AS/NZS 3760:2003
(Incorporating Amendment No. 1)

Australian/New Zealand Standard™

In-service safety inspection and testing of electrical equipment

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-036, In-service Testing of Electrical Equipment. It was approved on behalf of the Council of Standards Australia on 15 December 2003 and on behalf of the Council of Standards New Zealand on 18 December 2003.
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The following are represented on Committee EL-036:

Appliance and Electronic Industry Association of New Zealand
Australasian Lighting Industry Association
Australian Chamber of Commerce and Industry
Australian Electrical and Electronic Manufacturers 'Association
Australian National University
Black Diamond Technologies Ltd
Building Service Contractors of New Zealand
Canterbury Manufacturers ' Association
Communications,Electrical Plumbing Union Australia
Department of Fair Trading NSW
Department of Industrial Relations Queensland
Electrical Contractors Association of New Zealand
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Hire and Rental Association Australia
Hire Industry Association of New Zealand
Housing Industry Association Australia
Ministry of Economic Development New Zealand
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This Standard was issued in draft form for comment as DR 03931.

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-036 In-service Testing of Electrical Equipment, to supersede AS/NZS 3760:2001.

The in-service safety inspection and testing requirements in this Standard do not cover testing for the design and approval of equipment (which is covered separately in other Standards).

Changes to AS/NZS 3760:2001 incorporated in this Standard include the following:

(a) The environment for frequency of inspection and test has been revised to be more usage based, rather than specific site based;

(b) Customized solutions based on risk assessment are now allowed;

(c) The “Responsible Person” has been defined and the qualifications of a “Competent Person” clarified by notes;

(d) Guidelines to the knowledge of electrical principles with which a Competent Person is likely to be familiar have been added as an Informative Appendix, applicable in New Zealand only;

(e) Additional definitions have been formulated;

(e) The inspection and test responsibilities of the hirer and hiree are now stated and the inspection, test and tag intervals for the hirer clarified;

(f) Numerous minor text changes.

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 a Standard and subject to the same level of compliance as if it were in the body of the Standard, whereas an ‘informative’ appendix is provided for information and guidance, and may indicate good practice. Non-compliance with an informative appendix will not be seen as non-compliance with the Standard.

CONTENTS

FOREWORD

In-service testing is necessary for the safety of persons using the equipment and for the proper discharge of the obligations of employers and employees, as listed in legislation covering occupational health and safety matters. This Standard specifies in-service safety inspection and testing protocols and criteria that satisfy these obligations, and provides a cost effective approach to safety without jeopardizing personnel safety or involving excessive equipment downtime.

The philosophy of the document is to provide an inspection and testing regime capable of implementation with only simple instrumentation, and performed by a person not necessarily having formal qualifications or registration, but who has the necessary practical and theoretical skills, acquired through training, qualification, experience or a combination of these, to correctly undertake the tasks prescribed by this Standard.

The methodology of the inspection and testing process is defined. The frequency of repetition of that process is determined not by the equipment type, but by examination of the environment in which the equipment is used or working in. For indicative purposes a number of environments are provided with associated inspection/testing frequencies prescribed. These are based on the perception of the level of hazard and the degree of abuse to which the equipment is typically exposed. However, there will usually be multiple sub-environments within any location and the inspecting/testing frequency will be arrived at by an assessment of the actual environment in which the equipment is placed or used.

Introduced in this edition is the possibility of allocating the frequency of inspection/testing by undertaking, implementing and documenting a risk assessment.

The test and tag intervals prescribed for hire equipment are aligned with the intervals for environments such as construction and demolition sites.

This version incorporates Amendment No 1, August 2005, and those areas where changes have been made, are indicated by a vertical line in the margin.

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Australian/New Zealand Standard

In-service safety inspection and testing of electrical equipment

S E C T I O N 1 S C O P E A N D G E N E R A L

1.1 SCOPE

This Standard specifies procedures for the safety inspection and testing of low voltage single phase and poly-phase (e.g. nominal 240V and 415V) electrical equipment, connected to the electrical supply by a flexible cord and/or connecting device, which is new equipment placed into service for the first time, is already in-service, has been serviced or repaired, is returning to service from a second-hand sale, or is available for hire. A1

Typical examples of equipment are:

(a) Portable, hand-held and stationary appliances, designed for connection to the low voltage supply by a flexible cord;

(b) Cord extension sets and outlet devices (also known as electrical portable outlet devices, EPODs or power boards);

(c) Flexible cords connected to fixed equipment in hostile environments;

(d) Portable isolation transformers (includes power adaptor/plug-pack, both of the transformer and switch-mode type);

(e) RCDs - Portable type (PRCD), socket outlet type and fixed switchboard type;

(f) Commercial and industrial battery chargers;

(g) Portable and transportable 415V heavy duty tools such as high pressure washers and concrete grinders.

1.1.1 This Standard does not apply to electrical equipment (such as suspended light fittings), at a height of 2.5m or greater above the ground, floor or platform, where there is not a reasonable chance of a person touching the equipment and, at the same time, coming into contact with earth or any conducting medium which may be in electrical contact with earth or through which a circuit may be completed to earth.

1.1.2 This Standard does not apply to equipment which would need to be dismantled to perform the inspection and tests specified in this Standard.

NOTE If, for some reason outside the scope of this Standard, equipment must be dismantled to verify safety, this action must be performed by a technically qualified person.

1.1.3 Functional checks are not considered part of a safety evaluation and therefore not included in this Standard.

1.1.4 This Standard only applies to equipment in-service at a place of work or public place, or offered for hire.

NOTE For example, this Standard does not apply to demonstration stock in retail or wholesale outlets.

1.1.5 This Standard does not apply to fixed or stationary equipment connected to wiring that forms part of the electrical installation and falls within the scope of AS/NZS 3000.

1.1.6 This Standard does not apply to equipment whose nature is that of a medical device as defined in AS/NZS 3551. A1