

項次	規章名稱	修訂內容	新增項目	頁碼	說明
1	1.2整體星級評等規章	◎		2	參考 Euro NCAP 整體星級評等規章 9.1.1 及 10.0 版修訂新四大領域名稱、權重係數與平衡標準，以及補償機制與星等限制條件。
2	2.2兒童保護評等規章	◎		4	參考 Euro NCAP 兒童保護評等規章 8.1 版，新增安全功能得分前提要求、前方偏置撞擊 Q10 人偶胸部變形量，修訂治具安裝、CRS 安裝要求及評分架構。
3	3.8兒童保護試驗規章	◎		64	參考 Euro NCAP 兒童保護試驗規章 7.3.2 版，修訂 CRS 支撐腳安裝要求、人偶配件與調整及人偶衣著。
4	3.19兒童遺留偵測試驗規章		◎	72	參考 Euro NCAP 兒童遺留偵測試驗規章 1.3 版，增訂兒童遺留偵測試驗規範。

1.2 整體星級評等規章

Euro NCAP ASSESSMENT PROTOCOL – OVERALL RATING Version 9.1.1

Euro NCAP ASSESSMENT PROTOCOL – OVERALL RATING Version 10.0

修訂TNCAP條文草案(第三版)	對應TNCAP第二版規章																																																																																
1.2.1 整體星級評等判定 整體星級評等係採計四大評等領域 (也稱為「欄位」)分數，即<u>安全駕駛(Safe Driving)</u>、<u>碰撞預防(Crash Avoidance)</u>、<u>碰撞保護(Crash Protection)</u>與<u>碰撞後安全(Post-Crash)</u>，各欄位的得分係依據受評車型於各試驗項目之表現而評定。	1.2.1 整體星級評等判定 整體星級評等係採計四大評等領域 (也稱為「欄位」)分數，即<u>成人保護(Adult Occupant Protection</u>，以下簡稱 AOP)、<u>兒童保護(Child Occupant Protection</u>，以下簡稱 COP)、<u>弱勢道路使用者保護(Vulnerable Road User Protection</u>，以下簡稱 VRU)與<u>安全輔助(Safety Assist</u>，以下簡稱 SA)，各欄位的得分係依據受評車型於各試驗項目之表現而評定。																																																																																
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1.2.2.3 補償機制

TNCAP 前三個領域(安全駕駛、碰撞預防及碰撞保護)，最高得使用 5 分以補償相鄰評等領域，以獲得較高的星級評等結果。溢餘的分數僅得用於補償相鄰的評等領域，且僅以一次為限。例如「安全駕駛」與「碰撞保護」不得相互補償；若「碰撞預防」有 5 分溢餘，則得將其拆分並用於補償「安全駕駛」與「碰撞保護」。

1.2.2.4 TNCAP 整體星級評等五顆星車型應符合 1.2.2.2 四大安全領域平衡標準，且該車型於 TNCAP 實車正式試驗後(含扣分項目)之人偶身體部位不得被評為「不良(紅色)」，或弱勢道路使用者身體部位所對應之所有網格點不得皆被評為「不良(紅色)」，如表 3 及表 4 所示。如評為「不良(紅色)」，則該車型最多僅能授予四顆星。

表 3：TNCAP 實車試驗及人偶身體部位

實車試驗	人偶身體部位		
	駕駛	第一排乘客	後座乘客
前方偏置撞擊	頭、頸及胸部	頭、頸及胸部	頭及胸部 ^(註)
前方全寬撞擊	頭、頸及胸部	頭及胸部	頭及胸部
側方撞擊	頭、胸、腹部及骨盆		頭部
側方立柱撞擊	頭、胸、腹部及骨盆		

註:適用 Q10 胸部 3 毫秒合成加速度

1.2.2.3 TNCAP 整體星級評等五顆星車型應符合 1.2.2.2 四大安全領域平衡標準，且該車型於 TNCAP 實車正式試驗後(含扣分項目)之人偶重要身體部位不得被評判為「不良(紅色)」，如表 3 所示。人偶重要身體部位如評判為「不良(紅色)」，則該車型最多僅能授予四顆星。

表 3：TNCAP 實車試驗及人偶身體重要部位

實車試驗	人偶身體重要部位
前方偏置撞擊	頭、頸及胸部
前方全寬撞擊	頭、頸(僅適用駕駛)及胸部
側方撞擊	頭、胸、腹部及骨盆
側方立柱撞擊	頭、胸、腹部及骨盆

表 4：弱勢道路使用者人偶身體重要部位

<u>次系統試驗</u>	<u>人偶身體部位</u>		
	<u>成人行人</u>	<u>兒童行人</u>	<u>自行車騎士</u>
<u>弱勢道路使用者</u>	<u>頭、骨盆、 大腿、膝蓋 及脛骨</u>	<u>頭部</u>	<u>頭部</u>

2.2 兒童保護評等規章

Euro NCAP Assessment Protocol – CHILD OCCUPANT PROTECTION Version 8.1

TB 023 - Assessment of Automatic Passenger Airbag Disabling v2.0

TB 033 - Child Occupant Protection Website Information Form v1.1

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2 VEHICLE BASED ASSESSMENT ... 2.1 Preconditions ... 2.1.2 Website Information Form TB 033 The OEM is required to complete a website information form that details the vehicle's ability to accommodate CRS of all types, e.g. belted, i-Size etc. Information must not conflict with information detailed in the vehicle	2 VEHICLE BASED ASSESSMENT ... 2.1 Preconditions ...	2.2.1 車輛安全功能評等 ... 2.2.1.1 前提條件 ... <u>2.2.1.1.2 網站資訊表</u> <u>車輛業者應詳細說明車輛安裝所有類型 CRS 之適用性，例如安全帶、i-Size 等。所填資訊不得與車輛手冊之內容相牴觸。若車輛業者未說明，則車輛安全功能評等給予 0 分。</u>	2.2.1 車輛安全功能評等 ... 2.2.1.1 前提條件 ...

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handbook. Were the OEM has not completed the website information form, 0 points shall be awarded for the vehicle based assessment. 2.1.3 Vehicle Handbook Information Where any of the applicable vehicle handbook information is either not present or not in compliance with R16, the CRS installation and vehicle-based assessments will not be performed and 0 points shall be awarded in these areas. It is acceptable for the information to be annexed in the vehicle handbook or provided on a permanent website provided that clear references are provided in the vehicle handbook.	2.1.2 Vehicle Handbook Information Consumers must be able to rely on the information given in the vehicle handbook to determine which CRS suits them and their children best. The information provided should clearly state what is, and moreover, what is not possible in terms of installing child restraint systems on the different seating positions in the vehicle. The vehicle handbook must detail, either in tabular format or with the use of pictograms, the CRS categories (Universal, ISOFIX and i-Size as defined in Regulation 16) that are suitable or not suitable for installation for each passenger seating position. The information must explicitly state which CRS weight and size groups can be installed on each passenger seating	2.2.1.1.3 車主手冊資訊 <u>若車輛手冊中無適用資訊或該資訊不符合車輛安全檢測基準「四十八之二、安全帶固定裝置」規定，則不執行 CRS 安裝及車輛安全功能評等，且兩項皆給予 0 分。</u> 可將此表格包含於車主手冊之附件，或於永久網站上，惟車主手冊應清楚提供連結。	2.2.1.1.2 車主手冊資訊 <u>消費者應能根據車主手冊所提資訊決定最適合他們及其孩童之 CRS。此資訊應清楚說明車上各座椅位置是否適合安裝 CRS。車主手冊須以表格方式或使用圖示，清楚說明除第一排座椅以外各乘客座椅位置所適合安裝之 CRS 類型（依照車輛安全檢測基準「四十八之二、安全帶固定裝置」所定義之通用型、ISOFIX 及 i-Size）。該資訊必須明確地說明第一排座椅以外各乘客座椅位置可安裝之 CRS 質量等級及尺度範圍。若該座位可容納所有通用型（質量等級 0、0+、I、II 及 III），則可使用字母簡寫 U。對於無法安裝所有 CRS 質量等級/尺度範圍之座椅位置，車主手冊必須說明涵蓋及未涵蓋之質量等級/尺</u>

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	position. Where a seating position can accommodate all Universal categories (group 0, 0+, I, II and III), U may be used. For seating positions that do not cover all CRS groups, the handbook must indicate which groups are and are not covered. Where any of the applicable information is not present, the CRS installation and vehicle based assessments will not be performed and 0 points shall be awarded in these areas. It is acceptable for the information to be annexed in the vehicle handbook or provided on a permanent website provided that clear references are provided in the vehicle handbook. Where the CRS information is provided according to R16/06 supplement 8 or later, it must be clear which CRS weight and size groups can be installed on each passenger seating position. Where the table according to R16/06 up to and including supplement 7 is used for Universal, ISOFIX and i-Size CRS, Section 2.1.2.1-3 must be met.		<u>度範圍。若無該資訊，則將不進行 CRS 安裝與車輛安全功能評等，且前述兩項評等將給予 0 分。</u> 可將此表格包含於車主手冊之附件，或於永久網站上，惟車主手冊應清楚提供連結。 <u>若 CRS 資訊係依照現行車輛安全檢測基準「四十八之二、安全帶固定裝置」提供，則必須清楚說明第一排座椅以外各乘客座椅位置所適合安裝之 CRS 質量等級及尺度範圍。</u> <u>若使用通用型、ISOFIX 及 i-Size CRS 表格呈現，則須符合 2.2.1.1.2.1 至 2.2.1.1.2.3 之規定。</u>

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	2.1.2.1 Universal (Belted) CRS Table The Universal CRS table must clearly detail on which seating positions a Universal CRS can be installed (and not installed) using the vehicle's seatbelt. This is to be done for every Universal CRS weight group, using the following key of letters to be used in the table: U: Suitable for "Universal" category restraints approved for use in this weight group. U(*) or U(R) will also be permitted provided that there is an accompanying key. UF: Suitable for forward-facing "Universal" category restraints approved for use in this weight group. L: Suitable for particular child restraints given on attached list. These restraints may Version 7.3.2 5 November 2021 be of the "Specific vehicle", "Restricted" or "Semi-universal" categories. B: Built-in restraint approved for this weight group.		<u>2.2.1.1.2.1 通用型（以安全帶安裝）CRS 表</u> <u>通用型 CRS 表應清楚說明該座椅位置是否可使用車輛安全帶安裝通用型 CRS。通用型 CRS 之所有質量等級(Weight group)皆應包含在內，並於表格中使用下列字母簡寫：</u> <u>U：適用於經認證該質量等級之通用型兒童保護裝置。若有相對應的簡寫說明，亦可使用 U(*)或 U(R)。</u> <u>UF：適用於經認證該質量等級之通用型前向兒童保護裝置。</u> <u>L：適用於附列清單內之特定兒童保護裝置。此類兒童保護裝置可能為限制車款(Specific vehicle)、限制使用型(Restricted)或半通用型(Semi-universal)</u> <u>B：適用於經認證可用於此質量等級之內建式兒童保護裝置。</u>

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	X: Seat position not suitable for children in this weight group. 2.1.2.2 ISOFIX CRS Table The ISOFIX CRS table must clearly detail which seating positions can be used (and not used) for installing an ISOFIX CRS. This is to be done for every ISOFIX CRS size class and/or type of fixture using the following key of letters to be used in the table: IUF: Suitable for ISOFIX forward child restraints systems of Universal category approved for use in the weight group IL: Suitable for particular ISOFIX child restraint systems (CRS) given in the attached list. These ISOFIX CRS are those of the "specific vehicle", "restricted" or "semi-universal" categories. IL-SU will also be permitted provided that there is an accompanying key. X: ISOFIX position not suitable for ISOFIX child restraint systems in this weight group and/or this size class.		<u>X: 不適用於該質量等級之兒童。</u> <u>2.2.1.1.2.2 ISOFIX CRS 表</u> <u>ISOFIX CRS 表應清楚說明該座椅位置是否適合安裝 ISOFIX CRS。各尺度等級之 ISOFIX CRS 及/或治具類型皆應包含在內，並於表格中使用下列字母簡寫：</u> <u>IUF: 適用於經認證該質量等級之通用型 ISOFIX 前向兒童保護裝置。</u> <u>IL: 適用於附列清單內之特定 ISOFIX 兒童保護裝置(CRS)，此保護裝置可能為限制車款、「限定使用型」或是「半通用型」。若有相對應的簡寫說明，亦可使用 IL-SU。</u> <u>X: 不適用於該質量等級及/或尺度等級之 ISOFIX 兒童保護裝置。</u>

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	2.1.2.3 i-Size CRS Table The must clearly detail which seating positions can be used for installing an i-Size CRS using the following key of letters to be used in the table: i-U / i-UF: Suitable for i-Size "universal" CRS forward and/or rearward facing. X: Seating position not suitable for i-Size "universal" CRS.		<u>2.2.1.1.2.3 i-Size CRS 表</u> <u>i-Size CRS 表應清楚說明該座椅位置是否適合安裝 i-Size CRS，並於表格中使用下列字母簡寫：</u> <u>i-U/i-UF：適用於通用型前向及/或後向 i-Size CRS。</u> <u>X：不適用於通用型 i-Size CRS。</u>
2.1.3.1 Airbag Disabling a) Where a passenger frontal airbag is fitted (both front and rear seats if applicable) all CRS tables in the vehicle handbook must clearly indicate that when these passenger airbags are active the seat is NOT suitable for any rearward facing CRS. This is to be done with the use of either two separate columns in the relevant CRS tables, belt attached, ISOFIX and i-size where appropriate. One column shall indicate the CRS installation options with the airbag ON and the second column with the airbag OFF. Alternatively, pictograms may be	2.1.2.4 Airbag Disabling a) Where a passenger frontal airbag is fitted (both front and rear seats if applicable) all CRS tables in the vehicle handbook must clearly indicate that when these passenger airbags are active the seat is NOT suitable for any rearward facing CRS. This is to be done with the use of either two separate columns in the relevant tables, Universal, ISOFIX and i-size where appropriate. One column shall indicate the CRS installation options with the airbag ON and the second column with the airbag OFF. Alternatively, pictograms may be used to indicate the	<u>2.2.1.1.3.1 空氣囊解除</u> (1)若後排乘客座前方配備空氣囊，車主手冊內所有 CRS 表格皆應清楚說明此乘客座空氣囊啟用狀態下不適合安裝任何後向 CRS。依實際狀況（<u>安全帶固定型</u>、ISOFIX、i-Size），應於相關表格中使用兩欄作為標示，一個欄位標示空氣囊啟用狀態下 CRS 之安裝選項，另一個欄位則標示空氣囊解除狀態下之 CRS 安裝選項。 或者，得使用符合 <u>2.2.1.4</u> 規定之圖示，指示空氣囊狀態及乘客座準備情況以安裝 CRS。	<u>2.2.1.1.2.4 空氣囊解除</u> (1)若後排乘客座前方配備空氣囊，車主手冊內所有 CRS 表格皆應清楚說明此乘客座空氣囊啟用狀態下不適合安裝任何後向 CRS。依實際狀況（<u>通用型</u>、ISOFIX、i-Size），應於相關表格中使用兩欄作為標示，一個欄位標示空氣囊啟用狀態下 CRS 之安裝選項，另一個欄位則標示空氣囊解除狀態下之 CRS 安裝選項。 或者，得使用符合 <u>2.2.1.5</u> 規定之圖示，指示空氣囊狀態及乘客座準備情況以安裝 CRS。

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used to indicate the airbag status and equivalent readiness of the passenger seat for accommodating CRS providing the pictograms meet the requirements of Section 2.5.	airbag status and equivalent readiness of the passenger seat for accommodating CRS providing the pictograms meet the requirements of Section 2.5. <table><tr><td>Table example:</td><td>Rear outboard seats</td><td>Centre rear seat</td></tr><tr><td>Front passenger seat</td><td></td><td></td></tr><tr><td>Airbag activated</td><td></td><td>Airbag deactivated</td></tr><tr><td>Group 0</td><td>X</td><td>U</td></tr><tr><td>Group 0+</td><td>X</td><td>U</td></tr><tr><td>Group I</td><td>X</td><td>U</td></tr><tr><td>Group II</td><td>U</td><td>U</td></tr><tr><td>Group III</td><td>U</td><td>U</td></tr></table>	Table example:	Rear outboard seats	Centre rear seat	Front passenger seat			Airbag activated		Airbag deactivated	Group 0	X	U	Group 0+	X	U	Group I	X	U	Group II	U	U	Group III	U	U		表格範例: <table><tr><td></td><td colspan="2">後排外側座椅</td><td>後排中間座椅</td></tr><tr><td></td><td>空氣囊啟用</td><td>空氣囊解除</td><td></td></tr><tr><td>質量等級0</td><td>X</td><td>U</td><td>U</td></tr><tr><td>質量等級0+</td><td>X</td><td>U</td><td>U</td></tr><tr><td>質量等級I</td><td>X</td><td>U</td><td>U</td></tr><tr><td>質量等級II</td><td>U</td><td>U</td><td>U</td></tr><tr><td>質量等級III</td><td>U</td><td>U</td><td>U</td></tr></table>		後排外側座椅		後排中間座椅		空氣囊啟用	空氣囊解除		質量等級0	X	U	U	質量等級0+	X	U	U	質量等級I	X	U	U	質量等級II	U	U	U	質量等級III	U	U	U
Table example:	Rear outboard seats	Centre rear seat																																																					
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2.2 Gabarit Installation on All Passenger Seats Where the 2nd row outboard seats are in compliance with the requirements in UN	2.2 Gabarit Installation on All Passenger Seats Where the 2nd row outboard seats are in compliance with the requirements in UN	2.2.1.2 乘客座椅之治具(Gabarit)安裝 若第二排外側座椅符合車輛安全檢測基準「四十八之二、安全帶	2.2.1.2 乘客座椅之治具(Gabarit)安裝 若第二排外側座椅符合車輛安全檢測基準「四十八之二、安全帶																																																				

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Regulation 16 Annex 17 - Appendix 1 and meet the additional requirements specified below, 1 point shall be awarded. Where, in addition, all other passenger seats comply, an additional 1 point shall be awarded. For Gabarit installations on the 3rd row seats, it is acceptable to move or fold the 2nd row seats to enable installation provided the vehicle handbook instructs the user to do so. The 2nd row vehicle seats may remain folded for the Gabarit assessments on the 3rd row. From 2024 onwards, monitoring of ISO/B2 fixture installations (belted only) on all passenger seating positions will commence. For all assessments published from 1st January 2026, the vehicle must accommodate both the Gabarit and ISO/B2 fixture for these points to be awarded.	Regulation 16 Annex 17 - Appendix 1 and meet the additional requirements specified below, 1 point shall be Version 7.2.2 6 September 2018 awarded. Where, in addition, all other passenger seats comply, an additional 1 point shall be awarded. For gabarit installations on the 3rd row seats, it is acceptable to move or fold the 2nd row seats to enable installation provided the vehicle handbook instructs the user to do so.	固定裝置」7.2.1 之要求，且滿足下述額外要求時，應給予 1 分。除第一排乘客座椅外，若其他乘客座椅皆能滿足要求，應再多給予 1 分。對於第三排座椅治具安裝，若車主手冊提供使用者相關指示，則可接受移動或折疊第二排座椅以進行安裝。<u>執行第三排座椅治具安裝時，第二排座椅得維持於折疊狀態。</u> <u>對所有乘客座位進行 ISO/B2 治具(僅限安全帶安裝方式)安裝，試驗結果僅供監測。</u>	固定裝置」7.2.1 之要求，且滿足下述額外要求時，應給予 1 分。除第一排乘客座椅外，若其他乘客座椅皆能滿足要求，應再多給予 1 分。對於第三排座椅治具安裝，若車主手冊提供使用者相關指示，則可接受移動或折疊第二排座椅以進行安裝。
2.2.1 Additional Requirements for Gabarit Installation:	2.2.1 Additional Requirements for Gabarit Installation:	2.2.1.2.1 治具安裝之額外要求	2.2.1.2.1 治具安裝之額外要求

