AS/NZS 1754:2013
(Incorporating Amendment No. 1)

Australian/New Zealand Standard™

Child restraint systems for use in motor vehicles

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee CS-085, Child Restraints for Use in Motor Vehicles. It was approved on behalf of the Council of Standards Australia on 4 April 2013 and by the New Zealand Standards Approval Board on 20 May 2013.
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The following are represented on Committee CS-085:

Association of Accredited Certification Bodies
Australian Automobile Association
Australian Automotive Aftermarket Association
Australian Chamber of Commerce and Industry
Australian Competition and Consumer Commission
Australian Industry Group
Austroads
Centre for Automotive Safety Research
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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee CS-085, Child Restraints for Use in Motor Vehicles, to supersede AS/NZS 1754:2010.

This Standard incorporates Amendment No. 1 (October 2016). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

The Standard specifies a range of design and performance requirements for devices to restrain children in motor vehicles to provide protection to the child in the event of a crash. This Standard requires tests to be conducted according to methods contained in the AS/NZS 3629, *Methods of testing child restraints*, series.

Major revisions in this edition of AS/NZS 1754 include:

(a) Introduction of requirements for a lower anchorage attachment system for restraining the child restraints to the vehicle instead of using the seatbelt. This system was developed by the ISO committee ISO/TC 22/SC 12/WG 1 and is known as ISOFIX in Europe and Japan, LATCH in USA and UAS in Canada. The system features vehicle ISOFIX low anchorages and either rigid or flexible lower attachment connectors on the child restraints. This Standard specifies the requirements for the lower attachment connectors for Type A, Type B, Type D and combinations for these child designations. The vehicle ISOFIX low anchorages are not seen as being suitable for restraints for older occupants due to possible insufficient strength. ISOFIX low anchorages may not be strong enough in all vehicles to withstand the loads of a Type G (new) child restraint. Booster seats with lower attachment connectors may have a greater propensity for the occupant to submarine. Combination of Types B and E, and B and F are considered inappropriate as users may use the lower attachment connector in the child restraint in the booster seat mode. This new system for securing the child restraint to the vehicle continues to require the use of top tether straps or upper anchorage straps that have been required for child restraints since the requirements were first establish in AS 1754—1975.

    It may be many years before all vehicles have ISOFIX low anchorages thus child restraints with lower attachment connectors are also required to provide the ability of the child restraint to be fitted into vehicles that are not fitted with ISOFIX low anchorages or to allow three child restraints to be fitted across a rear vehicle seat. Thus, this Standard requires these new child restraints that connect to a car's ISOFIX low anchorages to also be capable of installing into a car using just the car's seatbelt.

(b) Introduction of new type designation for rear facing seats to allow children to stay rear facing longer. Prior to this revision the two options were Type A2 for children up to approximately 12 months and Type D for children approximately 12 months to 4 years of age. There is acknowledgement that in testing to the requirements of this and previous standard that achieving the requirements of this standard particularly using the TNO P6 dummy for dynamic test were onerous. Thus the new Type A4 has been introduced that is suitable for rear facing children from birth to approximately 30 months. This new child restraint designation will have accommodation for a TNO P3 dummy as well requirement dynamic testing using a TNO P3 dummy. Thus the sizing and performance of this new restraint is equivalent to European Group 1 child restraints that offer rearward facing for older children. Revision of Type D was considered unnecessary for this revision.

(c) Introduction of requirements for child restraints with in-built harnesses for children up to 8 years of age, known as Type G, which are similar to the Type B requirements but cater for older children. As the load on the child restraint anchorage fitting may be too high the requirements include a limit on the dynamic test loads on the child restraint's top tether strap to avoid overloading the vehicle child restraint anchorage.

(d) Minor revisions to the shoulder height marker system have been included with revised minimum heights for transition markers of combination Type A and Type B child restraints with the intent to have the occupant face rearward longer. In addition there is a revision to the height of the lower shoulder height marker for child restraints utilizing Type E and Type F designation. The lower height markers for Type B, Type D, Type E, Type F and the combination of these designations now have a requirement the position of these lower markers to be located on the child restraint with a tolerance of ±10 mm. The positioning of other height markers has been refined to limit how high the markers can be located. Other minor changes have been made to the wording on one of the height marker labels.

(e) Converters to be used with a seatbelt and/or a child restraint have been moved from a designation of Type F to a new designation of Type H with specific requirements for converters. A device for linking together a lap and sash seatbelt has been removed from the definition of converters and has been included in a new term 'Locking clips'. Locking clips, also known as 'gated buckle' or 'gated 3 bar slides' are no longer considered as converters.

(f) A new test method has been included that defines a single method of testing energy attenuation of side structure of child restraints.

(g) Test requirements for Type A have been revised to allow the optional designation of their child restraint to be suitable for low birth weight infants. A 2 kg low birth weight dummy has been specified by Committee CS-085.

(h) Type C child harness has been split in to two designations for booster seat use or vehicle only use. Separate requirements are provided for these new Types C1 and C2. There is provision to have a harness that will incorporate the requirements of both Type C1 and Type C2.

(i) Requirements for Type E booster seats have been revised to require additional dynamic performance with and without child harnesses. Additional testing is required for Type C1 child harnesses when used with booster seats.

(j) Users of child restraints often desire to use their child restraint on an aircraft in order to better restrain their child. The Australian Civil Aviation Safety Authority (CASA) and airlines have specific requirements that are not always understood by users or airline staff. Requirements have been introduced to this standard for child restraints that allows manufacturers to apply additional requirements in order to have their child restraint marked as acceptable for aircraft use. CASA have had a significant input in to these requirements.

Although this Standard specifies the requirements for removable items when supplied with a child restraint, additional requirements have been developed with the introduction of a new Standard, AS/NZS 8005, *Accessories for child restraints for use in motor vehicles*.

Statements expressed in mandatory terms in notes and footnotes to tables and figures are deemed to be requirements of this Standard.

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, whereas an 'informative' appendix is only for information and guidance.

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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 requirements for restraining devices for child occupants of passenger cars and their derivatives, such devices being intended, when properly selected, correctly installed and correctly adjusted, to reduce the risk of bodily injury in a vehicle impact. The devices may also have application to other types of vehicles.

Accessories or removable items supplied with the child restraint or included in the instruction book are included in the scope of this Standard. Accessories supplied separately for use with child restraints are covered by AS/NZS 8005.

This Standard does not cover child restraints that are an integrated feature of a motor vehicle.

1.2 OBJECTIVE

The objective of the Standard is to provide minimum design, construction and performance requirements for child restraint systems in order to provide a high level of protection for children travelling in motor vehicles.

1.3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS	
1753	Webbing for restraining devices for occupants of motor vehicles
2001	Methods of test for textiles
2001.5.4	Method 5.4: Dimensional change—Domestic washing and drying procedures for textile testing (ISO 6330:2000, MOD)
2282	Methods for testing flexible cellular polyurethane
2282.2	Method 2: Measurement of dimensions of test specimens
2282.8	Method 8: Determination of force deflection
2331	Methods of test for metallic and related coatings
2331.3.1	Method 3.1: Corrosion and related property tests—Neutral salt spray (NSS) test
2700	Colour Standards for general purposes
2755	Textile fabrics—Burning behaviour
2755.2	Method 2: Measurement of flame spread properties of vertically oriented specimens
2755.3	Method 3: Determination of surface burning time