

Australian Standard[®]

**Portable fire extinguishers —
Guide to servicing**

This Australian Standard was prepared by Committee FP/3, Fire Extinguishers. It was approved on behalf of the Council of Standards Australia on 18 January 1989 and published on 14 April 1989.

The following interests are represented on Committee FP/3:

Attorney-General's Department
Board of Fire Commissioners of New South Wales
Building Owners and Managers Association of Australia
Commonwealth Fire Board
Department of Consumer Affairs, New South Wales
Department of Defence
Department of Housing and Construction
Department of Industrial Relations & Employment, New South Wales
Fire Protection Industry Association of Australia
Insurance Council of Australia
Metropolitan Fire Brigades Board, Melbourne
Ministry of Consumer Affairs, Victoria
Telecom Australia
Trade Practices Commission
Western Australian Fire Brigades Board

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which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.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 87003.

Australian Standard[®]

**Portable fire extinguishers —
Guide to servicing**

First published as AS 3676-1989.
Incorporating:
Amdt 1—1990

PREFACE

This Standard was prepared by Standard Australia's Committee on Fire Extinguishers to provide a guide to the servicing of portable fire extinguishers as a companion document to AS 1851, *Maintenance of fire protection equipment, Part 1: Portable fire extinguishers*, which includes regular inspection, pressure testing, recharging, and general servicing.

Detailed information relating to specific types of extinguishers, and recommended replacement materials and parts should be obtained from the extinguisher manufacturer.

Some information is recorded on the extinguisher label or nameplate which should be read at the time of servicing to ensure that correct maintenance and recharging procedures are applied.

The purpose of a well planned and well executed maintenance programme is to afford maximum probability that an extinguisher will operate properly between the intervals established for maintenance in the environment to which it is exposed and will not constitute a potential hazard to persons in its vicinity or to operators or servicing personnel.

© 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	5
1.2 APPLICATION	5
1.3 REFERENCED AND RELATED DOCUMENTS	5
1.4 DEFINITIONS	5
1.5 INTERPRETATION IN ACCORDANCE WITH THE ROUNDING METHOD	5
SECTION 2. GENERAL REQUIREMENTS	
2.1 GENERAL	6
2.2 PROHIBITED REPAIRS	6
2.3 CONDEMNED EXTINGUISHERS AND COMPONENTS	6
SECTION 3. SERVICING	
3.1 GENERAL	7
3.2 EXTERNAL DAMAGE	7
3.3 EXTERNAL CORROSION	7
3.4 DISCHARGE NOZZLE	7
3.5 OUTLET HOSE AND NOZZLE	7
3.6 CONTENTS	7
3.7 PRESSURE INDICATORS	7
3.8 DISCHARGE TEST	7
3.9 OPERATING HEAD OR CAP AND REMOVAL	7
3.10 ACTUATING DEVICE AND INTERNAL COMPONENTS	9
3.11 COMPRESSED GAS CONTAINERS	9
3.12 INTERNAL CONDITION	9
3.13 SEALS AND GASKETS	9
3.14 RECHARGING	10
3.15 LABEL	10
3.16 LEAK DETECTION	10
3.17 LOCATION	10
3.18 PRESSURE TEST	10
SECTION 4. HYDROSTATIC TESTING	
4.1 GENERAL	11
4.2 APPARATUS	11
4.3 COMPLETE EXTINGUISHER TEST	13
4.4 EXTINGUISHER BODY TEST	14
4.5 OPERATING HEAD OR CAP TEST	14
4.6 EXTINGUISHER HOSE TESTING	14
SECTION 5. PRESSURIZING PROCEDURE FOR STORED PRESSURE FIRE EXTINGUISHERS	
5.1 GENERAL	15
5.2 APPARATUS	15
5.3 PRESSURIZING PROCEDURE	15

