

AS/NZS 5762:2005

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Australian/New Zealand Standard™

**In-service safety inspection and  
testing—Repaired electrical equipment**



## **AS/NZS 5762:2005**

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 25 July 2005 and on behalf of the Council of Standards New Zealand on 29 July 2005.  
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Appliance and Electronic Industry Association Inc - 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 - New Zealand  
Building Service Contractors of New Zealand  
Canterbury Manufacturers' Association - New Zealand  
Coates – Australia  
Communications, Electrical Plumbing Union – Australia  
Department of Fair Trading – NSW  
Department of Industrial Relations – Queensland  
Electrical Consultancy Services - New Zealand  
Electrical Contractors Association of New Zealand  
Electrical Workers Registration Board - New Zealand  
Hire and Rental Association – Australia  
Hire Industry Association of New Zealand  
Housing Industry Association Ltd – Australia  
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We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia or Standards New Zealand at the address shown on the back cover.

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# **In-service safety inspection and testing—Repaired electrical equipment**

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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.

This, the first edition, covers the testing process expected to be performed following repair before an appliance which has been serviced, repaired or undergone after-sale manufacturer's remedial action, is returned to its owner, so that when the appliance re-enters service, real and potential hazards such as electrical shock, mechanical injury, electrical and thermal fire, have been discovered, as far as is practicable.

The term 'informative' has been used in this Standard to define the application of the Appendix to which it applies. An 'informative' Appendix is provided for information and guidance, and may indicate good practice. Non-compliance with an informative Appendix shall not be seen as non-compliance with the Standard.

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## **FOREWORD**

Testing of appliances following repair is necessary for the safety of persons using the equipment and for the proper discharge of the obligations of employers and employees, as required in legislation covering electrical safety, and occupational health and safety matters.

The objective of this Standard is to ensure, in Australia and New Zealand, the safety of the owner, following the return of a repaired appliance intended for connection to the electrical supply mains, by offering the Repairer, Competent Person, Regulatory and similar agencies, a regime for inspection, testing and tagging.

## STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

### Australian/New Zealand Standard

### Safety inspection and testing – Repaired electrical equipment

## SECTION 1 SCOPE AND GENERAL

### 1 SCOPE

This Standard specifies requirements for the post-sale safety inspection and testing of low voltage single phase and poly-phase (e.g. nominal 240V and 415V) electrical equipment, which has been repaired, or undergone service maintenance which could have affected electrical safety.

#### 1.1 EXCEPTIONS

**1.1.1** This Standard shall not apply to equipment which has been only assessed visually for purposes such as providing a quotation of repair costs, and not repaired.

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

#### 1.2 GENERAL

**1.2.1** The inspection, testing and tagging regime described in AS/NZS 3760 is specified as the primary means of confirming the electrical safety of items which have undergone repair, servicing or manufacturer's after-sale remedial action.

**1.2.2** During repair of appliances, any safety features such as re-settable thermal cut-outs, tilt switches or electrical interlocks shall have their satisfactory operation confirmed.

**1.2.3** Confirmation of the efficacy of the repair need only be carried out on the particular area which is being serviced e.g. when servicing the control section of a hob or washing machine, it would not be necessary to dismantle the elements, or the motors respectively. This confirmation should be performed both during the servicing stage when the equipment is open for repair and at the conclusion when it has been re-assembled.

**1.2.4** Destructive testing shall not be performed.

#### 1.3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS/NZS

3551                Technical management programs for medical devices

3760                In-service safety inspection and testing of electrical equipment

#### 1.4 DEFINITIONS

For the purpose of this Standard, the definitions listed in AS/NZS 3760, and those listed below shall apply:

##### 1.4.1 Maintenance

An operation undertaken to extend the useful life of an item which is working satisfactorily.

#### **1.4.2 Repair**

An operation intended to remove a defect preventing the item working satisfactorily, and return it to an electrically/mechanically safe condition. This includes electrically related repair, servicing or manufacturer's after-sale remedial action, but does not include operations to fix mechanical faults unless they may have affected the item's electrical safety.

#### **1.4.3 Repair agency**

The organization (which may be an individual) undertaking the repair work.

#### **1.4.4 Service person**

A person who has had adequate or appropriate training in the particular field to service the equipment, as permitted by local Regulations.

In New Zealand and in some Australian States, licensing is required.

