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Amendment 1 - Mar 1986
" 2 - May 1986
" 3 - July 1989

REINSTATED AUG 1985 1991

AS 3163—1985
UDC 621.31:648.23

Superseded by AS 3304-1991.

(Under revision see DR 89206)

Australian Standard® 3163—1985

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CURRENT

APPROVAL AND TEST SPECIFICATION— ELECTRIC WASHING MACHINES FOR HOUSEHOLD USE



PUBLISHED BY THE STANDARDS ASSOCIATION OF AUSTRALIA
STANDARDS HOUSE, 80 ARTHUR ST, NORTH SYDNEY, N.S.W.

Incorporated by Royal Charter



This Australian standard was prepared by Committee EL/2, Electrical Approvals Standards. It was approved on behalf of the Council of the Standards Association of Australia on 20 February 1985 and published on 7 June 1985.

The following interests are represented on Committee EL/2:

- Australian Consumers Association
- Australian Electrical and Electronic Manufacturers Association
- Confederation of Australian Industry
- Consumer Electronics Suppliers Association
- Electrical Apparatus Approvals Authorities
- Electrical Testing Laboratories
- Electricity Supply Association of Australia
- Institution of Engineers Australia

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First published (AS C163).....	1960
Revised	1974
Revised and issued as AS 3163.....	1977
Second edition.....	1981
Third edition.....	1985

ERROR IN AUSTRALIAN
STANDARD

AS 3163 - 1985

- Copies to
- T.S.O.
 - Ross Johnson
 - Max Pfeiffer
 - Nevenka Beyer

Jeanor
Sydney Info. Centre

- Have seen Wal about this.
- The history block was ^{also} wrong in the 1977 + 1981 ~~to~~ edition of AS 3163
- It appears as if the latest reprint in incorporating amendments (1974) of AS 3163 was taken to be a revised edition.
- The error was picked up in the library in ~~the~~ the AS 3163 - 1977 edition but it has not been altered in Wal's copy - suggesting the information was not passed on.

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STANDARDS ASSOCIATION OF AUSTRALIA
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15 MAY 1986

AMENDMENT No 2

to

AS 3163—1985

Approval and Test Specification—

ELECTRIC WASHING MACHINES FOR HOUSEHOLD USE

CORRECTED TEXT

The 1985 edition of AS 3163 which was amended in March 1986 is further amended as follows; the amendment should be inserted in the appropriate place.

SUMMARY: The following section of the standard is covered by this amendment: Clause 19.7.3.

Published on 5 May 1986.

Page 8. Clause 19.7.3.

The changes to Clause 19.7.3 contained in Amendment No 1 should be made to item (a).

This amendment forms part of the specification on publication.

STANDARDS ASSOCIATION OF AUSTRALIA
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AMENDMENT No 1
to
AS 3163—1985
Approval and Test Specification—
ELECTRIC WASHING MACHINES FOR HOUSEHOLD USE

REVISED TEXT

The 1985 edition of AS 3163 is amended as follows; the amendments should be inserted in the appropriate place.

SUMMARY: The following sections of the standard are covered by this amendment: Clauses 8, 19.6, 19.7.3 and 19.9.

Published on 3 March 1986.

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Page 5. Clause 8.

Delete the second paragraph of this clause.

This amendment forms part of the specification on publication.

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1986

Page 8. Clause 19.6.

Delete this clause and *substitute* the following:

19.6 Test of motor control devices. Any control device supplied as part of the washing machine for the purpose of starting and stopping a motor shall comply with the relevant requirements of AS 3133, the rated voltage and current for the purpose of testing being taken as the maximum voltage and current controlled by the device under the appropriate loading condition specified in Clause 19.5.

Immediately following these tests, devices controlling motors, the rotors of which are likely to become locked in service shall also be subjected to the following test:

- (a) Unless so arranged that it cannot be operated to break locked rotor current, the device shall be subjected to 50 cycles of operation making and breaking the locked rotor current of the motor. The rate of operation shall be such that there is no undue temperature rise of contacts or of the motor and in any case a period of make shall not be more than 2s with at least 1 min between each operation.
- (b) The device may be tested either in the appliance with the rotor locked, or in an external circuit with the test current equal to the locked rotor current. Where requested by the applicant for approval, the test shall be conducted on an additional sample:
- For washing machines which are suitable for use on a.c. or d.c., the test shall be carried out with alternating current or direct current, whichever provides the most arduous conditions of operation.
- For washing machines suitable for use on d.c. only, the test shall be carried out with direct current.
- Where the switch or control device is to be tested in an external circuit, the test circuit shall be arranged so as to simulate the actual conditions

which the switch or device would experience if it were tested within the appliance, e.g. same power factor (if tested on a.c.) and inductive circuit conditions.

- (c) During the test any exposed metal parts of the washing machine shall be earthed, and the electrical connections shall be such that any single-pole switch or control device is in the active conductor.

When tested under the above conditions, the switch or control device shall not fail to interrupt the current or fail in any other way either electrically or mechanically, and the contacts shall not be damaged to an extent which will prevent their effective opening or closing.

This amendment forms part of the specification on publication.

Page 8. Clause 19.7.3.

