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Joint AS/NZS Amendment 1-October 1992

Superseded by AS/NZS 3629.1:1995

AS 3629.1—1991
NZS 5466:Part 1:1991

Australian Standard®
New Zealand Standard

Methods of testing child restraints

Part 1: Dynamic testing

AUS CC
NZ DD

SANZ Standards Association of New Zealand
STANDARDS AUSTRALIA

This Standard was prepared under a joint arrangement by Standards Australia and the Standards Association of New Zealand. It was approved for publication on behalf of the Council of Standards Australia on 26 November 1991 and on behalf of the Standards Council of New Zealand on 23 December 1991. It was published on 24 December 1991.

The following organizations are represented on the Committees responsible for this Standard:

Standards Australia Committee CS/75, Automotive Occupant Restraints
Australian Automobile Association
Australian Automotive Aftermarket Association
Australian Consumers Association
Australian Federation of Consumer Organizations
Australian Retailers Association
Business and Consumer Affairs, N.S.W.
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Department of Transport and Communications
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National Association of Testing Authorities, Australia
National Health and Medical Research Council
Retail Traders Associations of Australia
Roads and Traffic Authority, N.S.W.
Royal Australasian College of Surgeons
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Additional interests participating in preparation of Standard:
VicRoads

Standards Association of New Zealand Committee 50/–, Mechanical and General Board
Accident Compensation Corporation
Consumers Institute
Department of Labour
Department of Scientific & Industrial Research
Institution of Professional Engineers of N.Z.
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Suggestions for improvements to Australian and New Zealand Standards, addressed to the head office of the relevant organizations, are welcomed. Notification of any inaccuracy or ambiguity found in either an Australian or New Zealand Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

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STANDARDS AUSTRALIA

Amendment No. 1
to
AS 3629.1—1991/NZS 5466.1:1991
Methods of testing child restraints
Part 1: Dynamic testing

REVISED TEXT

The 1991 edition of AS 3629.1/NZS 5466.1 is amended as follows; the amendments should be inserted in the appropriate place.

SUMMARY: This Amendment applies to Clauses 8 and 9, Figure 5 and Appendix A.

Published on 12 October 1992.

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AS 3629.1—1991
NZS 5466:Part 1:1991

Australian Standard®
New Zealand Standard

Methods of testing child restraints

Part 1: Dynamic testing

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PREFACE

This Standard is issued as a joint Standard under the terms of the Memorandum of Understanding between Standards Australia and the Standards Association of New Zealand with the objective of reducing technical barriers to trade between the two nations. The Standard was prepared to supersede AS 3629.1—1989/NZS 5411:1982 (in part).

As in the previous edition, the dynamic testing of child restraints is required to be performed with the child restraint in the frontal, sideways and rearwards mode. In this edition, a more severe rearward dynamic test is required and an additional dynamic test in an inverted mode is introduced. Because of the addition of inverted dynamic testing, the previous method of rotating the test rig in a static condition and measuring the force required to operate the quick-release device while the test rig was in a 180° position has been replaced by a new method of testing the force required to operate the quick-release device.

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Delete the existing Item (b) and *substitute* the following:

(b) Install the child restraint system on the test seat with the test seat in the position for the required mode of testing.

Where the child restraint can be installed with either an adult lap or a lap/sash seat belt, a lap/sash seat belt shall be used and it shall incorporate an emergency locking retractor.

The child restraint shall be installed according to the instructions provided by the manufacturer and with the upper anchorage connected at point A1 in Figure 1. The anchorage fitting shall be tested with all spacers supplied, and with the orientation of the anchor bracket as shown in Figure 3.

For testing in the inverted mode, the orientation of the child restraint shall be as shown in Figure 4.

STANDARDS AUSTRALIA/STANDARDS ASSOCIATION OF NEW ZEALAND

Australian/New Zealand Standard
Methods of testing child restraints

Part 1: Dynamic testing

1 SCOPE This Standard sets out the method for determining the dynamic performance of a child restraint system.

2 APPLICATION The dynamic test set out in this Standard applies to all types of child restraints specified in AS 1754/NZS 5411.

3 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS
1754/NZS 5411 Child restraint systems for use in motor vehicles

SAE
J117 Dynamic test procedure—Type 1 and Type 2 seat belt assemblies
J211 Instrumentation for impact tests

4 DEFINITIONS For the purpose of this Standard, the definitions given in AS 1754/NZS 5411 apply.

5 PRINCIPLE The child restraint system is subjected to a series of dynamic forces to cause nominated decelerations of a test rig to simulate frontal, rearwards, sideways, and inverted vehicle impacts.

6 APPARATUS The following apparatus is required:

(a) A test rig of mass not less than 380 kg, and which consists of a trolley, a test seat conforming to Figure 1, and a structure for providing seat belt anchorages.

(b) A dummy as specified in AS 1754/NZS 5411.

(c) Where required, a spacer conforming to Figure 2.

(d) A means of measuring deceleration of the test rig for calibration purposes. Instrumentation shall comply with the requirements of SAE J211 for Channel Class 60.

(e) Where required, pressure-sensitive paper fixed in place over the genital region of the dummy.

(f) A means of measuring the quick-release device force with the aid of a test finger terminating in a 7.5 ±0.5 mm radius hemispherical surface.

(g) Self-adjusting slings for attachment to the dummy's wrists and ankles as shown in Figure 5.

(h) A means of applying a force of 200 N to the dummy through the self-adjusting slings referred to in Item (g).

(i) A means of measuring the force referred to in Item (h).

(j) Where required, a break-away retention system for the dummy's head which will ensure that light head contact is maintained with the child restraint during the run-down to impact.

(k) Where required, a means of measuring the head deceleration. Instrumentation shall comply with the requirements of SAE J117 for Channel Class 1000. The location of accelerometers shall be according to the manual supplied by TNO with the test dummies (see AS 1754/NZS 5411).
NOTE: A tri-axial accelerometer is considered to be the minimum required.

7 TEST SAMPLES Test samples shall be new, unused, and not previously tested child restraints.

8 PROCEDURE The procedure shall be as follows:

(a) Calibrate the test rig (see Appendix A).

SEE AMENDMENT 1

(b) Install the child restraint system on the test seat with the test seat in the position for the required mode of testing.

The child restraint shall be installed according to the instructions provided by the manufacturer and with the upper anchorage connected at point A1 in Figure 1. The anchor fitting shall be tested with all spacers supplied, and with the orientation of the anchor fitting as shown in Figure 3.

For testing in the inverted mode, the orientation of the child restraint shall be as shown in Figure 4.

(c) Place the appropriate test dummy as specified in AS 1754/NZS 5411 in the child restraint and insert the appropriate spacer between the back of the dummy and the test seat.