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a) Once the belt is correctly routed around the Gabarit fixture, it should be possible to draw a further 150mm of belt webbing from the reel. b) Where a passenger frontal airbag is fitted, it must be possible to activate and deactivate the passenger airbag, either automatically or manually. The requirements of Section 2.4 need not be met to qualify for this award, but the airbag disabling equipment must be standard and the requirements of 2.1.3.1 a) must also be met.	a) Once the belt is correctly routed around the Gabarit fixture, it should be possible to draw a further 150mm of belt webbing from the reel. b) Where a passenger frontal airbag is fitted, it must be possible to activate and deactivate the passenger airbag, either automatically or manually. The requirements of Section 2.5 need not be met to qualify for this award, but the airbag disabling equipment must be standard and the requirements of 2.1.2.4 a) must also be met.	(1)安全帶正確地繞過治具後，應可從安全帶捲軸再拉出長度 150mm 的織帶。 (2)若配備乘客座前方空氣囊，則應以自動或手動方式啟用及解除乘客座空氣囊。此項計分標準無須符合 2.2.1.4 之規定，惟空氣囊解除裝置須為標配且符合 2.2.1.1.3.1(1)之規定。	(1)安全帶正確地繞過治具後，應可從安全帶捲軸再拉出長度 150mm 的織帶。 (2)若配備乘客座前方空氣囊，則應以自動或手動方式啟用及解除乘客座空氣囊。此項計分標準無須符合 2.2.1.5 之規定，惟空氣囊解除裝置須為標配且符合 2.2.1.1.2.4(1)之規定。
2.3 i-Size and TopTether Marking 2.3.1 Preconditions Where i-Size seating positions are offered, they will be assessed on variants fitted with optional floor storage compartments and need to comply with the following requirements to be eligible for scoring the available points specified below. a) The location of each i-Size approved anchorage must be marked.	2.3 i-Size and TopTether Marking 2.3.1 Preconditions Where i-Size seating positions are offered, they will be assessed on variants fitted with optional floor storage compartments and need to comply with the following requirements to be eligible for scoring the available points specified below. a) The location of each i-Size anchorage must be marked.	2.2.1.3 i-Size 與上固定帶標識 2.2.1.3.1 前提條件 若配備 i-Size 座椅位置，則將以配有地板儲物箱之車款進行評等，且應符合下述規定以獲得各項分數。 (1)須標示每個 i-Size 經認證之固定器位置。	2.2.1.3 i-Size 與上固定帶標識 2.2.1.3.1 前提條件 若配備 i-Size 座椅位置，則將以配有地板儲物箱之車款進行評等，且應符合下述規定以獲得各項分數。 (1)須標示每個 i-Size 固定器位置。

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...	...	...	...
2.3.2 i-Size Availability Where the vehicle offers two or more i-Size seating positions, 2 points are awarded. As regulation limits installation of the B2 fixture to belted installation only (i.e. without the use of ISOFIX attachments), Euro NCAP will install the ISO/B2 fixture using the seatbelt and ISOFIX anchorages simultaneously. This will be monitored for all assessments from 1st January 2024. From 1st January 2026, the compatibility when using seatbelt AND ISOFIX anchorages will be included in this assessment.	2.3.2 i-Size Availability Where the vehicle offers two or more i-Size seating positions that are able to accommodate the ISO/B2 i-size fixture, defined in R16 supplement 9, 2 points are awarded.	2.2.1.3.2 i-Size 可適性 除第一排座椅以外，若車輛配備一個以上之 i-Size 座椅位置，則應給予 2 分。<u>由於法規僅限以安全帶安裝 ISO/B2 治具（即不使用 ISOFIX 固定裝置），TNCAP 將同時使用安全帶與 ISOFIX 固定器安裝 ISO/B2 治具，此結果僅供監測。</u>	2.2.1.3.2 i-Size 可適性 除第一排座椅以外，若車輛配備一個以上<u>可容納 ISO/B2 治具（參見車輛安全檢測基準「四十八之二、安全帶固定裝置」定義）</u>之 i-Size 座椅位置，則應給予 2 分。
2.3.3 Three i-Size Seating Positions & Accommodation of Two ISO/R3 positions Where the vehicle is provided with three fully independent, correctly marked i-Size seating positions (Section 2.3.1) that can correctly accommodate i-Size CRS including top-tether (2.3.2) with at least	2.3.3 Three i-Size Seating Positions Where the vehicle is provided with three fully independent, correctly marked i-Size seating positions (Section 2.3.1) that can correctly accommodate i-Size CRS including top-tether (2.3.2), 1 point shall	2.2.1.3.3 兩個 i-Size 座椅位置 <u>及 ISO/R3 座椅位置</u> 除第一排座椅以外，若車輛配備兩個完全獨立且正確標示之 i-Size 座椅位置（2.2.1.3.1），並可正確容納包括上固定帶之 i-Size CRS（2.2.1.3.2），<u>且至少兩個位置可</u>	2.2.1.3.3 <u>兩個 i-Size 座椅位置</u> 除第一排座椅以外，若車輛配備兩個完全獨立且正確標示之 i-Size 座椅位置（2.2.1.3.1），並可正確容納包括上固定帶之 i-Size CRS（2.2.1.3.2），則應給予 1 分。各

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two of those positions also accommodating the ISO/R3 fixture (Class C), 1 point shall be awarded. It will not be acceptable for any anchorages and the top-tether to be shared between seating positions.	be awarded. It will not be acceptable for any anchorages and the top-tether to be shared between seating positions. 2.4 Two or more ISO/R3 Positions Where two or more seating positions are suitable for fully independent use with the largest size of rearward facing (Class C) ISOFIX CRS, Fixture (CRF) ISO/R3, 1 point shall be awarded.	<u>容納 ISO/R3 治具(尺度等級 C)</u> ，則應給予 1 分。各座椅位置不得共用固定器或上固定帶。	座椅位置不得共用固定器或上固定帶。 <u>2.2.1.4 兩個以上之 ISO/R3 座椅位置</u> <u>除第一排座椅以外，若兩個以上座椅位置皆可獨立安裝最大尺度等級 (C) 之後向 ISOFIX CRS，亦即 ISO/R3 兒童保護裝置治具 (CRF)，則應給予 1 分。</u>
2.4 Passenger Airbag Warning Marking and Disabling If the vehicle is fitted with a passenger's frontal protection airbag as standard or optional, it must be marked with a permanent airbag warning label that meets the requirements of UN Regulation 94 to be eligible for scoring points under this section. For automatic switches, 4 points will be awarded when the below requirements in sections 2.4.1 and 2.4.3 are met. For manual switches, 2 points will be awarded when requirements for manual switches in sections 2.4.1 and 2.4.2 are met. If no passenger airbag is	2.5 Passenger Airbag Warning Marking and Disabling If the vehicle is fitted with a passenger's frontal protection airbag as standard or optional, it must be marked with a permanent airbag warning label that meets the requirements of UN Regulation 94 to be eligible for scoring points under this section. For automatic switches, 4 points will be awarded when the below requirements in sections 2.5.1 and 2.5.3 are met. For manual switches, 2 points will be awarded when requirements for manual switches in sections 2.5.1 and 2.5.2 are met. If no passenger airbag is	<u>2.2.1.4 乘客座空氣囊警告標識與空氣囊解除</u> 若車輛配備乘客前方保護之空氣囊，不論為標準配備或選擇性配備，須具有符合車輛安全檢測基準「車輛規格規定」之永久性空氣囊警告標識，以獲得本項得分資格。針對自動開關部分，若符合下述 <u>2.2.1.4.1</u> 及 <u>2.2.1.4.3</u> 之規定，則應給予 4 分。針對手動開關部分，若符合下述 <u>2.2.1.4.1</u> 及 <u>2.2.1.4.2</u> 之規定，則應給予 2 分。針對未配備空氣囊開關之車輛亦應給予 2 分。若該車款之車型總覽皆未配備乘客座空氣囊，則應	<u>2.2.1.5 乘客座空氣囊警告標識與空氣囊解除</u> 若車輛配備乘客前方保護之空氣囊，不論為標準配備或選擇性配備，須具有符合車輛安全檢測基準「車輛規格規定」之永久性空氣囊警告標識，以獲得本項得分資格。針對自動開關部分，若符合下述 <u>2.2.1.5.1</u> 及 <u>2.2.1.5.3</u> 之規定，則應給予 4 分。針對手動開關部分，若符合下述 <u>2.2.1.5.1</u> 及 <u>2.2.1.5.2</u> 之規定，則應給予 2 分。針對未配備空氣囊開關之車輛亦應給予 2 分。若該車款之車型總覽皆未配備乘客座空氣囊，則應

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available on the entire model range, 2 points will be awarded.	available on the entire model range, 2 points will be awarded.	給予 2 分。	給予 2 分。
2.4.1 General Requirements for Automatic and Manual Switches	2.5.1 General Requirements for Automatic and Manual Switches	2.2.1.4.1 自動與手動開關之一般規定	2.2.1.5.1 自動與手動開關之一般規定
...	...	...	...
2.4.2 Additional Requirements for Manual Switches Only	2.5.2 Additional Requirements for Manual Switches Only	2.2.1.4.2 手動開關之額外要求	2.2.1.5.2 手動開關之額外要求
...	...	...	...
2.4.3 Additional Requirements for Automatic Switches Only (TB 023 - Assessment of Automatic Passenger Airbag Disabling v2.0)	2.5.3 Additional Requirements for Automatic Switches Only (TB 023 - Assessment of Automatic Passenger Airbag Disabling v1.4)	2.2.1.4.3 自動開關之額外要求	2.2.1.5.3 自動開關之額外要求
1.Introduction	1.Introduction	...	...
...	...	(A) TNCAP 檢測機構必須檢查系統是否符合下列最低要求：	(A)檢測機構必須檢查系統是否符合下列最低要求：
The Euro NCAP test laboratory must check if the minimum requirements are followed:	The laboratory must check if the minimum requirements are followed:	(a)使用後向 CRS 時，空氣囊為解除狀態。	(a)使用後向 CRS 時，空氣囊為解除狀態。
● Airbag is OFF when using any rearward facing CRS	● Airbag is OFF when using a Rearward Facing CRS	(b)使用第 5 百分位 女性及較大體型 之乘員，空氣囊為啟用狀態。	(b)使用第 5 百分位以上之乘員，空氣囊為啟用狀態。
● Airbag is ON for a 5th percentile female occupant and larger	● Airbag is ON for a 5th occupant and above	車輛業者須負起責任 證明 其餘情況(如前向 CRS 及兒童乘坐於車輛座椅) 之系統功能性 。下列要	其餘情況(前向 CRS 以及僅有兒童之情況)須由車輛業者負起責任， 且系統具有不同的策略 。下列要
It is the responsibility of the vehicle manufacturer to demonstrate the system functionality in all other situations, i.e.	The rest (forward facing CRS + child alone) is the responsibility of the OEM and there are different strategies. The		

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forward facing CRS & a child sat on the vehicle seat. The requirements detailed in the following section aim to address a variety of different occupant ages, statures and child installation modes. Additional requirements for automatic airbag disabling systems can be found in ... the Euro NCAP Assessment protocol – Child Occupant Protection. 2. Installations and assessments 2.1 Test matrix (請參考末頁圖表) 2.2 Notes a) The airbag deployment strategy is the decision of the OEM. There is no mandatory status requirement specified by Euro NCAP. However, where the strategy is airbag ON, the OEM must show that deployment does not lead to higher risk for a child compared to that with the airbag OFF. This demonstration applies to both manual and automatic airbag disabling systems. For CRS installations involving a child, the stature	following requirements and test matrix aim to cover a variety of possible occupant sizes and installation modes. 2. Requirement for Airbag Status ... 3. Test Matrix (請參考末頁圖表)	求及試驗矩陣表將涵蓋不同乘員年齡、體型及安裝模式。 (B)試驗矩陣表 (請參考末頁圖表) 備註： (1)空氣囊開展策略由車輛業者自行決定，TNCAP 並無強制性要求。惟空氣囊採取開啟狀態之策略時，車輛業者應證明空氣囊開展，對兒童所造成之傷害風險不會高於空氣囊關閉狀態之情況。此證明要求適用於手動及自動空氣囊解除系統。針對涉及兒童之 CRS 安裝，應遵循 CRS 所認證之體型範圍。	求及試驗矩陣表將涵蓋不同乘員體型及安裝模式。 (B)空氣囊狀態要求 ... (C)試驗矩陣表 (請參考末頁圖表)

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ranges for which the CRS is approved shall be adhered to. b) This configuration is permitted in certain EU countries as there are differences between the regulatory requirements within the EU. Some EU countries require children to use a suitable CRS for all statures up to 150cm, whereas others permit children of 135cm to occupy a vehicle seat with no CRS. Therefore, larger statures (6YO and 10YO) are included in the Euro NCAP assessment. c) Currently not applicable (N/A): It is theoretically possible to have a large rearward facing CRS for taller statures, but none are known to exist at present. If one becomes available in the future, Euro NCAP will consider its inclusion in this assessment. d) For cells marked X there will be no installation as this combination of CRS type and child is precluded.		<u>(2)標示為「X」之欄位，代表不進行該組合之安裝。</u>	

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2.5 Child Presence Detection Where the vehicle is equipped with a Child Presence Detection (CPD) system that meets the requirements detailed in the Euro NCAP CPD Test and Assessment protocol, up to 4 points shall be awarded. The score available is dependent upon the type of detection system used, the areas of vehicle covered and which of the identified scenarios are covered by the system. A breakdown of CPD scoring can be found in Section 6 of the Euro NCAP CPD Test and Assessment protocol.	2.6 Integrated Child Restraints Where the vehicle is provided with at least one integrated CRS as standard equipment, 1 point shall be awarded. If the vehicle offers two or more integrated CRS, as standard equipment, 3 points shall be awarded.	2.2.1.5 兒童遺留偵測 若車輛配備之兒童遺留偵測系統(CPD)符合「兒童遺留偵測試驗規章」要求，則最高可獲得 4 分。實際可獲得分數，取決於所採用之偵測系統類型、所涵蓋之車輛區域，以及該系統所能對應之指定情境。關於兒童遺留偵測系統評分，詳見「兒童遺留偵測試驗規章」3.19.6。	2.2.1.6 整體型 CRS 除第一排座椅以外，若車輛標準配備整體型 CRS，則應給予 3 分。
3 INSTALLATION OF CHILD RESTRAINTS Euro NCAP rewards vehicles that can accommodate a broad variety of child restraints available on the European market. For this purpose, a limited number of popular CRS are installed in the vehicle. All CRS selected for the Euro NCAP fitment tests have demonstrated good (crash test) performance in leading independent consumer tests and are	3 INSTALLATION OF CHILD RESTRAINTS Euro NCAP rewards vehicles that can accommodate a broad variety of child restraints available on the European market. For this purpose, a limited number of popular CRS are installed in the vehicle. All CRS selected for the Euro NCAP fitment tests have demonstrated good (crash test) performance in leading independent consumer tests and are	2.2.2 CRS 安裝評等 能獲得 TNCAP 給分的車輛必須可安裝台灣市場上不同款式之 CRS。為此目的，我們將一些常見的 CRS 安裝於車輛上。選定之 CRS 類別與建議安裝模式代表市場上最常見的作法，包括<u>安全帶固定型</u>、ISOFIX 及 i-Size 兒童保護裝置。TNCAP CRS 清單(以下簡稱 CRS 清單)中 CRS 如何選	2.2.2 CRS 安裝評等 能獲得 TNCAP 給分的車輛必須可安裝台灣市場上不同款式之 CRS。為此目的，我們將一些常見的 CRS 安裝於車輛上。選定之 CRS 類別與建議安裝模式代表市場上最常見的作法，包括<u>通用型</u>、ISOFIX 及 i-Size 兒童保護裝置。TNCAP CRS 清單(以下簡稱 CRS 清單)中 CRS 如何選擇(Compile)

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readily available in certain regions of the Euro NCAP Application Area (EAA), TB002. The stature(s) and recommended installation modes of the CRS selected represent those commonly most observed on the market, including some belt attached, ISOFIX and i-Size seats. This installation list of CRS, how it is compiled and updated is explained in section 3.2 below.	readily available in certain regions of the EU-28. The groups and recommended installation modes of the CRS selected represent those commonly most observed on the market, including some Universal, ISOFIX and i-Size seats. This “top pick” list of CRS, how it is compiled and updated is explained in section 3.1 below. Where a vehicle is available with optional seat rows on any variant, the installation assessment will be based on a vehicle fitted with the optional seats.	擇(Compile)與更新將於 2.2.2.2 完整詳述。	與更新將於 2.2.2.1 完整詳述。 <u>若某車型有可選擇加裝座椅之車款，則將以座椅數最多之車款進行此安裝評等。</u>
3.1 Application of the Assessments Where a vehicle is available with optional equipment, the CRS installation assessment will be based on the worst performing configuration. The following optional equipment will be considered for the assessment: Seat rows – e.g. 3rd row Additional seating positions – e.g. position 2 in row 1 ISOFIX & i-Size positions		2.2.2.1 評等適用性 當車輛提供下列選擇性配備時，<u>受評車輛業者須自費提供選配之車輛執行試驗，以納入評等考量：</u> (1)座椅排數（例如：第三排座椅）。 (2)額外之座椅位置。 (3)ISOFIX 與 i-Size 座椅位置。	

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Top-tether anchorages Floor storage compartments 3.2 CRS Installation List and OEM Recommended CRS 3.2.1 Installation List The child restraints used for the fitment assessment are detailed in Euro NCAP Technical Bulletin TB 012.	3.1 Top Pick List and Recommended Seats 3.1.1 Top Pick List (TPL) The child restraints used for the fitment assessment are detailed in Euro NCAP Technical Bulletin TB012.	(4)上固定帶固定器。 (5)地板儲物箱。 2.2.2.2 CRS 清單與推薦之 CRS 2.2.2.2.1 TNCAP CRS 清單 2.2.2.2.1.1 TNCAP 兒童保護裝置清單評選作業方式 (1)參與 TNCAP 兒童保護裝置評選之 CRS 業者須確保該產品至次年年底仍持續於國內市場販售，且驗證證書至次年年底仍有效。 (2)TNCAP 執行機構將依 Euro NCAP CRS 清單之質量等級及尺度範圍，挑選通過標檢局(CNS)商品檢驗合格且國內市場販售之 CRS，並邀請國內 CRS 業者主動參與評選，以建立 CRS 清單。 (3)參與評選之 CRS 業者須填妥「臺灣新車安全評等(TNCAP)兒童保護裝置評選申請暨同意書」後，主動向 TNCAP 執行機構提出申請，並提供產品手冊、標檢局(CNS)商品檢驗合格證明書供 TNCAP 執行機構進行評選作業。	2.2.2.1 CRS 清單與推薦之 CRS 2.2.2.1.1 TNCAP CRS 清單 2.2.2.1.1.1 TNCAP 兒童保護裝置清單評選作業方式 (1)參與 TNCAP 兒童保護裝置評選之 CRS 業者須確保該產品至次年年底仍持續於國內市場販售，且驗證證書至次年年底仍有效。 (2)TNCAP 執行機構將依 Euro NCAP CRS 清單之質量等級及尺度範圍，挑選通過標檢局(CNS)商品檢驗合格且國內市場販售之 CRS，並邀請國內 CRS 業者主動參與評選，以建立 CRS 清單。 (3)參與評選之 CRS 業者須填妥「臺灣新車安全評等(TNCAP)兒童保護裝置評選申請暨同意書」及財團法人車輛研究測試中心（簡稱車輛中心，ARTC）之「檢測/校正服務申請表」後，主動向檢測機構與 TNCAP 執行機構提出申請，

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		若為 i-Size CRS，則業者另應檢附符合 UN R129 之佐證資料予執行機構，始得參與 i-Size CRS 評選作業。 (4)<u>TNCAP 執行機構依序由下列評選條件將 CRS 業者所提交資料進行評選：</u> (A)<u>由第三方出具自評選日期前半年之進口於國內市場販售該類 CRS 數量佐證相關資料（例如進口報關單），並挑選各質量等級/尺度範圍進口數量最高者。</u> (B)<u>若有兩件或以上產品同時符合前述 A 條件，則由財團法人車輛研究測試中心撈取計算下列試驗數據提供執行機構進行評選作業。</u> ●胸部加速度(3ms 合成加速度)。 ●胸部 Z 軸加速度(3ms 合成加速度)。 ●帶扣開脫力差值(動態衝擊試驗前後差值)。 ●長度調節裝置之長度調節力。 ●能量吸收。	<u>並由檢測機構撈取計算下列試驗數據提供執行機構進行評選作業。若為 i-Size CRS，則業者另應檢附符合 UN R129 之佐證資料予執行機構，始得參與 i-Size CRS 評選作業。</u> ●胸部加速度(3ms 合成加速度)。 ●胸部 Z 軸加速度(3ms 合成加速度)。 ●帶扣開脫力差值(動態衝擊試驗前後差值)。 ●長度調節裝置之長度調節力。 ●能量吸收。