ITEM (a), Deleted. See Amendment 2 - Mar 1986
Delete first sentence and *substitute* the following:

For motors which do not incorporate a thermal cutout, the test shall be continued as long as necessary to establish steady conditions or, if a timer is provided, for a time equal to the maximum period allowed by the timer, with the controlled sequence in the most arduous cycle.

This amendment forms part of the specification on publication.

Page 9. Clause 19.9.

Delete this clause and *substitute* the following:

19.9 Determination of ignitability and combustion propagation. This test shall be carried out in accordance with the provisions of Clause 6.1 of AS 3100 with values in Clause 6.1.1.2 for (a) and (b) as follows:

- (a) 850 °C for 30 s.
(b) 750 °C for 30 s.

This amendment forms part of the specification on publication.

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MAR.
1986

PREFACE

This standard was prepared by Committee EL/2, Electrical Approvals Standards. It is one of a series of approval and test specifications issued by the Association. These specifications are accompanied by a general specification AS 3100, containing definitions and general requirements for electrical materials and equipment. The purpose of these specifications is to outline conditions which must be met to secure approval for the sale and use of electrical equipment in Australia. Only safety matters and related conditions are covered.

This edition was published to incorporate into the specification Amendment Nos.1 to 4 to AS 3163—1981 and to effect changes to Clauses 16 and 19.2 with regard to new requirements for switches and spillage test. Also a list of referenced documents has been added to Clause 1 and a note with regard to the AS Mark added to Clause 17.

This standard supersedes AS 3163—1981 from date of publication.

The Association desires to call attention to the fact that this standard does not purport to include all the necessary provisions of a contract.

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard

APPROVAL AND TEST SPECIFICATION—
ELECTRIC WASHING MACHINES FOR HOUSEHOLD USE

This specification shall be read in conjunction with AS 3100. (See also Clause 3, below).

1 SCOPE AND REFERENCED DOCUMENTS.

1.1 Scope. This specification applies to electric washing machines for household use intended for operation at low or medium voltage.

1.2 Referenced documents. The following approval and test specifications are referred to in this standard:

- AS 3100 Definitions and General Requirements for Electrical Materials and Equipment
- AS 3109 Appliance Couplers for Household and Similar General Purposes
- AS 3155 Electric Motor-operated Appliances
- AS 3121 Insulating Mouldings
- AS 3133 Air Break Switches
- AS 3145 Radio Interference Suppression Devices
- AS 3161 Thermostats and Energy Regulators
- AS 3191 Electric Flexible Cords

2 DEFINITIONS. For the purpose of this specification the following definitions apply:

Electric washing machine—an appliance for household use designed principally for the washing of household linen, which incorporates means for agitating, and which may incorporate means for subsequently partially drying, the wash load.

Automatic washing machine—an electric washing machine in which the sequence and period of the various washing operations can be pre-set and the whole washing cycle carried out automatically.

Non-automatic washing machine—an electric washing machine in which the sequence and period of the various washing operations are controlled manually.

Semi-automatic washing machine—an electric washing machine in which the period or sequence of one or more of the washing operations can be controlled automatically, but manual operation of a control device is necessary to complete the whole cycle of washing operations.

3 COMPLIANCE WITH SPECIFICATIONS.

3.1 General requirements of AS 3100. This specification shall be read in conjunction with AS 3100 and the appropriate provisions of AS 3100 shall apply to the construction of the washing machine and insulation and/or safeguarding of parts which normally carry current.

3.2 Specific requirements of this specification. A washing machine shall be deemed to comply with

this specification only if it complies with all the requirements of this specification and passes the relevant tests specified herein.

3.3 Requirements of other specifications. Components incorporated in a washing machine which are depended upon for safety shall comply with the appropriate requirements of any relevant approval and test specification unless such requirements are varied herein.

4 MEANS OF CONNECTION. The washing machine shall be provided with one of the following means of connection to the supply:

- (a) A set of terminals for permanent connection to fixed wiring in accordance with Clauses 4.3 and 4.9 of AS 3100.
- (b) ~~A Type C appliance plug and appliance inlet socket with double insulation complying with AS 3109. The inlet socket shall be so located or shielded that it is protected from any spillage that may occur in the normal operation of the washing machine.~~ SEE AMENDMENT (3)
- (c) A power supply cord which shall be assembled with the appliance by one of the following methods:
 - Type X attachment.
 - Type M attachment.
 - Type Y attachment.

5 FLEXIBLE CORD AND CONNECTING PLUG.

Where required by Clause 4.4 of AS 3100, every washing machine shall be provided with a supply flexible cord and connecting plug.

Any flexible cord provided with a washing machine for the purpose of connecting it to the supply shall—

- (a) be of a type not inferior to an ordinary duty sheathed type in accordance with AS 3191; and
- (b) be correctly wired in accordance with the appropriate requirements of Clause 4.4 of AS 3100; and
- (c) have a free length (external to the washing machine and any plug) of not less than 1.8 m.

6 EARTHING. Where a washing machine is not provided with double insulation (see Clause 7)—

- (a) it shall comply with the relevant requirements of Clause 5.3 of AS 3100;
- (b) the earthing terminal shall be marked in accordance with Clause 7.4 of AS 3100.