following are represented on Committee FP-001:

- Australian Institute of Refrigeration, Air-conditioning and Heating
- Australasian Fire Authorities Council
- Communications, Electrical and Plumbing Union
- Department of Defence
- Department of Human Services
- Fire Protection Association of Australia
- Engineers Australia
- National Association of Testing Authorities, Australia
- National Electrical & Communications Association
- Property Council of Australia
- Representatives from Standards Australia Technical Committees:

FP-002—Fire Detection and Alarms

FP-003—Fire Extinguishers

FP-004—Automatic Fire Sprinkler Systems

FP-007 - Fire Hose Reels

FP-008—Fire Pumpsets

FP-009—Fire Hydrants

FP-011 — Special Fire Hazards

FP-017 - Emergency Management Procedures

FP-019—Passive Fire Systems

ME-062—Ventilation and Airconditioning

This Standard was issued in draft form for comment as DR AS 1851.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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### Australian Standard®

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### **PREFACE**

This Standard was prepared by the Standards Australia Committee FP-001, Maintenance of Fire Protection Systems and Equipment, to supersede AS 1851—2005, Maintenance of fire protection systems and equipment.

This Standard incorporates Amendment No. 1 (November 2016). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

This edition of AS 1851 incorporates a considerable amount of new material and technical changes for the routine service (maintenance) of fire protection systems and equipment in the light of user experience and feedback from regulatory bodies.

The scope of this Standard is applicable to the routine service procedures for fire protection systems and fire equipment. Routine service procedures for pre-engineered fire systems and other building safety measures such as emergency lighting and exit signs, emergency lifts or standby generator sets can be found in the relevant system Standard.

This edition retains a uniform structure for routine service (maintenance) requirements. Section 1 sets out general requirements applying to all systems and equipment. The other Sections contain the additional requirements specific to particular fire protection systems or equipment.

The following summarizes the major changes made to AS 1851—2005:

- (a) Title changed to overcome reported ambiguity but still reflect the concept of inspection, test and preventive maintenance. The term 'maintenance' has been replaced by 'routine service'.
- (b) Restructured documentation requirements into service records and reporting to assist regulatory use.
- (c) Defined the relationship between initial installation, routine service and annual regulatory compliance (see Figure 1.7).
- (d) Critically appraised and refined the routine service technical requirements in light of field experience and studies including, battery load testing, detector sensitivity testing and system interface testing (examples include change in frequencies and specific application instructions).
- (e) Facilitating the implementation of the Standard by the responsible entity and service provider (e.g. the consolidation of sections and consistency across sections, for the fire alarm, special hazards and mechanical services).
- (f) A thorough overhaul of the general requirements of Section 1 to remove administrative requirements and avoid regulatory conflict.
- (g) Tables in Sections 2 to 14 changed from type based to frequency based, and yearly service separated from supportive routine service schedules.
- (h) Clarified requirements for interface testing.
- (i) Clarified role of commissioning and baseline data as part of the approved design.
- (j) Deletion of specific competency qualifications.
- (k) Distinguished between critical defects, non-critical defects and non-conformances.
- (l) Extensively revised records (logbooks, tags, labels and summary records) and reporting requirements.
- (m) Removed ambiguity relating to current design Standards versus the design Standards applicable at the time of original systems installation, i.e. the approved design.

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- (n) Sections 6 to 10 of the 2005 edition covering fire detection, alarms, sound systems and intercom systems have been combined in a new Section 6 with the previous Section 8 (Fire alarm monitoring) being removed from this revised document.
- (o) The routine service requirements for the fire detection and control equipment of special hazard systems and smoke hazard management systems have been relocated from their respective sections into Section 6.
- (p) A new Section 5 has been included, covering water storage tanks for fire protection systems to address the new design Standard AS 2304, Water storage tanks for fire protection systems.
- (q) Sections 11 (Gaseous fire extinguishing systems), 12 (Fixed aerosol systems) and 13 (Water mist systems) of the 2005 edition have been combined in a new Section 7 (Special hazards).
- (r) Several new appendices have been included to expand on Section 1 content— baseline data (Appendix C) and systems interface testing (Appendix D), with two normative appendices, battery capacity testing (Appendix F) and fire detector testing (Appendix G). Extensive detail on mechanical services included in the normative section of the 2005 edition has been relocated in two appendices, both informative.
- A1 The objectives of Amendment 1 are to address editorial errors and baseline data.

Since its implementation, it became clear that baseline data in AS 1851—2012 had not been interpreted correctly by the fire protection industry. As such, FP-001 has revised this to clarify the intent of the committee.

The definition of baseline data and Clause 1.8 have been updated to reflect that the baseline data required by AS 1851—2012 is only what is required to verify the result of a service activity and only required where such baseline data was required by the approved design.

Appendix C and references to specific baseline data in the service schedules were removed accordingly so that the focus is, as intended, only on what baseline data was required by the approved design.

The terms 'normative' and 'informative' have been used in this Standard to define the application of the appendix to which they apply. A 'normative' appendix is an integral part of the Standard, whereas an 'informative' appendix is only for information and guidance.

Notes in this Standard are advisory only.

This Standard incorporates a Commentary on some clauses. The Commentary directly follows the relevant clause, is designated by 'C' preceding the clause number and is printed in italics in a panel. The Commentary is for information only and does not need to be followed for compliance with the Standard.



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