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		TNCAP 執行機構依下列評選方式將檢測機構所提供之試驗數據，進行評比並計算得各產品之得分率，<u>挑選各質量等級/尺度範圍之得分率最高 CRS 者</u>，各項得分與得分率之計算，以四捨五入取至小數點第一位。 ... <u>(C)若有兩件或以上產品同時符合(A)及(B)，則納入 TNCAP 工作組會議進一步決選。</u> (5)<u>依(4)條件所評選該質量等級/尺度範圍之 CRS 產品</u>，納入 TNCAP CRS 清單，並將該清單納入 TNCAP 制度規章，以及於 TNCAP 網站揭露該清單資訊。 (6)TNCAP 執行機構原則上每年定期檢視 CRS 清單之有效性，以確保清單中 CRS 至次年年底仍在國內市場販售，且驗證證書至次	(4)TNCAP 執行機構依下列評選方式將檢測機構所提供之試驗數據，進行評比並計算得各產品之得分率，各項得分與得分率之計算，以四捨五入取至小數點第一位。 ... (5)<u>依 TNCAP CRS 評選機制挑選各質量等級/尺度範圍之得分率最高 CRS 者</u>，納入 TNCAP CRS 清單，並將該清單納入 TNCAP 制度規章，以及於 TNCAP 網站揭露該清單資訊。<u>如有得分率相同之情形，得以該產品之申請廠商宣告該年度銷售量作為 CRS 清單挑選之參考。</u> (6)TNCAP 執行機構原則上每年定期檢視 CRS 清單之有效性，以確保清單中 CRS 至次年年底仍在國內市場販售，且驗證證書至次

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		年年底仍有效。如經查有不符合前述事項者，將無法參與 TNCAP CRS 評選及納入 CRS 清單。 (7)TNCAP 執行機構與檢測機構於本作業所取得資料，不得從事逾越原授權同意範圍以外之利用。 <u>2.2.2.2.1.2</u> CRS 清單 為評估車輛是否具備容納不同質量等級/或尺度範圍 CRS 之能力，使用 CRS 評選作業方式所建立之 CRS 清單評估車輛對於不同類型之 CRS 安裝性。 <u>安全帶固定型</u> CRS ... ISOFIX CRS ... i-Size CRS ... <u>2.2.2.2.1.3</u> CRS 清單更新作業 (1) 執行機構每年定期檢視 CRS 清單之有效性，若清單中之 CRS 不在國內市場上販售，則針對該 CRS 所涉質量等級/尺度範圍重新評選，並<u>以獲得評選者</u>替代原	年年底仍有效。如經查有不符合前述事項者，將無法參與 TNCAP CRS 評選及納入 CRS 清單。 (7)TNCAP 執行機構與檢測機構於本作業所取得資料，不得從事逾越原授權同意範圍以外之利用。 <u>2.2.2.1.1.2</u> CRS 清單 為評估車輛是否具備容納不同質量等級/或尺度範圍 CRS 之能力，使用 CRS 評選作業方式所建立之 CRS 清單評估車輛對於不同類型之 CRS 安裝性。 <u>通用型以安全帶安裝之</u> CRS ... ISOFIX CRS ... i-Size CRS ... <u>2.2.2.1.1.3</u> CRS 清單更新作業 (1)執行機構每年定期檢視 CRS 清單之有效性，若清單中之 CRS 不在國內市場上販售，則針對該 CRS 所涉質量等級/尺度範圍重新評選，並<u>以得分率最高者</u>替代

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3.2.2 Manufacturer's Recommendation The overall responsibility of the vehicle manufacturer for safe transport of children is also reflected in the recommendation that the vehicle manufacturer should make to the consumer regarding the CRS to be used in the vehicle. Hence, besides ensuring that vehicles that can accommodate a broad variety of CRSs, Euro NCAP rewards vehicle manufacturers that recommend suitable CRS for each child stature range, see Section 3.4. Any recommended CRS must meet the following requirements:	3.1.2 Manufacturer's Recommendation The overall responsibility of the vehicle manufacturer for safe transport of children is also reflected in the recommendation that the vehicle manufacturer should make regarding the CRS to be used in the vehicle. Hence, besides ensuring that vehicles that can accommodate a broad variety of CRSs, Euro NCAP rewards vehicle manufacturers that recommend suitable CRS for each mass group and/or size range. Any recommended CRS must meet the following requirements:	CRS。新版 CRS 清單規劃適用於次年 TNCAP 受評車型。 (2)如遇 TNCAP 規章改版，擬增減 CRS 清單質量等級或尺度範圍之兒童保護裝置時，將配合新版規章生效日制定 CRS 清單實施時間。 2.2.2.2.2 車輛業者推薦 車輛業者須為兒童安全負起責任，此亦反應車輛業者應推薦消費者有關安裝於車輛之 CRS。因此，TNCAP 除了確保車輛可安裝不同款式之 CRS 外，亦透過給分肯定能夠針對各種質量等級及/或尺度範圍推薦合適 CRS 之車輛業者（如 2.2.2.3）。 針對車輛業者推薦之 CRS，執行機構將依配備矩陣表購買 CRS 辦理後續兒童保護相關試驗，前述所需費用應由受評車輛業者承擔。 任何推薦之 CRS 皆須符合下列規定：	原 CRS。新版 CRS 清單規劃適用於次年 TNCAP 受評車型。 (2)如遇 TNCAP 規章改版，擬增減 CRS 清單質量等級或尺度範圍之兒童保護裝置時，將配合新版規章生效日制定 CRS 清單實施時間。 2.2.2.1.2 車輛業者推薦 車輛業者須為兒童安全負起責任，此亦反應車輛業者應推薦有關安裝於車輛之 CRS。因此，TNCAP 除了確保車輛可安裝不同款式之 CRS 外，亦透過給分肯定能夠針對各種質量等級及/或尺度範圍推薦合適 CRS 之車輛業者。 針對車輛業者推薦之 CRS，執行機構將依配備矩陣表購買 CRS 辦理後續兒童保護相關試驗，前述所需費用應由受評車輛業者承擔。 任何推薦之 CRS 皆須符合下列規定：

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a) The CRS must be recommended by the vehicle manufacturer, to their customers, in all countries within the EAA, where the vehicle is sold.	a) The CRS must be recommended by the vehicle manufacturer, to their customers, in all countries of the European Union, where the vehicle is sold.	(1)該 CRS 須獲得車輛業者推薦，推薦 CRS 之資訊得記載於車主手冊內，其內容應至少包含推薦 CRS 之質量等級及/或尺度範圍、產品廠牌、產品型號及市售名稱。	(1)該 CRS 須獲得車輛業者推薦，推薦 CRS 之資訊得記載於車主手冊內，其內容應至少包含推薦 CRS 之質量等級及/或尺度範圍、產品廠牌、產品型號及市售名稱。
b) Where the recommended CRS are not on the installation list, the CRS must be available for purchase by the public from both vehicle dealers and independent retail outlets in all countries defined in TB 002 where the vehicle is sold. The CRS system must be available to the public within 5 working days of an order being made.	b) Where the recommended CRS are not on the top-pick list, the CRS must be available for purchase by the public from both vehicle dealers and independent retail outlets in all EU28 countries where the vehicle is sold. The CRS system must be available to the public within 5 working days of an order being made.	(2)若推薦之 CRS 不在 CRS 清單內，則民眾須能在汽車經銷商及零售商購買此 CRS。若於經銷商購買者，則應於民眾下單後十五個工作天內取得此 CRS。	(2)若推薦之 CRS 不在 CRS 清單內，則民眾須能在汽車經銷商及零售商購買此 CRS。若於經銷商購買者，則應於民眾下單後十五個工作天內取得此 CRS。
c) With the exception of booster cushions¹ , the recommended CRS must have been fully type approved according to R129 and evaluated by the ETC (or similar) programme (including dynamic tests) and obtain a ‘good’ performance rating. This is the case for CRS on the installation list. For CRS not on the installation list, it is the vehicle manufacturer’s responsibility to provide evidence of ‘good	c) The recommended CRS must have been fully type approved and evaluated by the ETC (or similar) programme (including dynamic tests) and obtain a ‘good’ performance rating. This is the case for CRS on the top pick list. For CRS not on the top pick list, it is the vehicle manufacturer’s responsibility to provide evidence of ‘good performance’ at the time of CRS recommendation, following	(3)推薦之 CRS 須通過標檢局商品檢驗合格，惟整體型 CRS 得以符合 UN R44 或 UN R129 之檢測報告替代。	(3)推薦之 CRS 須通過標檢局商品檢驗合格，惟整體型 CRS 得以符合 UN R44 或 UN R129 之檢測報告替代。

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performance’ at the time of CRS recommendation, following the procedure described in Technical Bulletin 012. For Integrated CRS, booster seat with detachable backrests or booster cushion CRS no ETC testing is necessary. <i>1) For all vehicles published after 1st January 2025, all OEM recommended CRS must be R129 approved.</i> d) The recommended CRS must be rearward facing for children up to a stature of 83cm. e) Recommendation of ‘OEM rebranded’ CRS that are already on the installation list can be accepted. Information will be added to the results to highlight the equivalency between original installation list seat and ‘OEM rebranded’ seats to the consumer. f) Euro NCAP verifies the problem-free installation of manufacturer’s recommended CRS for Q6 and Q10 on the 2nd row rear outboard positions only. The installations will be performed using the CRS installation mode and	the procedure described in Technical Bulletin 012. For Integrated CRS, booster seat with detachable backrests or booster cushion CRS no ETC testing is necessary. d) Recommendation of ‘OEM rebranded’ CRS that are already on the top pick list can be accepted. Information will be added to the results to highlight the equivalency between original top pick list seat and ‘OEM rebranded’ seats to the consumer. e) Euro NCAP verifies the problem-free installation of manufacturer’s recommended CRS for Q6 and Q10 on the 2nd row rear outboard positions only. The installations will be performed using the CRS installation mode and	(4)對於身高小於 83 公分之兒童， 推薦之 CRS 必須為後向式。 (5)TNCAP 僅針對第二排外側座椅位置上之 6 歲人偶(Q6)及 10 歲人偶(Q10)，確認車輛業者所推薦之 CRS 安裝性。依照車輛業者於動態試驗建議所使用之 CRS 安裝模式與設定/調整，其確認安	(4)TNCAP 僅針對第二排外側座椅位置上之 6 歲人偶(Q6)及 10 歲人偶(Q10)，確認車輛業者所推薦之 CRS 安裝性。依照車輛業者於動態試驗建議所使用之 CRS 安裝模式與設定/調整，其確認安

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settings/adjustments recommended by the vehicle manufacturer for dynamic testing in the same way as it does installation list seats, but a separate score will be attributed (see Section 3.4). The other recommended CRS will not be installed.	settings/adjustments recommended by the vehicle manufacturer for dynamic testing in the same way as it does top pick list seats but a separate score will be attributed (see section 3.3). The other recommended CRS will not be installed.	裝性方式與 CRS 清單座椅相同，惟將另外給予一個分數（如 2.2.2.3）。不須安裝其餘推薦之 CRS。	裝性方式與 CRS 清單座椅相同，惟將另外給予一個分數（如 2.2.2.3）。不須安裝其餘推薦之 CRS。
g) Recommended CRS must either still be in production at the time of publication or available for at least 12 months from the end of CRS production.		<u>(6)推薦之 CRS 於評等公布時應仍持續生產；或自該 CRS 停產日起至少仍可取得 12 個月。</u>	
3.2.3 CRS for dynamic tests	3.1.3 CRS for dynamic tests	<u>2.2.2.2.3 CRS 動態試驗</u>	<u>2.2.2.1.3 CRS 動態試驗</u>
a) The Q6 dummy shall be seated in an appropriate CRS for a six year old child or a child with a stature of 125cm. This will be the CRS recommended by the vehicle manufacturer in the vehicle handbook. If there is no recommendation made in the vehicle handbook for a six year old child a suitable CRS will be chosen from the installation list (TB 012).	a) The Q6 dummy shall be seated in an appropriate CRS for a six year old child or a child with a stature of 125cm. This will be the CRS recommended by the vehicle manufacturer in the vehicle handbook. If there is no recommendation made in the vehicle handbook for a six year old child a suitable CRS will be chosen from the top pick list (TB012).	(1)Q6 人偶應乘坐於適合 6 歲兒童或身高達 125 公分兒童之 CRS，亦即該車輛業者於車主手冊所建議之 CRS。若車主手冊未針對 6 歲兒童提供任何 CRS 建議，則應從 CRS 清單中挑選合適之 CRS。	(1)Q6 人偶應乘坐於適合 6 歲兒童或身高達 125 公分兒童之 CRS，亦即該車輛業者於車主手冊所建議之 CRS。若車主手冊未針對 6 歲兒童提供任何 CRS 建議，則應從 CRS 清單中挑選合適之 CRS。
b) The Q10 dummy shall be seated on a booster cushion only. This will be the booster cushion recommended by the	b) The Q10 dummy shall be seated on a booster cushion only. This will be the booster cushion recommended by the	(2)Q10 人偶應僅能乘坐於增高型座墊(Booster cushion)，亦即該車輛業者於車主手冊所建議之增高	(2)Q10 人偶應僅能乘坐於增高型座墊(Booster cushion)，亦即該車輛業者於車主手冊所建議之增高

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vehicle manufacturer in the vehicle handbook. Where the vehicle manufacturer recommends, in the vehicle handbook, a high back booster seat with detachable backrest, it will be used without the backrest. If there is no recommendation made in the vehicle handbook or a booster seat with a non-removable backrest is recommended, a suitable booster cushion will be chosen from the list of booster cushions in TB012. Booster cushions will be accepted for use in the tests provided that when the Q10 dummy is seated on the booster, no part of the head is higher than 840mm vertically above the Cr-point. Booster cushions that have R129 approval will not need to meet this requirement. c) Where a vehicle is equipped with an integrated CRS covering the Q6 and/or Q10 on the rear outboard 2nd row test positions, the integrated CRS will be used in the dynamic tests. Integrated CRS will	vehicle manufacturer in the vehicle handbook. Where the vehicle manufacturer recommends, in the vehicle handbook, a high back booster seat with detachable backrest, it will be used without the backrest. If there is no recommendation made in the vehicle handbook or a booster seat with a non-removable backrest is recommended, a suitable booster cushion will be chosen from the list of booster cushions in TB012. Booster cushions will be accepted for use in the tests provided that when the Q10 dummy is seated on the booster, no part of the head is higher than 800mm vertically above the Cr-point. Booster cushions that have R44 or R129 approval will not need to meet this requirement. c) Where a vehicle is equipped with an integrated CRS covering the Q6 and/or Q10 on the rear outboard 2nd row test positions, the integrated CRS will be used in the dynamic tests. Integrated CRS will	型座墊。若該車輛業者於車主手冊建議為可拆卸靠背之高椅背增高型座椅(Booster seat)，則應僅使用增高座墊部分。若車主手冊未提供建議，或建議不可拆卸靠背之增高型座椅，則應從市場上隨機挑選合適之增高型座墊。 (查 2025 起 Euro NCAP 要求增高墊均須通過 R129 認證，且 2026 年已刪除規章，故建議參考新版作法刪除此段條文) (3)若車輛配備整體型 CRS，且第二排外側試驗位置配備適用於 Q6 及/或 Q10 人偶之 CRS，則動態試驗將使用此整體型 CRS。即使其為選擇性配備，亦使用此整體	型座墊。若該車輛業者於車主手冊建議為可拆卸靠背之高椅背增高型座椅(Booster seat)，則應僅使用增高座墊部分。若車主手冊未提供建議，或建議不可拆卸靠背之增高型座椅，則應從市場上隨機挑選合適之增高型座墊。<u>若 Q10 人偶乘坐於增高型座墊時，頭部任何部位未超過 Cr 點上方垂直 800mm 處，則可接受試驗時使用此增高型座墊。若該增高型座墊已取得 CNS 11497 認可，則不受限於此規定。通過 CNS 11497 認證之增高型座墊無須符合此要求。</u> (3)若車輛配備整體型 CRS，且第二排外側試驗位置配備適用於 Q6 及/或 Q10 人偶之 CRS，則動態試驗將使用此整體型 CRS。即使其為選擇性配備，亦使用此整體

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be used even if they are optional equipment. Where a vehicle is equipped with only one integrated CRS on either outboard position covering both or only one of two child ages, the integrated CRS will be used only where applicable. If only one integrated CRS is present, the vehicle manufacturer shall recommend a suitable CRS to accommodate the other child dummy. Where this is not the case the steps detailed in a) and/or b) will be followed. d) Where a vehicle is not equipped with two ISOFIX anchorages on positions 4 and 6, Q6 and Q10 CRS will use the adult seatbelt only installation mode for both full scale tests. This does not apply to two-seater vehicles providing that ISOFIX anchorages are standard equipment on the passenger's seat in both left and right hand drive vehicles. ... 3.3.1 Belt attached CRS The belt attached CRS detailed in TB 012	be used even if they are optional equipment. Where a vehicle is equipped with only one integrated CRS on either outboard position covering both or only one of two child ages, the integrated CRS will be used only where applicable. If only one integrated CRS is present, the vehicle manufacturer shall recommend a suitable CRS to accommodate the other child dummy. Where this is not the case the steps detailed in a) and/or b) will be followed. ... 3.2.1 Universal (Belted) CRS Seating positions must meet the extended	型 CRS。若車輛外側座椅位置僅配備一個整體型 CRS，且適用於兩個年齡層或僅適用一個年齡層，則僅使用合適之整體型 CRS。若僅配備一個整體型 CRS，則車輛業者應針對另一個兒童人偶推薦合適 CRS。若此情況不適用，則應依照(1)及/或(2)之詳細步驟。 <u>(4)若車輛第二排外側座椅位置未配備兩個 ISOFIX 固定器，則 Q6 及 Q10 CRS 於兩項動態試驗皆應以成人安全帶進行安裝。</u> (國內雙人座車輛不進行兒童保護評等，故左列部分條文不納入) ... <u>2.2.2.3.1 安全帶固定型 CRS</u> <u>安全帶固定型 CRS 應安裝於所有</u>	型 CRS。若車輛外側座椅位置僅配備一個整體型 CRS，且適用於兩個年齡層或僅適用一個年齡層，則僅使用合適之整體型 CRS。若僅配備一個整體型 CRS，則車輛業者應針對另一個兒童人偶推薦合適 CRS。若此情況不適用，則應依照(1)及/或(2)之詳細步驟。 ... <u>2.2.2.2.1 通用型 (以安全帶安裝)</u> CRS

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will be installed in all available seating positions. Seating positions must meet the extended Gabarit check (Section 2.2) to be included in the Installation Matrix for the belt attached CRSs. Where any of the extended Gabarit checks are not met, all belt attached CRS installations on that seating position will be deemed FAIL. Where the vehicle handbook excludes certain statures, belt attached CRS within that stature will be deemed FAIL. Where a vehicle can be equipped with optional inflatable seatbelts or other advanced adult restraint systems, this equipment will not be assessed provided that the vehicle handbook clearly states that CRS cannot be installed when this equipment is present. The vehicle manufacturer is asked to contact Euro NCAP in advance of the vehicle assessment to confirm this exemption. Exemptions for CRS on the installation list that are installed with the adult belt and support leg (R129 specific vehicle belted)	Gabarit check (Section 2.2) to be included in the Installation Matrix for the Universal CRS's. In addition, these seating positions must be marked with 'U' or 'UF' in the Universal CRS table. A combination of Universal CRS group and seating position that do not meet these requirements will automatically fail the CRS installation assessment for Universal CRS of that group on the Top Pick list. Where a vehicle can be equipped with optional inflatable seatbelts or other advanced adult restraint systems, this equipment will not be assessed provided that the vehicle handbook clearly states that CRS cannot be installed when this equipment is present. The vehicle manufacturer is asked to contact Euro NCAP in advance of the vehicle assessment to confirm this exemption. The semi-universal CRS on the top pick list that are installed with the adult belt and support leg will be exempted from	<u>適用座椅位置</u>。座椅位置須符合前述 2.2.1.2 治具 (Extended gabarit) 之檢查，以納入通用型 CRS 之安裝矩陣表。<u>若治具檢查未符合規定，則該座椅位置適用之所有安全帶固定型 CRS 安裝項目，皆判定為不通過。若車主手冊中排除特定兒童體型，則對應該範圍之安全帶固定型 CRS 應判定為不通過。</u> 若車輛可選配氣囊式安全帶或其他先進成人束縛系統，且若車主手冊清楚說明該設備存在時無法安裝 CRS，則該設備將不接受評等。車輛業者應提前針對車輛安全功能評等事宜聯繫 TNCAP 執行機構，以確認此例外是否成立。 (修訂不影響規章草案)	座椅位置須符合前述 2.2.1.2 治具 (Extended gabarit) 之檢查，以納入通用型 CRS 之安裝矩陣表。<u>且該座椅位置須於通用型 CRS 表中標示「U」或「UF」。</u>若通用型 CRS 與座椅位置之結合無法符合此規定，則 CRS 清單上該類之通用型 CRS 將無法通過 CRS 安裝評等。 若車輛可選配氣囊式安全帶或其他先進成人束縛系統，且若車主手冊清楚說明該設備存在時無法安裝 CRS，則該設備將不接受評等。車輛業者應提前針對車輛安全功能評等事宜聯繫 TNCAP 執行機構，以確認此例外是否成立。

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are only permitted where the following occur: 2nd row, position 5 – transmission tunnel only 3rd row, where applicable all positions – transmission tunnel, shallow floor and/or interaction with seat rails Belt attached ISO/R3 size class CRS listed on the installation list will be exempted from installation on any seating position when the CRF ISO/R3 cannot be installed according to Section 2.3.3 and is clearly identified with an “X” in the CRS table as unsuitable for this size. When this is the case, the combination of ISO/R3 size class CRS given installation score on that seating position will be awarded the available points (see section 3.4). The above exemptions will only be permitted providing that the vehicle handbook clearly indicates that on the above seating positions, it is not permitted to install a belted CRS with a support leg. These exemptions cannot be	installation on any seating position when the CRS vehicle list identifies that the CRS cannot be used on this seating position and that it is clearly identified in the vehicle handbook (adjacent to the Universal CRS table) not to install a belted CRS with a support leg, for example in the central sitting position where the tunnel interferes with the support leg. When this is the case, the belted semi-universal CRS installation score on that seating position will be awarded the available points (see section 3.3).		