SECTION 6. LEAK DETECTION TEST PROCEDURES	
6.1 GENERAL	16
6.2 IMMERSION TEST	16
6.3 ELECTRONIC GAS DETECTION	16
6.4 APPLIED SOLUTION TEST	16
6.5 TWENTY-ONE DAY BOND TESTS	16
SECTION 7. PRESSURE INDICATORS	
7.1 GENERAL	17
7.2 IN-SERVICE CHECKS	17
SECTION 8. REPLACEMENT PARTS AND MATERIALS	
8.1 MECHANICAL PARTS	18
8.2 CRITICAL PARTS	18
8.3 RECHARGE MATERIALS	18
8.4 STORAGE OF PARTS AND MATERIALS	18
APPENDICES	
A SERVICING EQUIPMENT	19
B EQUIVALENT EXTINGUISHING POWDERS	23
C EXAMPLES OF INTERPRETATION OF SPECIFIED LIMITING VALUES IN ACCORDANCE WITH THE ROUNDING METHOD . .	24

STANDARDS AUSTRALIA

Australian Standard

Portable fire extinguishers — Guide to servicing

SECTION 1. SCOPE AND GENERAL

1.1 SCOPE. This Standard provides a general guide to inspection and servicing of portable fire extinguishers. This Standard applies to all types of portable fire extinguishers manufactured in accordance with the relevant Australian Standard.

Details of servicing equipment and tools are given in Appendix A.

1.2 APPLICATION. All maintenance and servicing of portable fire extinguishers shall comply with the requirements of AS 1851.1, and, wherever possible, with the recommendation of the manufacturer of the extinguisher.

1.3 REFERENCED AND RELATED DOCUMENTS. The following documents are referred to in this Standard:

AS	
1840	Water (soda acid) type portable fire extinguishers*
1843	Foam (chemical) type portable fire extinguishers*
1846	Portable fire extinguishers—Powder type
1847	Portable fire extinguishers—Carbon dioxide type
1848	Portable fire extinguishers—Halon type
1851	Maintenance of fire protection equipment
1851.1	Part 1: Portable fire extinguishers
2030	SAA Gas Cylinders Code
2030.1	Part 1: Cylinders for compressed gases other than acetylene
2337	Gas cylinder test stations
2484	Fire—Glossary of terms relating to fire tests
2484.2	Part 2: Fire protection and firefighting equipment
2706	Numerical values—Rounding and interpretation of limiting values

Attention is drawn to the following related documents:

AS	
1841	Portable fire extinguishers—Water (gas container) type
1842	Portable fire extinguishers—Water (stored pressure) type
1844	Portable fire extinguishers—Foam (gas container) type
1845	Portable fire extinguishers—Foam (stored pressure) type

1850	Portable fire extinguishers—Classification, rating and fire testing
2444	Portable fire extinguishers—Selection and location

1.4 DEFINITIONS. For the purpose of this Standard, the definitions in AS 2484.2 and those below apply.

1.4.1 Extinguishing agent—a non-flammable agent used to control fire.

1.4.2 Inspection—the examination of extinguisher(s) to determine whether the extinguisher is of correct working order and condition, or requires servicing, i.e. test discharging, hydrostatic testing, and recharging.

1.4.3 Maintenance—a schedule of inspection and servicing for portable fire extinguishers. Maintenance is a thorough check of an extinguisher, intended to give maximum assurance that it will work and operate effectively and safely.

1.4.4 Recharging—replacement of the extinguishing agent(s) and, in certain types of extinguishers, the expellant gas.

1.4.5 Repair—refurbishment of extinguishers or extinguisher parts.

1.4.6 Servicing—all work required to maintain an extinguisher in effective condition. It includes all inspections, maintenance, recharging and repairs.

1.4.7 Shall—the word ‘shall’ is to be understood as mandatory.

1.4.8 Should—the word ‘should’ means advisory or recommended.

1.5 INTERPRETATION IN ACCORDANCE WITH THE ROUNDING METHOD.

1.5.1 Interpretation of specified limiting values.

For the purpose of assessing compliance with this Standard, the specified limiting values herein shall be interpreted in accordance with the ‘rounding method’ described in AS 2706, i.e. the observed or calculated value shall be rounded to the same number of figures as in the specified limiting value and then compared with the specified limiting value. For example, for specified limiting values of 2.5, 2.50, and 2.500, the observed or calculated value would be rounded respectively to the nearest 0.1, 0.01, or 0.001. (See also Appendix C.)

* Obsolescent Standard.