**NOTE –**

It is expected that the Service Person shall:

1. Be able to use test equipment safely and effectively.
2. Have an understanding of the dangers of electricity, leading to an appreciation of the need for inspection and testing.
3. Have an understanding of the construction of Class I and Class II equipment, and of the terms: basic, reinforced and double insulation, protective earth and earth continuity, insulation resistance and earth leakage current.
4. Have an understanding of the application and requirements of this Standard and AS/NZS 3760.
5. Have an understanding of the relevant legislative requirements appropriate for the jurisdiction they are operating within.



## SECTION 2 INSPECTION AND TESTS

### 2 GENERAL

This section prescribes the inspection, testing and tagging operations which are to be performed on the item during or after repair, servicing or manufacturer's after-sale remedial action.

#### 2.1 TAG REMOVAL

As soon as possible after receipt of the item from the owner, any tag affixed as a result of compliance with inspection and testing activities performed under AS/NZS 3760 requirements shall be removed.

#### 2.2 PERSONNEL

**2.2.1** The tasks associated with repair work specified in this Standard shall be carried out by a Service Person who is permitted to undertake the work in accordance with local Regulations.

**2.2.2** Inspection, testing and tagging functions shall be performed by a Competent Person permitted to undertake the work in accordance with local Regulations.

#### 2.3 COMPONENTS

When replacing a component, the replacement shall be the direct equivalent or one having at least the same safety characteristics.

#### 2.4 INSPECTION AND TESTING

##### 2.4.1 Inspection

During and following repair, servicing or manufacturer's remedial work, the item shall be inspected in the area of servicing in accordance with Clause 2.3.2 of AS/NZS 3760.

NOTE – The inspection process looks not only for faults or potential faults likely to cause electric shock, but also for faults of a mechanical or electro-mechanical nature having potential to cause harm to the user through mechanical injury, burns or electrical burns.

##### 2.4.2 Testing

Following the visual inspection performed under Clause 2.4.1, and re-assembly of the equipment, the equipment shall be tested for electrical integrity in accordance with the requirements of Clause 2.3.3 of AS/NZS 3760.

NOTE – The testing action forms an integral part of the inspection/testing process, and is intended to confirm the results of the visual inspection and detect the unobservable faults not found by the visual inspection process on the area being serviced.

Following the electrical testing, the equipment shall have checked for satisfactory operation any mechanical safety mechanisms such as guards, or electro-mechanical mechanisms such as tilt switches or interlocks.

#### 2.5 ACTION RESULTING FROM INSPECTION AND TESTING

##### 2.5.1 Non-compliant equipment

Where equipment fails to comply with this Standard, the equipment shall be appropriately labelled to indicate that the equipment requires remedial action, and warn the owner against further use. An example is provided in Clause A2 of Appendix A.

### **2.5.2 Compliant equipment**

Compliant equipment shall be fitted with a durable, non-reusable, non-metallic tag or other indicator. An example is provided in Clause A3 of Appendix A.

## **2.6 DOCUMENTATION REQUIREMENTS**

**2.6.1** Electrical or occupational health and safety regulators may require documentation to be kept in some or all cases.

**2.6.2** Where organizations perform voluntary additional inspections and tests, records should be kept of such actions and their results.

**2.6.3** Where records are kept, they should be retained for the period required by the specific regulations applicable, or, if not specified, as determined by the owner.

## APPENDIX A

### EXAMPLES OF LABELS

(Informative)

#### A1 GENERAL

Examples of labels which may be affixed to equipment are provided below. These are for indicative purposes only, depicting a minimum information set for inclusion.

#### A2 LABELS FOR NON-COMPLIANT EQUIPMENT

<p><b>WARNING</b></p> <p><b>NOT TO BE USED</b></p> <p><b>UNTIL REPAIRED</b></p> <p>Job No. .... Date .....</p> <p>REPAIR AGENCY ID .....</p>
--

**A2.1** The recommended colour scheme is for black text on red background.

#### A3 LABELS FOR COMPLIANT EQUIPMENT

<p>REPAIR AGENCY ID .....</p> <p>Repaired: Complies with AS/NZS 5762:2005</p> <p>Job No. .... Date .....</p>
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**A3.1** The recommended colour scheme is for black text on white background.

## **APPENDIX B**

### **REGULATORY APPLICATION OF THIS STANDARD**

(Informative)

#### **B1 GENERAL**

Electrical and OHS regulatory authorities in the Australian States and Territories and in New Zealand may require compliance with this Standard under their various regulatory instruments.

The purpose of this Appendix is to facilitate communication by providing contact details of those authorities.

This information is accurate at the time of publication of this Standard. Users are advised to consult the relevant nominated regulatory authority for information current at the time of use.