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applied to any other seating positions. 3.3.2 I-Size CRS The i-Size CRS detailed in TB 012 will be installed on seating positions with i-Size approval that are equipped either as standard or optionally, see Section 3.1. There are no exemptions permitted for i-Size CRS. Additionally, those i-Size CRS that do not use a support leg will be installed on any ISOFIX positions using the ISOFIX anchorages. The results of these installations will be included in the installation assessment from 1 January 2026. 3.3.3 R129 ISOFIX CRS Other CRS detailed in TB 012 that can be installed using ISOFIX anchorages with and without the seatbelt will be installed on all seating positions equipped either as standard or optionally, with ISOFIX and/or i-Size approval.	3.2.2 I-Size CRS These seating positions must be marked with 'i-U' in the i-Size CRS table ('i-UF' will be accepted only for seating positions equipped with airbags). A seating position that does not meet these requirements will automatically fail the CRS installation assessment for i-Size CRS on the Top Pick list. 3.2.3 ISOFIX CRS These seating positions must be marked with 'IL' or 'IUF' in the ISOFIX CRS table. A combination of ISOFIX size class and seating position that does not meet these requirements will automatically fail the CRS installation assessment for ISOFIX CRS of that size class on the Top	2.2.2.3.2 i-Size CRS <u>CRS 清單之 i-Size CRS 將安裝於符合車輛安全檢測基準「四十八之二、安全帶固定裝置」i-Size 規定之座椅位置，無論該位置為標配或選配(如 2.2.2.1)。</u> <u>i-Size CRS 不允許任何免除。</u> <u>另不使用支撐腳之 i-Size CRS，應使用 ISOFIX 固定裝置安裝於任何 ISOFIX 位置。</u> 2.2.2.3.3 ISOFIX CRS <u>CRS 清單中可使用 ISOFIX 固定且搭配或不搭配安全帶進行安裝者，將安裝於所有符合車輛安全檢測基準「四十八之二、安全帶固定裝置」ISOFIX 或 i-Size 規定之座椅位置，無論該位置為標配或選配。</u>	2.2.2.2.2 i-Size CRS <u>i-Size 座椅位置須符合 i-Size 標識規定(2.2.1.3.1)，以納入 i-Size/ISOFIX CRS 之安裝矩陣表。且該座椅位置亦須於 i-Size CRS 表中標示「i-U」(「i-UF」僅適用於配備空氣囊之座椅位置)。若座椅位置無法符合此規定，則 CRS 清單中 i-Size CRS 將無法通過 CRS 安裝評等。</u> 2.2.2.2.3 ISOFIX CRS <u>ISOFIX 座椅位置須符合 i-Size 標識規定(2.2.1.3.1)或車輛安全檢測基準「四十八之二、安全帶固定裝置」之 ISOFIX 標識規定，以納入 ISOFIX CRS 之安裝矩陣表。且該座椅位置須於 ISOFIX CRS 表中標示「IL」或「IUF」。若</u>

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Exemptions for CRS on the installation list that are installed using ISOFIX anchorages, with support leg and with and without the seatbelt are only permitted where the following occur: 2nd row, position 5 – transmission tunnel only 3rd row, where applicable all positions – transmission tunnel, shallow floor and/or interaction with seat rails The above exemptions will only be permitted providing that the vehicle handbook clearly indicates that on the above seating positions, it is not permitted to install a CRS with a support leg. These exemptions cannot be applied to any other seating positions.	Pick list.	<u>CRS 清單中，具有支撐腳之 ISOFIX CRS 在以下情況允許免除：</u> <u>(1)第二排中間座位-僅限傳動軸通道。</u> <u>(2)第三排所有座位(如適用)-傳動軸通道、地板高度較淺，及/或與座椅軌道之間有干涉情形。</u> <u>上述免除僅車主手冊清楚說明於該座椅位置不得安裝具有支撐腳之兒童保護裝置時，方可適用，此免除不適用於任何其他座位。</u>	<u>ISOFIX 尺度等級與座椅位置之結合無法符合此規定，則 CRS 清單中該尺度等級之 ISOFIX CRS 將無法通過 CRS 安裝評等。</u>
ISOFIX attached ISO/R3 size class seats listed on the installation list will be exempted from installation on any seating position when the CRF ISO/R3 cannot be installed according to Section 2.3.3 and is clearly identified with an “X” in the ISOFIX CRS table as unsuitable for this	ISO/R3 size class seats listed on the Top Pick list will be exempted from installation on any seating position when the CRF ISO/R3 cannot be installed according to section 2.4 and is clearly identified with an “X” in the ISOFIX CRS table as unsuitable for this size.	若任一座椅位置無法依照 2.2.1.3.3 規定安裝 ISO/R3 CRF，且 ISOFIX CRS 表中明確指出不適合該尺度而標示「X」，則 CRS 清單所列 <u>以 ISOFIX 固定</u> ISO/R3 尺度等級之 CRS 將免除安裝於此座椅位置。在此情況下，該座椅	若任一座椅位置無法依照 2.2.1.4 規定安裝 ISO/R3 CRF，且 ISOFIX CRS 表中明確指出不適合該尺度而標示「X」，則 CRS 清單所列 ISO/R3 尺度等級之 CRS 將免除安裝於此座椅位置。在此情況下，該座椅位置與 ISO/R3 尺

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size. When this is the case, the combination of ISO/R3 size class CRS given installation score on that seating position will be awarded the available points (see section 3.4).	When this is the case, the combination of ISO/R3 size class CRS given installation score on that seating position will be awarded the available points (see section 3.3).	位置與 ISO/R3 尺度等級 CRS 之結合將給予對應分數 (如 2.2.2.4)。	度等級 CRS 之結合將給予對應分數 (如 2.2.2.3)。
3.3.4 Passenger Airbag Warning and Disabling Seating positions which have a frontal passenger airbag present must meet the requirements for Passenger Airbag Warning Marking and Disabling (Section 2.4) to be included in the CRS installation assessment . A seating position that does not meet these requirements will automatically fail the CRS installation assessment for all rearward facing belted, ISOFIX and i-Size seats on the installation list for these seating positions.	3.2.4 Passenger Airbag Warning and Disabling Seating positions which have a frontal passenger airbag present must meet the requirements for Passenger Airbag Warning Marking and Disabling (Section 2.5) to be included in the Installation Matrix . A seating position that does not meet these requirements will automatically fail the CRS installation assessment for all rearward facing Universal belted, ISOFIX and i-Size seats on the Top Pick list for these seating positions.	2.2.2.3.4 乘客座空氣囊警告標識與空氣囊解除 配備前方乘客座空氣囊之座椅位置須符合乘客座空氣囊警告標識與空氣囊解除之規定 (2.2.1.4) 以納入 CRS 安裝評等 。若該座椅位置無法符合此規定，則無法通過所有 CRS 清單中後向 CRS 之安裝評等，包括通用型 (以安全帶安裝)、ISOFIX 及 i-Size 座椅。	2.2.2.2.4 乘客座空氣囊警告標識與空氣囊解除 配備前方乘客座空氣囊之座椅位置須符合乘客座空氣囊警告標識與空氣囊解除之規定 (2.2.1.5) 以納入 安裝矩陣表 。若該座椅位置無法符合此規定，則無法通過所有 CRS 清單中後向 CRS 之安裝評等，包括通用型 (以安全帶安裝)、ISOFIX 及 i-Size 座椅。
3.3.5 Integrated Child Restraints Where an integrated CRS is offered as standard and indicated as such in the vehicle handbook, this seating position will automatically pass the assessments	3.2.5 Integrated Child Restraints Where an integrated CRS is offered as standard and indicated as such in the vehicle handbook, this seating position will automatically pass the assessments	2.2.2.3.5 整體型 CRS 車輛業者應檢附 UN R44 或 UN R129 檢驗合格報告。若整體型 CRS 為標準配備且於車主手冊有此說明，則該座椅位置將自動通	2.2.2.2.5 整體型 CRS 車輛業者應檢附 UN R44 或 UN R129 檢驗合格報告。若整體型 CRS 為標準配備且於車主手冊有此說明，則該座椅位置將自動通

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and no installation check is required with the installation List-CRS of the child stature covered by the integrated CRS. 3.4 CRS Installation Scoring ... The score for each individual CRS on the installation matrix, CRS _i , will be calculated by dividing the number of successful installations in the vehicle by the total number of suitable passenger seating positions in the vehicle. All CRS will be awarded equally in the assessment and the maximum score for installation of CRS detailed on the installation list is 10 points.	and no installation check is required with the Top Pick List-CRS of the weight/size group covered by the integrated CRS. 3.3 CRS Installation Scoring ... The score for each individual CRS on the installation matrix, CRS _i , will be calculated by dividing the number of successful installations in the vehicle by the total number of suitable passenger seating positions in the vehicle. Table 1. Installation score for individual CRS on the top pick list.	過評等，且整體型 CRS 所涵蓋質量等級/尺度範圍之 CRS 清單中之 CRS 無須進行安裝檢查。 2.2.2.4 CRS 安裝評分 ... 計算安裝矩陣表上每個個別 CRS 分數(CRS _i)時，將以該車輛上成功安裝 CRS 數量除以車輛上所有合適乘客座椅位置總數。 表 1：CRS 清單中個別 CRS 安裝分數 (考量我國尚未導入 UN R129 之尺度範圍分類，爰建議沿用第二版 CRS 清單及其分數權重，故修訂不影響規章草案)	過評等，且整體型 CRS 所涵蓋質量等級/尺度範圍之 CRS 清單中之 CRS 無須進行安裝檢查。 2.2.2.3 CRS 安裝評分 ... 計算安裝矩陣表上每個個別 CRS 分數(CRS _i)時，將以該車輛上成功安裝 CRS 數量除以車輛上所有合適乘客座椅位置總數。 表 1：CRS 清單中個別 CRS 安裝分數												
	<table><tr><td>CRS_i</td><td>Installed in</td><td>CRS_i Installation Score</td></tr><tr><td>Universal</td><td>All passenger positions</td><td>Number of “Pass” / All passenger positions</td></tr></table>	CRS _i	Installed in	CRS _i Installation Score	Universal	All passenger positions	Number of “Pass” / All passenger positions		<table><tr><td>CRS_i</td><td>安裝位置</td><td>CRS_i 安裝分數</td></tr><tr><td>通用型</td><td>除第一排以外所有乘客座椅位置</td><td>「通過」數量除以所有乘客座位數 (除第一排以外)</td></tr></table>	CRS _i	安裝位置	CRS _i 安裝分數	通用型	除第一排以外所有乘客座椅位置	「通過」數量除以所有乘客座位數 (除第一排以外)
CRS _i	Installed in	CRS _i Installation Score													
Universal	All passenger positions	Number of “Pass” / All passenger positions													
CRS _i	安裝位置	CRS _i 安裝分數													
通用型	除第一排以外所有乘客座椅位置	「通過」數量除以所有乘客座位數 (除第一排以外)													

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	ISOFIX	All ISOFIX or i-Size positions	Number of “Pass” / All ISOFIX and/or i- Size positions		ISOFIX	除第一排 以外所有 ISOFIX 或 i-Size 座椅位置	「通過」 數量除以 所有 ISOFIX 及 / 或 i- Size 座位 數 (除第 一 排 以 外)	
	i-Size	All i-Size positions	Number of “Pass” / All i-Size positions		i-Size	除第一排 以外所有 i-Size 座 椅位置	「通過」 數量除以 所有 i- Size 座位 數 (除第 一 排 以 外)	
	Separate points will then be given for fitment of the CRS from each category as follows:							
	Universal CRS 4 point							
	ISOFIX CRS 2 point							
i-Size CRS 4 point								
The score for each CRS category is calculated by taking the average of the CRSi scores in the category and applying the percentage to the points allocated for this category of CRS.						各類型 CRS 安裝將分別給予下列 分數： 通用型 CRS 4 分 ISOFIX CRS 2 分 i-Size CRS 4 分 各類型 CRS 之分數係以該類 CRSi 分數平均值乘上該類型 CRS 配 分百分比計算而得。		

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Where the manufacturer recommends appropriate CRS for all child statures up to and including 135cm (section 3.2.2) 1 point will be awarded. For statures up to 83cm, the recommended CRS must be rearward facing. An additional 1 point will be awarded where the recommended CRS are for all statures up to and including 150cm.	Where the manufacturer recommends appropriate CRS for all child statures up to and including 135cm (section 3.1.2) 1 point will be awarded. An additional 1 point will be awarded where there is a recommended CRS for statures up to and including 150cm.	若車輛業者推薦之 CRS 適合身高小於且包含 135 公分 (2.2.2.2.2) 之孩童，則應給予 1 分。 對於身高小於 83 公分之孩童，推薦之 CRS 必須為後向式 。若推薦之 CRS 適合身高小於且包含 150 公分之孩童，則應再多給予 1 分。	若車輛業者推薦之 CRS 適合身高小於且包含 135 公分 (2.2.2.1.2) 之孩童，則應給予 1 分。若推薦之 CRS 適合身高小於且包含 150 公分之孩童，則應再多給予 1 分。
If any the recommended CRS are to be used in the dynamic tests, they MUST meet the installation requirements on the 2nd row rear outboard positions.	If the recommended CRS are to be used in the dynamic tests they MUST meet the installation requirements on the 2nd row rear outboard positions.	若推薦之 CRS 將使用於動態試驗，則該裝置必須符合第二排外側座椅位置之安裝規定。	若推薦之 CRS 將使用於動態試驗，則該裝置必須符合第二排外側座椅位置之安裝規定。
The maximum available score for the installation assessment will be 12 points and is independent of the number of seats on the installation list. If there is no OEM recommendation for CRS the maximum available score for CRS installation will be 10 points.	The maximum available score for the installation assessment will be 12 points and is independent of the number of seats on the top pick list. If there is no recommendation for CRS, the maximum available score for CRS fitment will be 10 points.	安裝評等最高分為 12 分，且其與 CRS 清單座椅數量無關。若無推薦之 CRS，則 CRS 安裝最高分為 10 分。	安裝評等最高分為 12 分，且其與 CRS 清單座椅數量無關。若無推薦之 CRS，則 CRS 安裝最高分為 10 分。
3.4.1 Rounding	3.3.1 Rounding	2.2.2.4.1 小數點捨入原則	2.2.2.3.1 小數點捨入原則
...	...	...	...
Table 1. Example of installation list results	Table 2. Example of top pick list installations	表 2：TNCAP CRS 清單安裝於車輛座椅位置結果範例	表 2：TNCAP CRS 清單安裝於車輛座椅位置結果範例

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(請參考末頁圖表)	(請參考末頁圖表)	(請參考末頁圖表)	(請參考末頁圖表)
4 DYNAMIC ASSESSMENT The starting point for the dynamic assessment of child occupant protection is the dummy response data recorded in two different test configurations: frontal MPDB and side AE-MDB. All criteria used are calculated according to Technical Bulletin 021. Initially, each relevant body area is given a score based on the measured dummy parameters. These scores can be adjusted after the test based on the defined modifiers. ... 4.2 Criteria and Limit Values The basic assessment criteria used for frontal impact, with the upper and lower performance limits for each parameter, are summarised below. Where multiple criteria exist for an individual body region, the lowest scoring parameter is used to determine the performance of that region. Injury parameter assessments highlighted in Table 2 and Table 3 will not	4 DYNAMIC ASSESSMENT The starting point for the dynamic assessment of child occupant protection is the dummy response data recorded in two different test configurations: frontal impact in offset and side impact. All criteria used are calculated according to Technical Bulletin 21. Initially, each relevant body area is given a score based on the measured dummy parameters. These scores can be adjusted after the test based on the defined modifiers. ... 4.2 Criteria and Limit Values The basic assessment criteria used for frontal impact, with the upper and lower performance limits for each parameter, are summarised below. Where multiple criteria exist for an individual body region, the lowest scoring parameter is used to determine the performance of that region. Injury parameter assessments highlighted in Table 3 and Table 4 will not	2.2.3 動態評等 (修訂不影響規章草案) ... 2.2.3.2 標準與限制值 下述為前方偏置撞擊之基本評等標準，包括每個參數之較高性能與較低性能限制值。若單一身體部位使用多重標準，則該部位性能判定將使用最低分之參數。反彈(Rebound)階段不納入表2及表3之傷害參數評等。	2.2.3 動態評等 兒童保護之動態評等第一步是記錄兩個不同試驗型態的人偶感應數據：前方偏置撞擊與側方撞擊。首先，身體每個相關部位將根據量測人偶參數進行評分，接著根據定義之扣分(Modifier)進行試驗後分數調整。 ... 2.2.3.2 標準與限制值 下述為前方偏置撞擊之基本評等標準，包括每個參數之較高性能與較低性能限制值。若單一身體部位使用多重標準，則該部位性能判定將使用最低分之參數。反彈(Rebound)階段不納入表3及表4之傷害參數評等。

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be evaluated during the rebound phase. ...	be evaluated during the rebound phase. ...	...	...
4.2.2 Frontal Impact	4.2.2 Frontal Impact	2.2.3.2.2 前方偏置撞擊	2.2.3.2.2 前方偏置撞擊
4.2.2.1 Head contact	4.2.2.1 Head contact	2.2.3.2.2.1 頭部碰觸	2.2.3.2.2.1 頭部碰觸
If there is no hard contact seen on the high speed film, the head score is based on the Resultant 3ms acceleration only.	If there is no hard contact seen on the high speed film, the head score is based on the Resultant 3ms acceleration only.	若高速攝影片段顯示沒有任何硬碰撞，則頭部分數僅須根據3ms合成加速度進行計算。 <u>硬碰撞係指高速影像證實有硬碰撞，或非因人偶頭部與本身部位接觸所致頭部合成加速度峰值超過 80g。</u>	若高速攝影片段顯示沒有任何硬碰撞，則頭部分數僅須根據3ms合成加速度進行計算。
4.2.2.2. Head excursion modifier	4.2.2.2 Head excursion modifier	2.2.3.2.2.2 頭部偏移扣分 (修訂不影響規章草案)	2.2.3.2.2.2 頭部偏移扣分
The head score is reduced for excessive forward excursion. Where the head of the Q6 exceeds the 550mm forward excursion line a 4 point modifier is applied. For the Q10 a stepped modifier is used, where the Q10 head exceeds the 450mm or 550mm forward excursion line, a 2 or 4 point modifier respectively is applied. The excursion will be measured from the H-point location of the 5th female occupant with the rear seats adjusted in accordance with the	The head score is reduced for excessive forward excursion. Where the head of the Q6 exceeds the 550mm forward excursion line a 4 point modifier is applied. For the Q10 a stepped modifier is used, where the Q10 head exceeds the 450mm or 550mm forward excursion line, a 2 or 4 point modifier respectively is applied. The excursion will be measured from the H-point location of the 5th female occupant with the rear seats adjusted in accordance with the		前向偏移(Forward excursion)過多時，頭部分數將被扣分。若Q6人偶頭部超過前向偏移線 550mm時，則扣4分。當Q10人偶頭部超過前向偏移線450mm或550mm，分別扣2分或4分。偏移量係從百分之五成年女性乘員之H點位置開始量測，且後排座椅依照前方偏置撞擊試驗規章進行調整。

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Frontal MPDB test protocol. 4.2.2.3 Frontal Impact Criteria Table 2. Frontal impact criteria, limits and available points per body region for Q6, Q10 (請參考末頁圖表) 4.2.3 Side Impact 4.2.3.1 Head contact If there is no hard contact seen on the highspeed film, the score is based on the Resultant 3ms acceleration only. 4.2.3.2 Side Impact Criteria Table 3. Side impact criteria, limits and available points per body region for Q6, Q10 (請參考末頁圖表) The contribution of the Dynamic Score to the Child Occupant Protection Score is calculated by summing the body scores for the relevant body regions for the Q6	Frontal ODB test protocol. 4.2.2.3 Frontal Impact Criteria Table 3. Frontal impact criteria, limits and available points per body region for Q6, Q10 (請參考末頁圖表) 4.2.3 Side Impact 4.2.3.1 Head contact If there is no hard contact seen on the high speed film, the score is based on the Resultant 3ms acceleration only. 4.2.3.2 Side Impact Criteria Table 4. Side impact criteria, limits and available points per body region for Q6, Q10 (請參考末頁圖表) The contribution of the Dynamic Score to the Child Occupant Protection Score is calculated by summing the body scores for the relevant body regions for the Q6	2.2.3.2.2.3 前方偏置撞擊標準 表2：前方偏置撞擊標準、限制值及 Q6與Q10人偶身體部位分數 (請參考末頁圖表) 2.2.3.2.3 側方撞擊 2.2.3.2.3.1 頭部碰觸 若高速攝影片段顯示沒有任何硬碰撞，則頭部分數僅須根據3ms合成加速度進行計算。 <u>硬碰撞係指高速影像證實有硬碰撞，或非因人偶頭部與本身部位接觸所致頭部合成加速度峰值超過80g。</u> 2.2.3.2.3.2 側方撞擊標準 表3：側方撞擊標準、限制值及Q6與Q10人偶身體部位分數 (請參考末頁圖表) 兒童保護分數中，動態分數部分係計算 Q6 及 Q10 人偶上所有相關身體部位之分數，包括前方偏置撞擊與側方撞擊（共 24 分）。	2.2.3.2.2.3 前方偏置撞擊標準 表3：前方偏置撞擊標準、限制值及 Q6與Q10人偶身體部位分數 (請參考末頁圖表) 2.2.3.2.3 側方撞擊 2.2.3.2.3.1 頭部碰觸 若高速攝影片段顯示沒有任何硬碰撞(Hard contact)，則頭部分數僅須根據3ms合成加速度進行計算。 2.2.3.2.3.2 側方撞擊標準 表4：側方撞擊標準、限制值及Q6與Q10人偶身體部位分數 (請參考末頁圖表) 兒童保護分數中，動態分數部分係計算 Q6 及 Q10 人偶上所有相關身體部位之分數，包括前方偏置撞擊與側方撞擊（共 24 分）。

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and Q10 in both front and side impact (24 in total).	and Q10 in both front and side impact (24 in total).		
5 TWO SEATERS AND VEHICLES WITH LIMITED REAR SPACE ... 5.1 Vehicles with only Two Seats ... 5.2 Vehicles with Limited Rear Space A vehicle will be deemed as having limited rear space as defined in Section 3.5 of the COP Testing protocol. Where this is the case, the test laboratory will confirm that child dummy cannot be installed in the frontal MPDB and/or side AE-MDB test without interference from the vehicle. ...	5 TWO SEATERS AND VEHICLES WITH LIMITED REAR SPACE ... 5.1 Vehicles with only Two Seats ... 5.2 Vehicles with Limited Rear Space A vehicle will be deemed as having limited rear space as defined in Section 3.5 of the COP Testing protocol. Where this is the case, the test laboratory will confirm that child dummy cannot be installed in the frontal ODB and/or side MDB test without interference from the vehicle. ...	(修訂不影響規章草案)	2.2.4 雙人座車輛與後座空間有限之車輛 ... 2.2.4.1 僅配備雙座椅之車輛 ... 2.2.4.2 後座空間有限之車輛 依照兒童保護試驗規章 3.8.2.5 之規定，判定該車輛是否為後座空間有限者。若為後座空間有限者，則檢測機構將確認執行前方偏置撞擊試驗及/或側方撞擊試驗時，在不改變車輛下無法安裝兒童人偶。 ...
6 SCORING & VISUALISATION 6.1 Scoring ... 6.1.1 Normal and Limited Rear Space Vehicles	6 SCORING & VISUALISATION 6.1 Scoring ... 6.1.1 Normal and Limited Rear Space Vehicles	2.2.5 評分與圖示說明 2.2.5.1 評分 ... 2.2.5.1.1 一般車輛與後座空間有限之車輛	2.2.5 評分與圖示說明 2.2.5.1 評分 ... 2.2.5.1.1 一般車輛與後座空間有限之車輛

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Category	Total points 49	Category	Total points 49	評等項目	總分 (49)	評等項目	總分 (49)
Dynamic Assessment	(24)	Dynamic Assessment	(24)	動態評等	(24)	動態評等	(24)
Frontal Impact	16	Frontal Impact	16	前方撞擊	16	前方撞擊	16
Side Impact	8	Side Impact	8	側方撞擊	8	側方撞擊	8
Vehicle Based Assessments	(13)	Vehicle Based Assessments	(13)	車輛安全功能評等	(13)	車輛安全功能評等	(13)
Gabarit Installation on all Passenger Seats	2	Gabarit Installation on all Passenger Seats	2	乘客座椅之治具安裝	2	乘客座椅之治具安裝	2
i-Size and TopTether Marking & Two or more ISO/B2 Positions, or i-Size and TopTether Marking & Two or more ISO/B2 & R3 Positions	2 or 3	i-Size and TopTether Marking	3	一個以上 i-Size 與上固定帶標識之 ISO/B2 座椅位置，或	2 或 3	i-Size 與上固定帶標識	3
		Two or more ISO/R3 Positions	1	兩個以上 i-Size 與上固定帶標識之 ISO/B2 與 ISO/R3 座椅位置		兩個以上之 ISO/R3 座椅位置	1
Passenger Airbag Warning Marking and Disabling	4 or 2	Passenger Airbag Warning Marking and Disabling	4 or 2	乘客座空氣囊警告標識與空氣囊解除	4 或 2	乘客座空氣囊警告標識與空氣囊解除	4 或 2
Child Presence Detection	4	Integrated CRS	3	兒童遺留偵測	4	整體型 CRS	3
Installation of Child Restraints	(12)	Installation of Child Restraints	(12)	CRS 安裝評等	(12)	CRS 安裝評等	(12)
TB 012 CRS	10	Universal seats	4	CRS 清單	10	通用型座椅	4
OEM Recommended seats	2	ISOFIX seats	2	車輛業者推薦 CRS	2	ISOFIX 座椅	2
		i-Size seats	4			i-Size 座椅	4
		Recommended seats	2			車輛業者推薦座椅	2
6.2.2 TB 012 CRS installation		6.2.2 Top pick installation		2.2.5.2.2 CRS 清單安裝		2.2.5.2.2 CRS 清單安裝	
The results of the CRS installation check		The results of the top pick CRS installation		CRS 清單中 CRS 之安裝檢查結果		CRS 清單中 CRS 之安裝檢查結果	

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will be shown in terms of “Pass”, “P Fail”, “Fail”, “Exempt” or “N/A” in tabular format.	check will be shown in terms of “Pass”, “P Fail”, “Fail”, “Exempt” or “N/A” in tabular format.	將以表格註明「通過」、「部分不通過」、「不通過」、「免除」或「不適用」之方式呈現。	將以表格註明「通過」、「部分不通過」、「不通過」、「免除」或「不適用」之方式呈現。
6.2.3 Visualisation of CRS installation. The website will present the installation results of each CRS in a map of the vehicle. The CRS will be anonymised and given a generic description containing the stature and attachment method. Four possible outcomes will be presented to indicate the following: ... ✗ Installation prohibited -When X is in handbook- It is prohibited to install a CRS on this seating position. The vehicle handbook indicated X for that particular seating position or the CRS approved vehicle list indicated that a belt or ISOFIX attached CRS with support leg cannot be installed on that position. Also, indicates there are no ISOFIX/i-Size positions fitted to that seating position.	6.2.3 Visualisation of top pick installation. The website will present the installation results of each top pick CRS in a map of the vehicle. Four possible outcomes will be presented to indicate the following: ... ✗ Installation prohibited -When X is in handbook- It is prohibited to install a CRS on this seating position. The vehicle handbook indicated X for that particular seating position or the CRS approved vehicle list indicated that a semi-universal CRS with support leg cannot be installed on that position. Also, indicates there are no ISOFIX anchorages fitted to that seating position.	2.2.5.2.3 CRS 清單安裝之圖示說明 網站將以車輛圖示說明每個 CRS 之安裝結果。 <u>CRS 將以匿名方式呈現，並以包含乘員身高(體型)與固定方式之通用描述呈現。</u> 四種可能之結果如下說明： ... ✗ 禁止安裝（車主手冊上標示 X） 禁止將 CRS 安裝於該座椅位置。車主手冊上於該特定座椅位置標示 X，或 CRS 核准之車輛清單上指出 <u>以安全帶或 ISOFIX 固定之</u> CRS 配上支撐腳無法安裝於該座椅位置。此外，表示該座椅位置未設置 ISOFIX <u>/i-Size 位置</u> 。	2.2.5.2.3 CRS 清單安裝之圖示說明 網站將以車輛圖示說明每個 CRS 之安裝結果。四種可能之結果如下說明： ... ✗ 禁止安裝（車主手冊上標示 X） 禁止將 CRS 安裝於該座椅位置。車主手冊上於該特定座椅位置標示 X，或 CRS 核准之車輛清單上指出 <u>半通用型</u> CRS 配上支撐腳無法安裝於該座椅位置。此外，表示該座椅位置未設置 <u>ISOFIX 固定器</u> 。

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(2025 年 Euro NCAP 規章)

TB 023 - Assessment of Automatic Passenger Airbag Disabling v2.0

2.1 Test Matrix

Occupant	No CRS	System Requirements for Airbag Status				Can it be done by Lab?	
		Rearward facing belted CRS with integral harness (Group 0, 0+, I & II) 	Forward Facing CRS (Group I) 	Forward Facing booster seat (Group II & III) 	Booster cushion (Group III) 	System functionality: Human IS NOT required	System functionality: Human IS required OEM data required
New-born <60cm		Mandatory OFF #1 Maxi Cosi Pebble 360* #2 Maxi Cosi Cabriofix & Easybase 2*				Yes	No
1.5YO 75cm-87cm & <15month		Mandatory OFF #1 Maxi Cosi Pebble 360 #2 Maxi Cosi Cabriofix & Easybase 2 #3 Maxi Cosi Pebble 360 & FamilyFix	a) OEM Strategy #4 Britax King II LS			Yes	No
3YO 87cm-105cm		Mandatory OFF #5 Britax Elite two way	a) OEM Strategy #4 Britax King II LS #6 Britax Trifix 2	a) OEM Strategy #8 Cybex Solution Z		Yes	No
6YO 105cm-125cm		Mandatory OFF #5 Britax Elite two way	a) OEM Strategy #7 Britax Advansafix	a) OEM Strategy #8 Cybex Solution Z	a)* OEM Strategy #9 Graco booster cushion	Yes	No
10YO >125cm	b)	c) N/A	c) N/A	a) OEM Strategy #8 Cybex Solution Z	a) OEM Strategy #9 Graco booster cushion	Yes	No
5 th female	Mandatory ON Human required					Yes	Yes
5 th male	Mandatory ON Human required					Yes	Yes
95 th male	Mandatory ON Human required					Yes	Yes

3. Child Restraint Systems

3.1 Summary

Detailed below are the CRS to be used in the system assessment and the required installation modes.

	Child Restraint System	Installation mode	TB 012
1.	Maxi Cosi Pebble 360	B _ _ _	Yes
2.	Maxi Cosi Cabriofix + EasyBase 2	B _ L _	No
3.	Maxi Cosi Pebble 360 & FamilyFix 360	_ I L _	Yes
4.	Britax Römer King II LS Universal	B _ _ _	Yes
5.	Britax Römer Two-way Elite Uni FWF & Semi-Uni RWF	B _ _ _	No
6.	Britax Römer Trifix 2 i-Size	_ I _ S	Yes
7.	Britax Römer Advansafix III SICT	B I _ _	No
8.	Cybex Solution Z i-fix	B _ _ _	Yes
9.	Graco booster basic	B _ _ _	Yes

3.2 Key to installation modes:

B = Belted
I = ISOFIX attachments
L = Support leg
S = Top-tether

(2019 年 Euro NCAP 規章)

TB 023 - Assessment of Automatic Passenger Airbag Disabling v1.4

3. Test Matrix

	Installation to checks				
Occupant	Rearward Facing CRS (can be Group 0 / 0+ / 1 / 2)	Forward Facing CRS (= Group 1)	Highback booster (=Group 2/3)	Booster cushion (=Group 3)	No CRS
new born	#1 - Cabriofix Belted #2 - Cabriofix B+L	forbidden	forbidden	forbidden	forbidden
1.5 yo	#1 - Cabriofix Belted #2 - Cabriofix B+L #3 - Cabriofix I+L (if Isofix on front seat)	#4 - Romer King	forbidden	forbidden	forbidden
3 yo	#5 - Britax Elite	#4 - Romer King #6 - Duo I+S (if Isofix on front seat)	#8 - KidFix Belted #9 - KidFix B+I (if Isofix on front seat)	forbidden	forbidden
6 yo	#5 - Britax Elite	#7 - Britax Advansafix III SICT B+I (if Isofix on front seat)	#8 - KidFix Belted #9 - KidFix B+I (if Isofix on front seat)	#10 - KidFix cushion only Belted	forbidden
10 yo	not tested	not tested	#8 - KidFix Belted #9 - KidFix B+I (if Isofix on front seat)	#10 - KidFix cushion only Belted	forbidden
5th					real human
50th					real human
95th					real human

(修正後 TNCAP 規章草案)

(B) 試驗矩陣表

	空氣囊狀態要求					可由檢測機構執行？	
乘員	無 CRS	後向 CRS (Group 0/0+/1/2) 	前向 CRS (Group 1) 	高靠背增高型座椅 (Group 2/3) 	增高型座墊 (Group 3) 	系統不須 使用真人	系統須使 用真人 車輛業者 資料要求
新生兒	X	強制關閉 #1 JOIE I-JEMINI	X	X	X	是	否
1.5 歲	X	強制關閉 #1 JOIE I-JEMINI #2 JOIE I-HARBOUR	(1)車輛業者策略 #3 Chicco Eletta 寶貝 舒適全歲段安全汽座	X	X	是	否
3 歲	X		(1)車輛業者策略 #3 Chicco Eletta 寶貝 舒適全歲段安全汽座 #4 Chicco Seat 4 Fix ISOFIX 安全汽座	(1)車輛業者策略 #5 PERO Luce90 #6 TOYOTA/LEXUS JUNIOR SEAT2	X	是	否
6 歲	X			(1)車輛業者策略 #5 PERO Luce90 #6 TOYOTA/LEXUS JUNIOR SEAT2	(1)車輛業者策略 #7 TOYOTA/LEXUS JUNIOR SEAT2 cushion	是	否

	空氣囊狀態要求					可由檢測機構執行？	
乘員	無 CRS	後向 CRS (Group 0/0+/1/2) 	前向 CRS (Group 1) 	高靠背增高型座椅 (Group 2/3) 	增高型座墊 (Group 3) 	系統不須 使用真人	系統須使 用真人 車輛業者 資料要求
10 歲	X	無須測試	無須測試	(1)車輛業者策略 #5 PERO Luce90 #6 TOYOTA/LEXUS JUNIOR SEAT2	(1)車輛業者策略 #7 TOYOTA/LEXUS JUNIOR SEAT2 cushion	是	否
第 5 百分位 女性	強制開啟 真人					是	是
第 50 百分位 男性	強制開啟 真人					是	是
第 95 百分位 男性	強制開啟 真人					是	是

表格中所列出之CRS應依照3.8兒童保護試驗規章中「安裝TNCAP CRS清單上之兒童保護裝置」程序進行安裝。

	兒童保護裝置	<u>安裝方式</u>	是否在 CRS 清單?
<u>1.</u>	JOIE I-JEMINI	B _ _ _	是
<u>2.</u>	JOIE I-HARBOUR /底座	_ I L _	是
<u>3.</u>	Chicco Eletta 寶貝舒適全歲段安全汽座	B _ _ _	是
<u>4.</u>	Chicco Seat 4 Fix ISOFIX 安全汽座	_ I _ S	是
<u>5.</u>	PERO Luce90	B _ _ _	是
<u>6.</u>	TOYOTA/LEXUS JUNIOR SEAT2	B I _ _	是
<u>7.</u>	TOYOTA/LEXUS JUNIOR SEAT2 cushion	B _ _ _	是

#2、#4 及#6 ISOFIX CRS 僅適用配備 ISOFIX 之第一排座椅。

安裝方式說明：

B = 以安全帶安裝(Belted)

I = ISOFIX 固定裝置(ISOFIX attachments)

L = 支撐腳(Support leg)

S = 上固定帶(Top-tether)

(修正前 TNCAP 規章)

2.2.1.5.3 自動開關之額外要求

安裝檢查					
乘員	後向 CRS (Group 0/0+/1/2)	前向 CRS (=Group 1)	高靠背增 高型座椅 (=Group 2/3)	增高型 座墊 (=Group 3)	無 CRS
新生兒	#1 - JOIE I-JEMINI(以安 全帶安裝)	禁止	禁止	禁止	禁止
1.5 歲	#1 - JOIE I-JEMINI (以安 全帶安裝) #2 - JOIE I-HARBOUR(以 ISOFIX+支 撐腳安裝)(若 第一排座椅配 備 ISOFIX)	#3 - Chicco Eletta 寶 貝舒適全 歲段安全 汽座	禁止	禁止	禁止
3 歲		#3 - Chicco Eletta 寶 貝舒適全 歲段安全 汽座 #4 - Chicco Seat 4 Fix ISOFIX 安 全汽座(以 ISOFIX+ 上固定帶 安裝)(若 第一排座 椅配備 ISOFIX)	#5 - PERO Luce90(以 安全帶安 裝) #6 - TOYOTA/ LEXUS JUNIOR SEAT2(以 安全帶 +ISOFIX 安裝)(若 第一排座 椅配備 ISOFIX)	禁止	禁止
6 歲			#5 - PERO Luce90(以 安全帶安	#7 - TOYOT A/LEXU	禁止

安裝檢查					
乘員	後向 CRS (Group 0/0+/1/2)	前向 CRS (=Group 1)	高靠背增 高型座椅 (=Group 2/3)	增高型 座墊 (=Group 3)	無 CRS
			裝) #6 - TOYOTA/ LEXUS JUNIOR SEAT2(以 安全帶 +ISOFIX 安裝)(若 第一排座 椅配備 ISOFIX)	S JUNIOR SEAT2 cushion (以安全 帶安裝)	
10 歲	無須測試	無須測試	#5 - PERO Luce90(以 安全帶安 裝) #6 - TOYOTA/ LEXUS JUNIOR SEAT2(以 安全帶 +ISOFIX 安裝)(若 第一排座 椅配備 ISOFIX)	#7 - TOYOT A/LEXU S JUNIOR SEAT2 cushion (以安全 帶安裝)	
第 5 百 分位					真人
第 50 百分位					真人
第 95 百分位					真人