#### **B2 REGULATORY AND SIMILAR AUTHORITIES**

##### **New South Wales**

WorkCover NSW  
92-100 Donnison Street, Gosford.

Postal Address: Locked Bag 2906, Lisarow NSW 2252  
WorkCover Assistance Service, Phone: 13 10 50

Website: [www.workcover.nsw.gov.au](http://www.workcover.nsw.gov.au)

##### **Victoria**

Victorian WorkCover Authority  
Level 24, 222 Exhibition St  
Melbourne 3000

WorkCover Advisory Service

Ph (03) 9641 1555  
Fax (03) 9641 1222

Website: [www.workcover.vic.gov.au](http://www.workcover.vic.gov.au)

##### **Queensland**

Street Address: Electrical Safety Office  
Department of Industrial Relations  
Level 6, Neville Bonner Building  
75 William Street  
Brisbane Qld 4000

Postal Address: GPO Box 69  
Brisbane Qld 4001

Telephone: (07) 3237 0220  
Facsimile: (07) 3237 0229

Website: [www.eso.qld.gov.au](http://www.eso.qld.gov.au).

### **Australian Capital Territory**

#### **ACTPLA**

Street Address: Central Office, Ground Floor, North,  
Dame Pattie Menzies House,  
16 Challis Street Dickson

Telephone: (02) 6207 1926

Fax: (02) 6207 1925

Website: [www.actpla.act.gov.au](http://www.actpla.act.gov.au)

#### **ACT Workcover**

Street Address: Level 4 Eclipse House  
197 London Circuit  
Canberra City ACT 2601

Postal Address: PO Box 224

Civic Square ACT 2608

Telephone: (02) 6205 0200

Facsimile: (02) 6205 0336

Website: [www.workcover.act.gov.au](http://www.workcover.act.gov.au)

#### **Commonwealth OH&S regulator, Comcare**

Street Address: Level 1,  
14 Moore St  
Canberra ACT 2600

Postal Address: GPO Box 9905

Canberra ACT 2601

Telephone: 1300 366 979

Facsimile: (02) 6257 5634

Website: [www.comcare.gov.au](http://www.comcare.gov.au)

### **Tasmania**

#### **Workplace Standards Tasmania**

Street Address: 30 Gordons Hill Rd,  
Rosny Park 7018  
Postal Address: PO Box 56  
Rosny Park TAS 7018

Telephone: 1300 366 322

Facsimile:

Website: [www.wsa.tas.gov.au](http://www.wsa.tas.gov.au)

### **Northern Territory**

#### **Electrical Safety Office**

Street address: Minerals House  
66 The Esplanade  
Darwin NT 0800

Postal Address: GPO Box 4821

Darwin NT 0801

Telephone: (08) 8999 5010

Facsimile: (08) 8999 6260

Website: [www.deet.nt.gov.au/wha/pages/electrical](http://www.deet.nt.gov.au/wha/pages/electrical)

### **South Australia**

Office of the Technical Regulator (SA)

Street Address: Level 19 Wakefield House  
30 Wakefield Street  
Adelaide SA 5000

Telephone: (08) 8226 5500  
Facsimile: (08) 8226 5523

Website: [www.technicalregulator.sa.gov.au](http://www.technicalregulator.sa.gov.au)

### **Western Australia**

Electrical Work is also subject to the terms of the Occupational Safety and Health Act 1984 and the Occupational Safety and Health Regulations 1996, which are administered by WorkSafe Western Australia.

Energy Safety Directorate  
Street Address: West Leederville Office (Head Office)  
20 Southport Street  
WEST LEEDERVILLE, Western Australia 6007

Phone: (08) 9422 5200  
Facsimile: (08) 9422 5244

Website: [www.energysafety.wa.gov.au](http://www.energysafety.wa.gov.au)

Work Safe Western Australia  
Street Address: 5th Floor, 1260 Hay Street  
WEST PERTH WA 6005

Postal Address: PO Box 294  
WEST PERTH WA 6872

Telephone: (08) 9327 8777  
Facsimile: (08) 9321 8973

Website: [www.safetyline.wa.gov.au](http://www.safetyline.wa.gov.au)

### **New Zealand**

The Energy Safety Service of the Ministry of Economic Development is the Electrical Safety Regulator in New Zealand.

Energy Safety Service  
33 Bowen Street  
Wellington  
New Zealand

Postal Address: PO Box 1473  
Wellington  
New Zealand

Telephone: + 64 4 472 0030  
Facsimile: + 64 4 460 1365

Website: [www.ess.govt.nz](http://www.ess.govt.nz)

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