表格中所列出之CRS應依照3.8兒童保護試驗規章中「安裝TNCAP CRS清單上之兒童保護裝置」程序進行安裝。

兒童保護裝置 <u>清單</u>	<u>CRS</u> 是否在 CRS 清單?
<u>#1 - JOIE I-JEMINI(以安全帶安裝)</u>	是
<u>#2 - JOIE I-HARBOUR /底座(以安全帶+支撐腳安裝)</u>	是
<u>#3 - Chicco Eletta 寶貝舒適全歲段安全汽座(通用型)</u>	是
<u>#4 - Chicco Seat 4 Fix ISOFIX 安全汽座(以 ISOFIX+上 固定帶安裝)</u>	是
<u>#5 - PERO Luce90(以安全帶安裝)</u>	是
<u>#6 - TOYOTA/LEXUS JUNIOR SEAT2(以安全帶 +ISOFIX 安裝)</u>	是
<u>#7 - TOYOTA/LEXUS JUNIOR SEAT2 cushion (以安全 帶安裝)</u>	是

#3、#4 及#6 ISOFIX CRS 僅適用配備 ISOFIX 之第一排座椅。

(2025 年 Euro NCAP 規章)

3.4.1 Rounding

Table 1. Example of installation list results

CRS Installation Assessment					SEATING POSITION									SCORING													
					Front			2nd row			3rd row			Pass	Fail	Exempt	Score										
					Left	Centre	Right	Left	Centre	Right	Left	Centre	Right														
					N/A	Belt	Belt	i-Size	Belt	i-Size	ISOFIX	Belt	ISOFIX														
1	< 83cm	Maxi Cosi Pebble 360	B _ _ _	ISO/R2	N/A	Pass	Pass	Pass	Pass	Pass	Pass	P Fail	Pass	7	1	NA	87.5%										
2	135cm	Britax Kidfix i-Size	B _ _ _	ISO/B2	N/A	Pass	Pass	Pass	Fail	Pass	Pass	P Fail	Pass	6	2	NA	75.0%										
3	150cm	Cybox Solution Z i-Fix	B _ _ _	ISO/B3	N/A	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Pass	7	1	NA	87.5%										
4	135cm	Cybox Solution Z i-Fix	B i _ _	ISO/B3	N/A	N/A	N/A	Pass	N/A	Pass	Pass	N/A	Pass	4	0	NA	100.0%										
5	150cm	Cybox Solution Z i-Fix	B i _ _	ISO/B3	N/A	N/A	N/A	Pass	N/A	Pass	Pass	N/A	Pass	4	0	NA	100.0%										
6	40-105cm	Maxi Cosi Pearl 360 & FamilyFix 360	_ i L _	ISO/R2	N/A	N/A	N/A	Pass	N/A	Pass	Exempt	N/A	Exempt	2	0	2	100.0%										
7	150CM	Maxi Cosi Pearl 360 & FamilyFix 360	_ i L _	F2X	N/A	N/A	N/A	Pass	N/A	Pass	Exempt	N/A	Exempt	2	0	2	100.0%										
8	61-105cm	BeSafe iZi Kid X2 i-Size	_ i L _	ISO/R2	N/A	N/A	N/A	Pass	N/A	Pass	Exempt	N/A	Exempt	2	0	2	100.0%										
9	76-105cm	Britax Römer TriFix ² i-Size	_ i _ S	F2X	N/A	N/A	N/A	Pass	N/A	Pass	Pass	N/A	Pass	4	0	NA	100.0%										
10	100-135cm	BeSafe iZi Flex FIX i-Size	B i _ _	ISO/B2	N/A	N/A	N/A	Pass	N/A	Pass	Pass	N/A	Pass	4	0	NA	100.0%										
	< 83cm	Maxi Cosi Pebble 360	B _ _ _	ISO/R2													1.000										
	76-105cm	Britax Römer TriFix ² i-Size	_ i _ S	F2X																							
	< 135cm	Cybox Solution Z i-Fix	B i _ _	ISO/B3																							
	< 150cm	Cybox Solution Z i-Fix	B i _ _	ISO/B3																							
SUMMARY																											
Installation assessment					9.500																						
OEM assessment					2.000																						
TOTAL INSTALLATION ASSESSMENT					11.500																						

Legend:

Pass	CRS can be installed correctly.
P Fail	CRS can be installed correctly but more actions are needed that do not meet the requirements of Euro NCAP and 0 points are awarded.
Fail	Safety critical issues exist, 0 points awarded.
Exempt	Vehicle handbook exempts the CRS from being installed on that seating position. The only allowable exemptions are detailed in Sections 3.3.1 & 3.3.3.
N/A	This combination of CRS and seating position cannot be installed.

(2019 年 Euro NCAP 規章)

3.3.1 Rounding

Table 2. Example of top pick list installations

CRS Installation Assessment					SEATING POSITION								SCORING			
					Front	2nd row			3rd			Pass	Fail	Exempt	Score	
					Right	Left	Centre	Right	Left	Centre	Right					
					ISOFIX	I-Size	Belt	I-Size	Belt	N/A	Belt					
UNIVERSAL	Group 0+	Maxi Cosi CabrioFix	B _ _ _	U	Pass	Pass	Fail	Pass	Pass	N/A	Pass	5	1		83.3%	
		Maxi Cosi CabrioFix & EasyBase2	B _ I _	VEHICLE LIST	Pass	P Fail	Exempt	P Fail	Pass	N/A	Pass	3	2	1	66.7%	
	Group I	Römer King II LS	B _ _ _	U / UF	Pass	Pass	Pass	Pass	Fail	N/A	Fail	4	2		66.7%	
	Group II/III	Römer KidFix XP	B _ _ _	U / UF	Pass	Pass	P Fail	Pass	Fail	N/A	Fail	3	3		50.0%	
ISOFIX	Group 0+	Maxi Cosi CabrioFix & FamilyFix	_ I L _	ISO/R1	Pass	Pass	N/A	Pass	N/A	N/A	N/A	3	0		100.0%	
	Group 0+/I	BeSafe IZI Combi X4 ISOfix	_ I L _	ISO/R3	Fail	Pass	Exempt	Pass	N/A	N/A	N/A	2	1	1	75.0%	
	Group I	Römer Duo Plus	_ I _ S	ISO/F2X	Pass	Pass	N/A	Pass	N/A	N/A	N/A	3	0		100.0%	
	Group II/III	Römer KidFix XP	B I _ _	VEHICLE LIST	P Fail	Pass	N/A	Pass	N/A	N/A	N/A	2	1		66.7%	
I-Size	67-105cm	Maxi Cosi 2way Pearl & 2wayFix	_ I L _	I-Size	N/A	Pass	N/A	Pass	N/A	N/A	N/A	2	0		100.0%	
	>15m-105cm		N/A	Pass	N/A	Pass	N/A	N/A	N/A	2	0		100.0%			
	61-105cm		BeSafe IZI Kid X2 I-Size	_ I L _	I-Size	N/A	Pass	N/A	Pass	N/A	N/A	N/A	2	0		100.0%
OEM	Group 0+	Maxi Cosi CabrioFix	_ I L _	ISO/R1												
	Group I	Maxi Cosi Pearl & FamilyFix	_ I L _	ISO/F2X											1.000	
	Group II	Takata Maxi Plus	B I _ _	VEHICLE LIST		Pass		Pass				2	0			
	Group III	Takata Maxi Plus	B I _ _	VEHICLE LIST		Pass		Pass				2	0		1.000	
SUMMARY																
Universal assessment					2.667											
ISOFIX assessment					1.708											
I-Size assessment					4.000											
OEM assessment					2.000											
TOTAL INSTALLATION ASSESSMENT					10.375											

Legend:

Pass	CRS can be installed correctly
P Fail	CRS can be installed correctly but more actions are needed that do not meet the requirements of Euro NCAP and 0 points are awarded
Fail	safety critical issues exist, 0 points awarded
Exempt	Vehicle handbook or CRS Vehicle list exempt the CRS from being installed on that seating position
N/A	This combination of CRS and seating position is not applicable

(修正後 TNCAP 規章草案)

2.2.2.3.1 小數點捨入原則

表 1：TNCAP CRS 清單安裝於車輛座椅位置結果範例

範例					座椅位置								得分			
					第一排		第二排		第三排				通過	不通過	免除	分數
					右側	左側	中間	右側	左側	中間	右側	安全帶				
CRS 安裝評等					ISOFIX	i-Size	安全帶	i-Size	安全帶	不適用	安全帶					
通用型	Group 0+	JOIE I-JEMINI	B_ _ _	U	不適用	通過	不通過	通過	通過	不適用	通過		4	1		80.0%
	Group I	Chicco Eletta 寶貝舒適全歲段安全汽座	B_ _ _	U/UF	不適用	通過	通過	通過	不通過	不適用	不通過		3	2		60.0%
	Group II/III	PERO Luce90	B_ _ _	U/UF	不適用	通過	部分不通過	通過	不通過	不適用	不通過		2	3		40.0%
ISOFIX	Group 0+	JOIE I-HARBOUR	_ I L _	ISO/R1	不適用	通過	不適用	通過	不適用	不適用	不適用		2	0		100.0%
	Group 0+/I	Chicco BI-SEAT	_ I L _	ISO/R3	不適用	通過	免除	通過	不適用	不適用	不適用		2	0	1	100.0%
	Group I	Chicco Seat 4 Fix ISOFIX 安全汽座	_ I _ S	ISO/F2X	不適用	通過	不適用	通過	不適用	不適用	不適用		2	0		100.0%
	Group II/III	TOYOTA/LEXUS JUNIOR SEAT2	B I _ _	VEHICLE LIST	不適用	通過	不適用	通過	不適用	不適用	不適用		2	0		100.0%
i-Size	67-105cm				不適用	通過	不適用	通過	不適用	不適用	不適用		2	0		100.0%
	>15 個月-105cm	JOIE I-HARBOUR	_ I L _	i-Size	不適用	通過	不適用	通過	不適用	不適用	不適用		2	0		100.0%
	61-105cm	JOIE I-PIVOT 360	_ I L _	i-Size	不適用	通過	不適用	通過	不適用	不適用	不適用		2	0		100.0%
	100-135cm	Numa AACE 1x	_ I L _	i-Size	不適用	通過	不適用	通過	不適用	不適用	不適用		2	0		100.0%
範例					座椅位置								得分			
					第一排		第二排		第三排				通過	不通過	免除	分數
					右側	左側	中間	右側	左側	中間	右側	安全帶				
通用型	Group 0+	Maxi Cosi Carriofix	_ I L _	ISO/R1												
	Group I	Maxi Cosi Pearl & FamilyFix	_ I L _	ISO/F2X												
	Group II	Takata Maxi Plus	B I _ _	VEHICLE LIST		通過		通過					2	0		1.000
	Group III	Takata Maxi Plus	B I _ _	VEHICLE LIST		通過		通過					2	0		1.000
總站																
通用型評等					2.400											
ISOFIX 評等					2.000											
i-Size 評等					4.000											
車輛業者推薦評等					2.000											
安裝評等總分					10.400											

圖例

通過：	可正確安裝 CRS。
部分不通過：	可正確安裝 CRS，惟須額外步驟，無法符合 TNCAP 要求，給予 0 分。
不通過：	涉及安全攸關問題，給予 0 分。
免除：	車主手冊不允許該 CRS 安裝於此座椅位置。 免除條件詳參 2.2.2.3.3。
不適用：	該 CRS 無法被安裝 於此座椅位置。

(修正前 TNCAP 規章)

2.2.2.3.1 小數點捨入原則

表 2：TNCAP CRS 清單安裝於車輛座椅位置結果範例

範例					座椅位置								得分			
					第一排		第二排		第三排				通過	不通過	免除	分數
					右側	左側	中間	右側	左側	中間	右側	安全帶				
CRS 安裝評等					ISOFIX	i-Size	安全帶	i-Size	安全帶	不適用	安全帶					
通用型	Group 0+	JOIE I-JEMINI	B_ _ _	U	不適用	通過	不通過	通過	通過	不適用	通過		4	1		80.0%
	Group I	Chicco Eletta 寶貝舒適全歲段安全汽座	B_ _ _	U/UF	不適用	通過	通過	通過	不通過	不適用	不通過		3	2		60.0%
	Group II/III	PERO Luce90	B_ _ _	U/UF	不適用	通過	部分不通過	通過	不通過	不適用	不通過		2	3		40.0%
ISOFIX	Group 0+	JOIE I-HARBOUR	_ I L _	ISO/R1	不適用	通過	不適用	通過	不適用	不適用	不適用		2	0		100.0%
	Group 0+/I	Chicco BI-SEAT	_ I L _	ISO/R3	不適用	通過	免除	通過	不適用	不適用	不適用		2	0	1	100.0%
	Group I	Chicco Seat 4 Fix ISOFIX 安全汽座	_ I _ S	ISO/F2X	不適用	通過	不適用	通過	不適用	不適用	不適用		2	0		100.0%
	Group II/III	TOYOTA/LEXUS JUNIOR SEAT2	B I _ _	VEHICLE LIST	不適用	通過	不適用	通過	不適用	不適用	不適用		2	0		100.0%
i-Size	67-105cm				不適用	通過	不適用	通過	不適用	不適用	不適用		2	0		100.0%
	>15 個月-105cm	JOIE I-HARBOUR	_ I L _	i-Size	不適用	通過	不適用	通過	不適用	不適用	不適用		2	0		100.0%
	61-105cm	JOIE I-PIVOT 360	_ I L _	i-Size	不適用	通過	不適用	通過	不適用	不適用	不適用		2	0		100.0%
	100-135cm	Numa AACE 1x	_ I L _	i-Size	不適用	通過	不適用	通過	不適用	不適用	不適用		2	0		100.0%
範例					座椅位置								得分			
CRS 安裝評等					第一排		第二排		第三排				通過	不通過	免除	分數
					右側	左側	中間	右側	左側	中間	右側	安全帶				
通用型	Group 0+	Maxi Cosi Carriofix	_ I L _	ISO/R1												
	Group I	Maxi Cosi Pearl & FamilyFix	_ I L _	ISO/F2X												
	Group II	Takata Maxi Plus	B I _ _	VEHICLE LIST		通過		通過					2	0		1.000
	Group III	Takata Maxi Plus	B I _ _	VEHICLE LIST		通過		通過					2	0		1.000
總站																
通用型評等					2.400											
ISOFIX 評等					2.000											
i-Size 評等					4.000											
車輛業者推薦評等					2.000											
安裝評等總分					10.400											

圖例：

通過：	可正確安裝 CRS。
部分不通過：	可正確安裝 CRS，惟須額外步驟，無法符合 TNCAP 要求，給予 0 分。
不通過：	涉及安全攸關問題，給予 0 分。
免除：	車主手冊 <u>或 CRS 車輛清單</u> 不允許該 CRS 安裝於此座椅位置。
不適用：	該 CRS <u>不適用</u> 於此座椅位置。

(2025 年 Euro NCAP 規章)

4.2.2.3 Frontal Impact Criteria

Table 2. Frontal impact criteria, limits and available points per body region for Q6, Q10

	Criteria	Performance limits			Available points
		Higher	Lower	Capping	
Head Score	HIC ₁₅ (with hard contact)	500	700	800	4 points
	Resultant 3ms acceleration	60g	80g	80g	
	Head excursion				
	Q6	NA	550mm	NA	
	Q10	450mm	550mm	NA	
Upper Neck	Tension Fz	1.7kN	2.62kN	NA	2 points
	Extension My(with head to interior contact)				
	Q6	NA	36Nm	NA	
	Q10	NA	49Nm	NA	
Chest(T4)	Resultant 3ms acceleration*				2 points
	Q6	NA	NA	NA	
	Q10	41g	55g	55g	
	Deflection-max Dres, upper and lower				
	Q6	30mm	42mm	NA	
	Q10	NA	56mm	NA**	
Pelvis	ASIS load	NA	NA	NA	
TOTAL					8 points/dummy

*Chest acceleration peaks caused by the firing of seatbelt pretensioners early in the loading event will be ignored.

**Capping, as defined in Section 4.1, will be applied to the Q10 chest deflection on 1st January 2025. The limitation to star rating as defined in Section 2.3 the Euro NCAP Assessment Protocol - Overall rating, will not be applied to Q10 chest deflection.

(2019 年 Euro NCAP 規章)

4.2.2.3 Frontal Impact Criteria

Table 3. Frontal impact criteria, limits and available points per body region for Q6, Q10

	Criteria	Performance limits			Available points
		Higher	Lower	Capping	
Head Score	HIC ₁₅ (with hard contact)	500	700	800	4 points
	Resultant 3ms acceleration	60g	80g	80g	
	Head excursion				
	Q6		550mm	NA	
	Q10	450mm	550mm	NA	
Uper Neck	Tension Fz	1.7kN	2.62kN	(monitoring)	2 points
	Extension My(with head to interior contact)				
	Q6	NA	36Nm	NA	
	Q10	NA	49Nm	NA	
Chest(T4)	Resultant 3ms acceleration*				
	Q6	NA	NA	NA	NA
	Q10	41g	55g	55g	2 points
	Deflection				
	Q6	30mm	42mm	NA	2 points
	Q10	(monitoring)	(monitoring)	NA	NA
Pelvis	ASIS load	NA	NA	NA	
TOTAL					8 points/dummy

*Chest acceleration peaks caused by the firing of seatbelt pretensioners early in the loading event will be ignored.

(修正後 TNCAP 規章草案)

2.2.3.2.2.3

表2：前方偏置撞擊標準、限制值及Q6與Q10人偶身體部位分數

	標準		性能限制值			分數
			較高	較低	底線限制	
頭部分數	頭部傷害指數(HIC ₁₅)(硬碰撞)		500	700	800	4分
	3ms合成加速度		60g	80g	80g	
	頭部偏移量	Q6	NA	550mm	NA	
		Q10	450mm	550mm	NA	
上頸部	張力(Tension Fz)		1.7kN	2.62kN	NA	2分
	拉伸力My (頭部與車內發生接觸)	Q6	NA	36Nm	NA	
		Q10	NA	49Nm	NA	
胸部(T4)	3ms合成加速度 ¹	Q6	NA	NA	NA	2分
		Q10	41g	55g	55g	
	最大變形量-上部及下部	Q6	30mm	42mm	NA	
		Q10	-	56mm	56mm ²	
骨盆	ASIS負載		NA	NA	NA	
總分						8分/人偶

備註：1.碰撞時，安全帶預負載裝置作動所引起之胸部加速度峰值可被忽略。

2.底線限制（如2.2.3.1定義）適用於Q10人偶胸部變形量。TNCAP整體星級評等規章之1.2.2.3要求，不適用於Q10人偶胸部變形量。

(修正前 TNCAP 規章)

2.2.3.2.2.3 前方偏置撞擊標準

表3：前方偏置撞擊標準、限制值及Q6與Q10人偶身體部位分數

	標準		性能限制值			分數
			較高	較低	底線限制	
頭部分數	頭部傷害指數(HIC ₁₅)(硬碰撞)		500	700	800	4分
	3ms合成加速度		60g	80g	80g	
	頭部偏移量	Q6		550mm	NA	
		Q10	450mm	550mm	NA	
上頸部	張力(Tension Fz)		1.7kN	2.62kN	<u>—</u>	2分
	拉伸力My (頭部與車內發生接觸)	Q6	NA	36Nm	NA	
		Q10	NA	49Nm	NA	
胸部(T4)	3ms合成加速度*	Q6	NA	NA	NA	<u>NA</u>
		Q10	41g	55g	55g	<u>2分</u>
	變形量	Q6	30mm	42mm	NA	<u>2分</u>
		Q10	—	<u>—</u>	NA	<u>NA</u>
骨盆	ASIS負載		NA	NA	NA	
總分						8分/人偶

備註：*碰撞時，安全帶預負載裝置作動所引起之胸部加速度峰值可被忽略。

(2025 年 Euro NCAP 規章)

4.2.3.2

Table 3. Side impact criteria, limits and available points per body region for Q6, Q10

	Criteria	Performance limits			Available points
		Higher	Lower	Capping	
Head Score	HIC ₁₅ (with hard contact)	500	700	800	2points
	Resultant 3ms acceleration	60g	80g	80g	
Upper Neck	Resultant Force Q6 Q10	NA NA	2.4Kn 2.2Kn	NA	1point
Chest(T4)	Resultant 3ms acceleration*		67g	NA	1point
TOTAL					4 points/dummy

*Chest acceleration peaks caused by the firing of seatbelt pretensioners early in the loading event will be ignored.

(2019 年 Euro NCAP 規章)

4.2.3.2

Table 4. Side impact criteria, limits and available points per body region for Q6, Q10

	Criteria	Performance limits			Available points
		Higher	Lower	Capping	
Head Score	HIC ₁₅ (with hard contact)	500	700	800	2points
	Resultant 3ms acceleration	60g	80g	80g	
Upper Neck	Resultant Force Q6 Q10		2.4Kn 2.2Kn	NA (monitoring)	1 point
Chest(T4)	Resultant 3ms acceleration*		67g	NA (monitoring)	1 point
TOTAL					4 points/dummy

*Chest acceleration peaks caused by the firing of seatbelt pretensioners early in the loading event will be ignored.

(修正後 TNCAP 規章草案)

2.2.3.2.3.2 側方撞擊標準

表3：側方撞擊標準、限制值及Q6與Q10人偶身體部位分數

	標準		性能限制值			分數
			較高	較低	底線限制	
頭部分數	頭部傷害指數(HIC ₁₅)(硬碰撞)		500	700	800	2分
	3ms合成加速度		60g	80g	80g	
上頸部	合力 (Resultant Force)	Q6	NA	2.4kN	NA	1分
		Q10	NA	2.2kN		
胸部(T4)	3ms合成加速度*			67g	NA	1分
總分						4分/人偶

備註：*碰撞時，安全帶預負載裝置作動所引起之胸部加速度峰值可被忽略。

(修正前 TNCAP 規章)

2.2.3.2.3.2 側方撞擊標準

表4：側方撞擊標準、限制值及Q6與Q10人偶身體部位分數

	標準		性能限制值			分數
			較高	較低	底線限制	
頭部分數	頭部傷害指數(HIC ₁₅)(硬碰撞)		500	700	800	2分
	3ms合成加速度		60g	80g	80g	
上頸部	合力 (Resultant Force)	Q6		2.4kN	NA	1分
		Q10		2.2kN		
胸部(T4)	3ms合成加速度*			67g	NA	1分
總分						4分/人偶

備註：*碰撞時，安全帶預負載裝置作動所引起之胸部加速度峰值可被忽略。

3.8 兒童保護試驗規章

TESTING PROTOCOL-CHILD OCCUPANT PROTECTION Version 7.3.2

2025 年版 Euro NCAP 規章	2022 年版 Euro NCAP 規章	修訂 TNCAP 條文草案	對應 TNCAP 條文
2.1.1.1 Initial vehicle settings Installations on the rear seat: (a) The front row seats shall initially be set in the Euro NCAP Frontal MPDB impact test position. (b) The front seats may be adjusted during the assessment. The adjustments allowed are limited to normal day-to-day adjustments to ensure the best possible installation. For the front passenger seat, the full range of fore/aft movement is permissible to create sufficient space for the seat to be installed. The seatback angle must be no further forward than a torso angle of 15 degrees. The full range of seat height is permitted. (c) For the driver's seat, the fore/aft adjustment must be no further forward than mid between fully forward and the 95th percentile positions. The seatback must be no further forward than a torso	2.1.1.1 Initial vehicle settings Installations on the rear seat: (a) The front row seats shall initially be set in the Euro NCAP Frontal ODB impact test position. (b) The front seats may be adjusted during the assessment. The adjustments allowed are limited to normal day-to-day adjustments to ensure the best possible installation. For the front passenger seat, the full range of fore/aft movement is permissible to create sufficient space for the seat to be installed. The seatback angle must be no further forward than a torso angle of 15 degrees. The full range of seat height is permitted. (c) For the driver's seat, the fore/aft adjustment must be no further forward than mid between fully forward and the 95th percentile positions. The seatback must be no further forward than a torso	3.8.1.1.1 車輛初始設定 安裝於後排座椅： (1) 第一排座椅之初始設定應於 TNCAP 前方偏置撞擊試驗位置。 (2) 評等過程中可調整前排座椅，惟調整僅限於一般日常調整，以確保最佳安裝。針對前排乘客座椅，允許全範圍之前/後移動，以提供安裝兒童保護裝置之充足空間。椅背角度不得小於相對應之軀幹角 15 度。允許調整全範圍之座椅高度。 (3) 針對駕駛座椅前/後調整，調整幅度不得超過第 95 百分位與最前方之間的中間位置。椅背角度不得小於相對應之軀幹角 15 度。允許調整全範圍之座椅高度。	3.8.1.1.1 車輛初始設定 安裝於後排座椅： (1) 第一排座椅之初始設定應於 TNCAP 前方偏置撞擊試驗位置。 (2) 評等過程中可調整前排座椅，惟調整僅限於一般日常調整，以確保最佳安裝。針對前排乘客座椅，允許全範圍之前/後移動，以提供安裝兒童保護裝置之充足空間。椅背角度不得小於相對應之軀幹角 15 度。允許調整全範圍之座椅高度。 (3) 針對駕駛座椅前/後調整，調整幅度不得超過第 95 百分位與最前方之間的中間位置。椅背角度不得小於相對應之軀幹角 15 度。允許調整全範圍之座椅高度。

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angle of 15 degrees. The full range of seat height is permitted. (d) It is acceptable to utilise any ‘easy entry’ function in conjunction with the fore/aft adjustment to move the front seat forward and allow access to the rear seats. (e) Vehicles with three seat rows shall have the row in front of the seat row being assessed positioned as in b). (f) Vehicles with adjustable rear seats shall initially be set in the position recommended by the manufacturer in the Euro NCAP Frontal MPDB impact test. The flat folded position of a seat is not considered as an in use position. Normal day-to-day adjustments will also be permitted as defined in b).	angle of 15 degrees. The full range of seat height is permitted. (d) It is acceptable to utilise any ‘easy entry’ function in conjunction with the fore/aft adjustment to move the front seat forward and allow access to the rear seats. (e) Vehicles with three seat rows shall have the row in front of the seat row being assessed positioned as in b). (f) Vehicles with adjustable rear seats shall initially be set in the position recommended by the manufacturer in the Euro NCAP Frontal ODB impact test. The flat folded position of a seat is not considered as an in use position. Normal day-to-day adjustments will also be permitted as defined in b).	(4) 可使用任何結合前/後調整之「便利進出(Easy entry)」功能，將第一排座椅向前移動，以進入後座。 (5) 針對配備三排座椅之車輛，評等座椅之前排座椅位置應依照(2)進行調整。 (6) 針對後排座椅可調整之車輛，座椅之初始設定應於車輛業者所建議之 TNCAP 前方偏置撞擊試驗位置。座椅折疊打平之位置將不視為使用中位置。亦可依照(2)定義進行日常調整。	(4) 可使用任何結合前/後調整之「便利進出(Easy entry)」功能，將第一排座椅向前移動，以進入後座。 (5) 針對配備三排座椅之車輛，評等座椅之前排座椅位置應依照(2)進行調整。 (6) 針對後排座椅可調整之車輛，座椅之初始設定應於車輛業者所建議之 TNCAP 前方偏置撞擊試驗位置。座椅折疊打平之位置將不視為使用中位置。亦可依照(2)定義進行日常調整。
2.4.2 Ease of use of support legs This is an assessment of the vehicles ability to provide adequate support to any support legs, where applicable. Where optional storage compartments are	2.4.2 Ease of use of support legs This is an assessment of the vehicles ability to provide adequate support to any support legs, where applicable.	3.8.1.4.2 支撐腳之易用性 依實際狀況，本項係評等車輛能否為任一支撐腳提供足夠支撐，<u>若車輛可選配地板儲物箱，則該裝置將納入CRS安裝評等。</u>	3.8.1.4.2 支撐腳之易用性 依實際狀況，本項係針對車輛能否為任一支撐腳提供足夠支撐進行評等。

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available, they will be included in the CRS installation assessment. The vehicle meets the requirements if all of the following are met: (a) The vehicle provides sufficient space to allow stable placement of any support legs. (b) The support leg must be installed in the intended positions, for example fully locked out. (c) The area upon which a support rests must also be capable of providing adequate restraint during an impact as described in Regulation R145 with any storage cover closed. The vehicle would not meet the requirements if any of the following occur: (d) Poor or inadequate support is provided to CRS support legs or where the support leg cannot be positioned correctly due to interference from the front seat or other vehicle structures.	The vehicle meets the requirements if all of the following are met: The vehicle provides sufficient space to allow stable placement of any support legs. The support leg must be installed in the intended positions, for example fully locked out. The area upon which a support rests must also be capable of providing adequate restraint during an impact as described in Regulation R145. The vehicle would not meet the requirements if any of the following occur: (d) Poor or inadequate support is provided to CRS support legs or where the support leg cannot be positioned correctly due to interference from the front seat or other vehicle structures.	若滿足下列所有要求，則該車輛視為符合規定： (1) 車輛提供足夠空間，可穩固放置任一支撐腳。 (2) 支撐腳必須依照原設定位置進行安裝，例如完全鎖定。 (3) 當車輛安全檢測基準「四十八之二、安全帶固定裝置」所述之撞擊發生時，支撐腳放置區域在儲物箱蓋子關閉情況下亦應提供適當保護。 若發生下列狀況，則該車輛視為不符合規定： (4) CRS 支撐腳支撐不足或不良，或是由於前排座椅或車輛其他結構而無法正確放置支撐腳。	若滿足下列所有要求，則該車輛視為符合規定： (1) 車輛提供足夠空間，可穩固放置任一支撐腳。 (2) 支撐腳必須依照原設定位置進行安裝，例如完全鎖定。 (3) 當車輛安全檢測基準「四十八之二、安全帶固定裝置」所述之撞擊發生時，支撐腳放置區域亦應提供適當保護。 若發生下列狀況，則該車輛視為不符合規定： (4) CRS 支撐腳支撐不足或不良，或是由於前排座椅或車輛其他結構而無法正確放置支撐腳。

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(e) The support leg cannot be fully locked out or cannot provide the intended level of support for any reason, such as due limited space. (f) It is necessary to open any storage cover or use additional components/inserts to support the lid, such as foam blocks.	(e) The support leg cannot be fully locked out, or cannot provide the intended level of support for any reason, such as due limited space.	(5) 支撐腳無法完全鎖定，或任何原因（例如因空間有限）而無法提供預期支撐程度。 (6) <u>須開啟所有儲物箱蓋子或使用額外部件或插入物支撐儲物箱蓋子，例如泡棉塊。</u>	(5) 支撐腳無法完全鎖定，或任何原因（例如因空間有限）而無法提供預期支撐程度。
3.2 Dummy Preparation and Certification 3.2.1 General In the Frontal MPDB impact, a Q6 child dummy shall be installed on the 2nd row outboard passenger seat behind the driver. A Q10 child dummy shall be installed on the 2nd row outboard passenger seat behind the front passenger. For the Side AE-MDB impact a Q10 child dummy shall be installed on the 2nd row outboard passenger seat behind the driver. A Q6 child dummy shall be installed on the 2nd row outboard passenger seat behind the front	3.2 Dummy Preparation and Certification 3.2.1 General In the Frontal ODB impact, a Q6 child dummy shall be installed on the 2nd row outboard passenger seat behind the driver. A Q10 child dummy shall be installed on the 2nd row outboard passenger seat behind the front passenger. For the Side AE-MDB impact a Q10 child dummy shall be installed on the 2nd row outboard passenger seat behind the driver. A Q6 child dummy shall be installed on the 2nd row outboard passenger seat behind the front	3.8.2.2 人偶整備及驗證 3.8.2.2.1 通則 執行前方偏置撞擊試驗時，Q6兒童人偶應安裝於駕駛座後方之第二排外側乘客座椅位置。Q10兒童人偶應安裝於第一排乘客座後方之第二排外側乘客座椅位置。 執行側方撞擊試驗時，Q10兒童人偶應安裝於駕駛座後方之第二排外側乘客座椅位置。Q6兒童人偶應安裝於第一排乘客座後方之第二排外側乘客座椅位置。	3.8.2.2 人偶整備及驗證 3.8.2.2.1 通則 執行前方偏置撞擊試驗時，Q6兒童人偶應安裝於駕駛座後方之第二排外側乘客座椅位置。Q10兒童人偶應安裝於第一排乘客座後方之第二排外側乘客座椅位置。 執行側方撞擊試驗時，Q10兒童人偶應安裝於駕駛座後方之第二排外側乘客座椅位置。Q6兒童人偶應安裝於第一排乘客座後方之第二排外側乘客座椅位置。

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passenger. 3.2.3 Additions and modifications to the dummies (a) The Q6 dummy shall be standard build level A, and the Q10 standard build level C. See the relevant user manual for each dummy. (b) The Q10 dummy is used with the full arms for frontal impact testing. The Side Impact Kit including half arms on both sides of the dummy shall be used in the side impact test. The approved Q10 upgrade kit, defined in Technical Bulletin TB029, shall be used in both the front and side impact tests.	passenger. 3.2.3 Additions and modifications to the dummies (a) The Q6 dummy shall be standard build level A, and the Q10 standard build level C. See the relevant user manual for each dummy. (b) The Q10 dummy is used with the full arms for frontal impact testing. The Side Impact Kit including half arms on both sides of the dummy shall be used in the side impact test.	3.8.2.2.3 人偶配件與調整 (1). Q6 人偶應為標準製造 A 等級 (Standard build level A), Q10 人偶應為標準製造 C 等級 (Standard build level C)。請參閱各人偶相關使用手冊。 (2). 前方偏置撞擊試驗係使用配備全臂之 Q10 人偶。側方撞擊試驗則係使用配備包括兩側半臂之側方撞擊套件 (Side Impact Kit) 之 Q10 人偶。<u>前方及側方撞擊試驗應使用 Euro NCAP 技術通報 TB029 核准之 Q10 升級套件。</u>	3.8.2.2.3 人偶配件與調整 (1). Q6 人偶應為標準製造 A 等級 (Standard build level A), Q10 人偶應為標準製造 C 等級 (Standard build level C)。請參閱各人偶相關使用手冊。 (2). 前方偏置撞擊試驗係使用配備全臂之 Q10 人偶。側方撞擊試驗則係使用配備包括兩側半臂之側方撞擊套件 (Side Impact Kit) 之 Q10 人偶。
3.2.4 Dummy clothing (a) Each child dummy shall wear their appropriate suits, Q6 (with Cordura patches) and Q10. (b) The Q10 shall be installed with left and right hand hip shields. Hip liners	3.2.4 Dummy clothing (a) Each child dummy shall wear their appropriate suits, Q6 part number 033-8000 (with Cordura patches) and Q10 part number 010-8000. (b) The Q10 shall be installed with either left and right hand hip shields, part	3.8.2.2.4 人偶衣著 (1). 每個兒童人偶應穿著合適服裝，<u>其中</u> Q6 人偶包含 Cordura 布料貼片。 (2). Q10 人偶應安裝左側及右側髖部保護罩，<u>僅乘坐於整體型 CRS</u>	3.8.2.2.4 人偶衣著 (1). 每個兒童人偶應穿著合適服裝，Q6 人偶零件號碼為 033-8000 (包含 Cordura 布料貼片)，<u>Q10 人偶零件號碼為 010-8000。</u> (2). Q10 人偶應安裝左側及右側髖部保護罩，<u>其零件號碼分別為</u>

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may only be used for the Q10 when seated on an integrated CRS.	numbers 010-8001 and 010-8002 or a hip liner, part number 010-8000.	<u>時才可使用髖部內襯(Hip liner)。</u>	<u>010-8001 及 010-8002，或是安裝髖部內襯，其零件號碼為 010-8000。</u>
(c) The Q6 shall be installed without either hip shields or a hip liner when using a booster seat. Hip liners may only be used for the Q6 when seated on an integrated CRS.	(c) The Q6 shall be installed with either hip shields or a hip liner, part number 033-7160. Hip shields or hip liners may only be used for the Q6 when seated on an integrated CRS.	(3). Q6 人偶使用增高座椅時，不應安裝髖部保護罩或髖部內襯。僅乘坐於整體型 CRS 時才可使用髖部內襯。	(3). Q6 人偶應安裝髖部保護罩或髖部內襯，其零件號碼為 033-7160。Q6 人偶乘坐於整體型 CRS 時才可使用髖部保護罩或髖部內襯(Hip liner)。
3.4.1 General Before installing the dummies and child restraint systems, ensure that the passenger compartment adjustments for the rear seats is performed according to Chapter 5 of the Euro NCAP Frontal MPDB Test protocol and Chapter 4 of the Euro NCAP Side Protocol – AEMDB. Leave the front seats as far forward as possible to ensure easy access.	3.4.1 General Before installing the dummies and child restraint systems, ensure that the passenger compartment adjustments for the rear seats is performed according to Chapter 5 of the Euro NCAP Frontal ODB Test protocol and Chapter 4 of the Euro NCAP Side Protocol – AE-MDB. Leave the front seats as far forward as possible to ensure easy access.	3.8.2.4.1 通則 人偶與兒童保護裝置安裝前，應確保車室後排座椅依照TNCAP前方偏置撞擊試驗規章3.1.5與TNCAP側方撞擊試驗規章3.3.4進行調整。將第一排座椅盡可能調整至最前方，以確保便利進出。	3.8.2.4.1 通則 人偶與兒童保護裝置安裝前，應確保車室後排座椅依照TNCAP前方偏置撞擊試驗規章3.1.5與TNCAP側方撞擊試驗規章3.3.4進行調整。將第一排座椅盡可能調整至最前方，以確保便利進出。
3.5 Vehicles with Limited Rear Space Vehicles will be considered as having limited rear space when the child dummies cannot be installed with the front seats in the full scale impact test	3.5 Vehicles with Limited Rear Space Vehicles will be considered as having limited rear space when the child dummies cannot be installed with the front seats in the full scale impact test	3.8.2.5 後座空間有限之車輛 於3.8.2.4.3.6規定調整後，實車撞擊試驗(Full scale impact test)之第一排座椅位置導致兒童人偶無法安裝時，則該車輛將視為後座空間	3.8.2.5 後座空間有限之車輛 於3.8.2.4.3.6規定調整後，實車撞擊試驗(Full scale impact test)之第一排座椅位置導致兒童人偶無法安裝時，則該車輛將視為後座空間

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position after adjustment in Section 3.4.3.6. Where this is the case, the test laboratory will confirm that child dummy cannot be installed without interference from the vehicle.	position after adjustment in Section 3.4.3.6. Where this is the case, the test laboratory will confirm that child dummy cannot be installed without interference from the vehicle.	有限者。在此情況下，檢測機構將確認兒童人偶在不改變車輛下無法進行安裝。	有限者。在此情況下，檢測機構將確認兒童人偶在不改變車輛下無法進行安裝。
Where a manufacturer wishes to avoid being awarded zero points for the CRS dynamic assessments, the dynamic performance will be based on manufacturers data from test(s) with modified front seating positions. These tests shall be performed using the appropriate CRS with the front seats positioned to one notch forwards of contact with the dummy. The dummy pelvis shall be positioned in the last step in after adjustment in Section 3.4.3.6.	Where a manufacturer wishes to avoid being awarded zero points for the CRS dynamic assessments, the dynamic performance will be based on manufacturers data from test(s) with modified front seating positions. These tests shall be performed using the appropriate CRS with the front seats positioned to one notch forwards of contact with the dummy. The dummy pelvis shall be positioned in the last step in after adjustment in Section 3.4.3.6.	若車輛業者不希望CRS動態評等獲得零分，則將根據車輛業者修改第一排座椅位置所執行試驗之數據進行動態性能評等。這些試驗應使用合適CRS，且第一排座椅位置設置在與人偶接觸之前一個段位。於3.8.2.4.3.6規定調整後，人偶骨盆之擺放應為最後一個步驟。	若車輛業者不希望CRS動態評等獲得零分，則將根據車輛業者修改第一排座椅位置所執行試驗之數據進行動態性能評等。這些試驗應使用合適CRS，且第一排座椅位置設置在與人偶接觸之前一個段位。於3.8.2.4.3.6規定調整後，人偶骨盆之擺放應為最後一個步驟。
In order to reduce the test burden, it may be possible to install both of the child dummies in the official frontal MPDB impact as the driver and passengers seat are more forward than in the side MDB test. Where this is the case, the official MPDB test will be performed as normal	In order to reduce the test burden, it may be possible to install both of the child dummies in the official frontal ODB impact as the driver and passengers seat are more forward than in the side MDB test. Where this is the case, the official ODB test will be performed as normal	為減輕試驗負擔，可在正式前方偏置撞擊試驗時安裝兩個兒童人偶，因為該試驗之駕駛與乘客座椅位置較側方撞擊試驗更前方。在此情況下，正式前方偏置撞擊試驗仍正常進行，車輛業者僅須提供等效側方撞擊試驗之內部數	為減輕試驗負擔，可在正式前方偏置撞擊試驗時安裝兩個兒童人偶，因為該試驗之駕駛與乘客座椅位置較側方撞擊試驗更前方。在此情況下，正式前方偏置撞擊試驗仍正常進行，車輛業者僅須提供等效側方撞擊試驗之內部數

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and the manufacturer need only provide in house data from an equivalent side impact. Any of the front or side MDB tests must be performed with both child dummies present to evaluate occupant interaction.	and the manufacturer need only provide in house data from an equivalent side impact. Any of the front or side MDB tests must be performed with both child dummies present to evaluate occupant interaction.	據。任何前方或側方試驗皆須在兩個兒童人偶並存下執行試驗，以評估乘員間的互動情形。	據。任何前方或側方試驗皆須在兩個兒童人偶並存下執行試驗，以評估乘員間的互動情形。

3.19 兒童遺留偵測試驗規章

TEST AND ASSESSMENT PROTOCOL-CHILD PRESENCE DETECTION Version 1.3 兒童遺留偵測

Euro NCAP 原文	TNCAP 條文草案	說明
1. INTRODUCTION 1.1 Background Leaving a child unattended in a parked car, even for a few minutes, can lead to hyperthermia, heatstroke and death, especially if the car is exposed to the sun. A child's inability to exit the vehicle on their own, combined with a low tolerance for high temperatures, requires that children never be left unattended in a car. Temperatures can reach a critical level in just 15 minutes and leaving windows ajar does little to reduce the threat. Child deaths from vehicle-related heatstroke occur less frequently than those resulting from crashes, but the nature of these entirely avoidable deaths deserves special attention as the technology already exists to address the issue of child hyperthermia in vehicles. Technological solutions for Child Presence Detection (CPD) are available that can detect a child's presence in the vehicle and alert the vehicle user or third-party services. Euro NCAP has rewarded vehicles that offer such solutions as standard since 2023. 1.2 Scope To avoid heatstroke-related injury and death, some countries have made it illegal to leave a child alone in a car, even for a minute. Following this principle, CPD technology can address situations where the child is left behind, regardless of whether it was intentional or unintentional and in hot weather or not.	<u>3.19.1 簡介</u> <u>3.19.1.1 背景介紹</u> <u>將兒童獨自遺留於停放之車輛內，即使僅數分鐘，亦可能導致兒童體溫過高、中暑甚至死亡，尤其當車輛曝露於陽光下，兒童無法自行離開車輛，且對高溫耐受度較低，因此禁止將兒童單獨遺留於車內。車室溫度可能於 15 分鐘內即達到危急程度，稍微開啟車窗亦無法降低此威脅。</u> <u>雖然兒童於車內中暑致死之機率低於車禍事故，然此類可完全避免之死亡事故仍應高度關注，尤其目前已有相關技術可解決兒童於車內體溫過高之問題。</u> <u>目前已有兒童遺留偵測 (Child Presence Detection, CPD) 技術，可用以偵測兒童留置於車內，並向車輛使用者或第三方服務商發出警示。TNCAP 對於將該解決方案列為標準配備之車輛給予獎勵。</u> <u>3.19.1.2 適用範圍</u> <u>為避免因高溫而導致傷害及死亡，我國已立法禁止將兒童單獨遺留於車內，即使僅為短暫數分鐘。無論為故意或非故意、當時是否處於炎熱天候，兒童遺留偵測 (CPD) 技術能解決兒童被留置於車內之各種情形。</u>	

Euro NCAP 原文	TNCAP 條文草案	說明
Young children up to the age of 4 years old are particularly at risk. However, there are reported cases of older children getting into unlocked vehicles on their own and not able to get out. As these cases occur less frequently, this scenario will be addressed and included in the CPD assessment in 2025. The protocol details how CPD systems will be evaluated and rewarded by Euro NCAP. Prior to assessment, information from the OEM is needed so that the system can be assessed. This is needed to explain system functionality, a description of the CPD warning and how it compares/differs to other signals from the vehicle (e.g. locking). Where an OEM chooses, a warning sequence using a mobile phone application must be provided by the OEM prior to assessment given that in some cases the vehicle under assessment is not yet sold and the application may not be available.	<u>4 歲以下兒童屬於高風險群，但仍有年紀較大之兒童曾自行進入未上鎖車輛後無法自行脫困之案例。儘管此類情形發生頻率相對較低，相關情境亦已年納入本項評等。</u> <u>本規章詳述 TNCAP 對兒童遺留偵測系統之評等及得分機制。</u> <u>車輛業者必須於提供系統相關資料，以利進行評估。所需資料包含系統功能說明、兒童遺留偵測警示訊號之描述，以及該警示與車輛其他訊號（例如上鎖提示）之比較或差異說明。若車輛業者選擇採用行動裝置應用程式提供警示，則須於評等前提供該應用程式之警示流程。</u>	
2. DEFINITIONS Throughout this protocol the following terms are used: 2.1 Sensing 2.1.1 Direct sensing The ability to detect the absolute presence of a human inside the vehicle by means of tracking heartbeat, respiration, movement, or any other sign of life. Direct sensing may or may not allow categorisation and localisation of the subject(s). 2.1.2 Indirect sensing	<u>3.19.2 名詞釋義</u> <u>3.19.2.1 感測</u> <u>3.19.2.1.1 直接感測(Direct sensing)：係指透過偵測心跳、呼吸、動作或其他生命特徵，偵測車內是否有人員存在之能力。直接感測技術可具備判斷人員類型及位置之功能，為非必要。</u>	

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The ability to derive the potential presence of a subject or object inside the car based on logic using information such as door opening, pressure or capacitive sensing etc. Indirect sensing does not distinguish between live persons or objects. From 2025 onwards, indirect sensing system will NOT be rewarded by Euro NCAP. 2.2 Journey 2.2.1 Start of journey The start of a journey is defined as engine running or forward movement for all types of vehicle, ICE, hybrid and fully electric etc. 2.2.2 End of journey A journey is deemed to have finished 15 minutes after: Engine off or Ignition off or Master control switch off. In subsequent sections of the protocol, the term ‘ignition off’ is used to cover the three different actions detailed in this definition. 2.3 Vehicle master control switch means the device by which the vehicle’s on-board electronics system is brought from being switched off, as in the case where a vehicle is parked without the driver being present, to a normal operation mode. 2.4 Warnings 2.4.1 Alert	<u>3.19.2.1.2 間接感測(Indirect sensing)：係指透過邏輯推論，結合如車門開啟、壓力感測、電容感測等資訊，推測車內可能存在人員或物體之能力。間接感測無法區分是真人或物體，因此 TNCAP 對於僅具備間接感測功能之系統不予給分。</u> <u>3.19.2.2 行駛</u> <u>3.19.2.2.1 行程開始(Start of journey)：係指引擎啟動或開始向前行駛，適用於所有車型類別，包括傳統內燃機車輛(ICE)、混合動力車(Hybrid)及純電動車(Fully Electric)等。</u> <u>3.19.2.2.2 行程結束(End of journey)：係指符合下列任一情況後 15 分鐘，即視為行程結束：</u> <u>(1)引擎關閉，或</u> <u>(2)點火系統關閉，或</u> <u>(3)主控開關關閉。</u> <u>本規章中所使用之「關閉點火系統」，均涵蓋本定義中所述之三種情況。</u> <u>3.19.2.3 車輛主控開關(Vehicle master control switch)：係指可使車輛車載電子系統由關閉狀態（例如車輛停放且駕駛不在車內時）切換至正常運作模式之裝置。</u> <u>3.19.2.4 警示</u>	

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Alert systems consider the potential presence of an occupant in the rear (only) and provide a signal from the vehicle in accordance with the US voluntary commitment (September 2019).	<u>3.19.2.4.1 提醒(Alert)：提醒系統係指僅針對後座可能存在的乘員進行偵測，並從車輛發出提醒，且符合美國自願性承諾（2019 年 9 月）之系統。</u>	
2.4.2 Initial warning	<u>3.19.2.4.2 初始警示(Initial warning)：係指車外首次發出之</u>	
The first exterior signal from a vehicle that informs the driver/carer directly that a child may be in the vehicle. This is the first opportunity for a driver/carer to be warned that a child has been locked in a vehicle while they are in the vicinity of the vehicle. The requirements for initial warnings are detailed in Section 4.1.	<u>警示信號，以直接告知駕駛或照護者車內可能留有兒童。此為駕駛或照護者於車輛鄰近範圍內首次得知兒童被鎖住留於車內之機會。初始警示之相關要求詳見 3.19.4.1。</u>	
2.4.3 Escalation warning	<u>3.19.2.4.3 升級警示(Escalation warning)：於初始警示後發</u>	
Provided after the initial signal, escalation warnings are more persistent and repetitive than initial warnings providing additional warning signals to the driver/carer and the surrounding environment that a child may be in the vehicle. The requirements for escalation warnings are detailed in Section. 4.2.	<u>出，升級警示較初始警示更為持續且重複，提供駕駛或照護者及周圍環境額外警示訊號，提醒車內可能留有兒童。升級警示之相關要求詳見 3.19.4.2。</u>	
2.5 Intervention	<u>3.19.2.5 介入措施(Intervention)：係指系統透過某種行動減</u>	
An action by which a system mitigates the threat to any child that has become locked in a vehicle either knowingly or unknowingly. It is considered a last resort when warnings have been ignored and the internal vehicle temperature may be critical. The requirements for intervention are detailed in Section 5.	<u>輕兒童被鎖住留於車內所受之威脅，無論該情況是有意或無意發生。此措施係在警示無效且車內溫度可能為危急狀態時之最後防範措施。介入措施之相關要求詳見 3.19.5。</u>	
2.6 Adult	<u>3.19.2.6 成年人(Adult)：本規章中成年人係指體重達 47 公</u>	
For the purposes of this protocol only, an adult shall be defined as a person with a mass or stature as of 47kg or 140cm respectively	<u>斤或身高達 140 公分者（參照 UNR16 所定義下限）。雖可能有少數超過 10 歲之兒童，其體重或身高已達小型成</u>	

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(defined in UN ECE R16 lower boundary). It is likely there may be a minority of children (>10YO) with a mass or stature of that of a small adult, but they would also be considered capable of self-extrication in the event of being locked in a vehicle.	<u>年人體格標準，惟該等兒童於車輛鎖閉情況下視同具備自行脫困之能力。</u>	
2.7 Six year old	<u>3.19.2.7 六歲兒童(Six year old)：本規章中六歲兒童係指體</u>	
For the purposes of this protocol only, a six year old child shall be defined as having a mass or stature of that of a 95th percentile child, 28kg or 125cm respectively. Growth Charts - 2000 CDC Growth Charts - United States.	<u>重或身高達第 95 百分位者，分別約為 28 公斤及 125 公分，依據美國疾病控制與預防中心（CDC）2000 年成長曲線資料訂定。</u>	
2.8 Warning signal suppression	<u>3.19.2.8 警示訊號抑制(Warning signal suppression)：係指駕</u>	
Signal suppression is specifically an intentional action by the driver/carer to either delay a signal before it has started or cancel a signal that has already started.	<u>駛或照護者有意採取之行為，用以延後尚未發出之警示訊號，或取消已啟動之訊號。</u>	
2.8.1 Delay of a signal	<u>3.19.2.8.1 延遲訊號(Delay of a signal)：延遲初始警示在特</u>	
Delaying the initial signal may be necessary, for example at a fuel station, and is an intentional act by the driver/carer who is aware that there is a child in the vehicle. This can be done at any time between the start of journey up to the start of the escalation warning.	<u>定情境下（例如進入加油站）可能有其必要性，駕駛或照護者已知車內仍有兒童而有意識延後警示啟動。該延遲行為可於行程開始至升級警示啟動前之任一時刻執行。</u>	
Delay of initial warnings must meet the requirements of Section 4.1.5. Delay of escalation warnings is permitted as a result of delaying the initial warning in accordance with Section 4.2.5.	<u>初始警示之延遲應符合 4.1.5 之規定；若符合 4.2.5 之規定，則升級警示得因初始警示延遲而一併延後。</u>	
2.8.2 Cancellation of a signal	<u>3.19.2.8.2 取消訊號(Cancellation of a signal)：係指駕駛或照</u>	
Cancellation of a signal means stopping any CPD warning where the driver/carer has forgotten or intentionally left an unattended child in	<u>護者將無人看管之兒童遺忘或有意留置於車內時，停止任何兒童遺留偵測警示行為。取消訊號發生於車輛已上</u>	

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the vehicle. Cancellation occurs after the vehicle has been locked and the warning, initial or escalation, has commenced. Cancellation of any warning must have no consequence on either the subsequent warnings or intervention when a child is in the vehicle. Cancellation of initial warnings must meet the requirements of Section 4.1.6. Cancellation of escalation warnings must meet the requirements of Section 4.2.7. 2.9 System deactivation 2.9.1 Temporary deactivation Temporary deactivation of the CPD system means deactivation of all warnings and intervention for a single journey only. This is an intentional act from the driver/carer performed at any time before and during a journey. Temporary deactivation must not be confused with delaying or cancelling the CPD signal, see Section 3.2.11 for deactivation requirements. 2.9.2 Long term deactivation Systems that allow the CPD system to be deactivated for more than a single journey will NOT be rewarded by Euro NCAP. 2.10 Child safety locks For the purposes of this protocol only, Euro NCAP uses the same definition for child safety locks as that detailed in UN ECE Regulation 11. Child Safety Lock System is a locking device which can be engaged and released independently of other locking devices and which, when	<u>鎖且警示（無論為初始警示或升級警示）已啟動之情況下。</u> <u>取消任何警示訊號，不得對後續警示或當車內確實有兒童時之介入措施造成影響。取消初始警示應符合 3.19.4.1.6 之規定；取消升級警示應符合 3.19.4.2.7 之規定。</u> <u>3.19.2.9 系統停用</u> <u>3.19.2.9.1 暫時停用(Temporary deactivation)：暫時性停用兒童遺留偵測系統，係指僅對單次行駛停用所有警示訊號與介入措施。該行為必須由駕駛或照護者於行程開始前或行駛期間所執行之刻意操作。暫時性停用不得與延遲或取消 CPD 警示訊號混淆，相關停用要求詳見 3.19.3.2.11。</u> <u>3.19.2.9.2 長期停用(Long term deactivation)：允許將兒童遺留偵測系統停用超過單次行駛者，TNCAP 將不予給分。</u> <u>3.19.2.10 兒童安全鎖(Child safety lock)：本規章中兒童安全鎖定義與 UN R11 規範相同。</u> <u>兒童安全鎖系統係指能夠獨立作動及解除，阻斷由車內門把或其他解鎖裝置作動門鎖的裝置，其可為手動式或電</u>	

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engaged, prevents operation of the interior door handle or other release device. The lock release/engagement device may be manual or electric and may be located anywhere on or in the vehicle.	<u>動式，並可裝設於車輛上車輛內任何位置。</u>	
3. General Requirements for CPD Systems	<u>3.19.3 兒童遺留偵測系統之一般要求</u>	
3.1 Type approval and national legislation	<u>3.19.3.1 型式審驗及國家法規</u>	
3.1.1 The vehicle manufacturer is solely responsible for ensuring that their products comply fully with all appropriate road traffic laws. Type approval requirements and domestic construction and use provisions of differing countries must still be followed and nothing in this protocol provides exemption from those requirements.	<u>3.19.3.1.1 車輛業者須全權負責確保其產品完全符合所有相關之道路交通法規。</u>	
3.1.2 Certain areas of the CPD protocol overlap with type approval and domestic requirements, in particular, warning signals (visual and audible). Euro NCAP requirements are intended to avoid conflict with legislation.	<u>3.19.3.1.2 兒童遺留偵測規章部分內容與型式審驗及國內法規要求重疊，特別是警示訊號（包括視覺及聽覺）。TNCAP 之要求係以避免與現行相關法規產生衝突為原則。</u>	
3.1.3 While type approval and national laws preclude the use of vehicular audio-visual signals, the initial warning requirements will remain unchanged. If type approval and national laws permit, Euro NCAP will implement stricter CPD warning requirements where the initial signal must be audio-visual. Confirmation of such an update would be expected at least 12 months prior to implementation.	<u>3.19.3.1.3 雖型式審驗及國內法規可能排除使用車輛視聽覺警示訊號，惟初始警示之相關要求仍維持不變。若型式審驗及國內法規允許之情況下，TNCAP 將實施更嚴格之 CPD 警示要求，其初始警示訊號應包含視覺與聽覺。</u>	
3.2 CPD systems with warnings	<u>3.19.3.2 具有警示功能之兒童遺留偵測系統</u>	
3.2.1 To be eligible for scoring under warnings and intervention (Section 6.1), any CPD system must be:	<u>3.19.3.2.1 任何兒童遺留偵測系統須符合下列要求，才能獲得警示與介入(3.19.6.1)得分資格：</u>	
3.2.1.1 Equipped with direct sensing and;	<u>3.19.3.2.1.1 配備直接感測功能；及</u>	

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3.2.1.2 detect the presence of child trapped in a vehicle occupant compartment: as defined in Scenarios 1 and 2 or; as defined in Scenarios 1, 2 and 3; 3.2.1.3 provide the required warnings for as long as necessary (Section 4) and, where possible, intervene (Section 5) to mitigate the risk of hyperthermia. 3.2.2 The system must address children of ages up to and including six years old as defined in Section 2.7. The following potential situations shall be considered: • Children left behind in a vehicle unintentionally (Scenario 1) • Children left behind in a vehicle intentionally (Scenario 2) • Children three to six years of age that have entered an unlocked vehicle and become trapped inside the vehicle without the knowledge of the carer (Scenario 3) 3.2.3 For Scenarios 1 & 2, the CPD system must account for all likely child positions inside the vehicle compartment. CRS will be installed on relevant vehicle seating positions and includes all positions of movable seats and all seat rows as well as optional and removable seats. 3.2.3.1 In addition to the coverage areas detailed in Section 3.2.3, the coverage area for Scenario 3 (only) includes also the driver's seat as well as other areas where a child may hide within the cabin such as all footwell areas. The luggage area, accessible from the occupant	<u>3.19.3.2.1.2 偵測受困於車室內兒童之存在，且符合下列情境：</u> <u>(1)情境 1 及情境 2；或</u> <u>(2)情境 1、情境 2 及情境 3。</u> <u>3.19.3.2.1.3 依實際情況提供必要之警示（詳參 3.19.4），並於可行範圍內進行介入（詳參 3.19.5），以降低體溫過高之風險。</u> <u>3.19.3.2.2 系統須能處理涵蓋 3.19.2.7 所定義之年齡六歲（含）以下之兒童。下列潛在情境應予以考量：</u> <u>(1)情境 1：兒童被無意間遺留於車內。</u> <u>(2)情境 2：兒童被有意遺留於車內。</u> <u>(3)情境 3：年齡三歲至六歲兒童在照護者不知情下，自行進入未上鎖之車輛並受困於車內。</u> <u>3.19.3.2.3 針對情境 1 及情境 2，兒童遺留偵測系統須涵蓋車室內所有可能出現兒童之位置。將兒童保護裝置安裝於相關座椅位置，包括可移動座椅之所有位置、所有座椅排數，以及選配或可拆卸座椅。</u> <u>3.19.3.2.3.1 針對情境 3，除 3.19.3.2.3 所列之涵蓋範圍外，其涵蓋範圍另包括駕駛座及車室內兒童可能藏匿之區域，例如所有腳踏空間。可從車室最末排座椅背後、後車廂門或後車門進入之行李放置區域予以排除。針對情境</u>	

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compartment behind the rearmost seatback, boot or rear door will be excluded. The Scenario 3 extended coverage area (footwell etc) does not apply to Scenario 1 & 2 assessments.	<u>3 延伸涵蓋區域(如腳踏空間等)不適用於情境 1 及情境 2 之評估。</u>	
3.2.4 The functionality of each system and their compliance with warning/intervention requirements is assessed in accordance with the procedures laid out in Section 7.	<u>3.19.3.2.4 各系統之功能及其對警示/介入要求之符合情形，應依 3.19.7 所訂之程序進行評估。</u>	
3.2.5 Any CPD system must be fitted as standard equipment to the vehicle as defined in the VSSTR Protocol.	<u>3.19.3.2.5 任何兒童遺留偵測系統必均依照「車型挑選提名、自費申請評等、車輛規格及試驗管理規章」規定，作為車輛之標準配備。</u>	
3.2.6 The system must be Default ON.	<u>3.19.3.2.6 系統應預設為「開啟」狀態。</u>	
3.2.7 Vehicles offering optional seats and/or rows will have those positions assessed.	<u>3.19.3.2.7 若車輛提供選配座椅及/或座椅排數，則該座以位置亦須納入評估範圍。</u>	
3.2.8 For vehicles without rear seat rows, such as two seaters and pickups, only the one seat row is to be covered and an adjusted vehicle-based assessment will be applied as defined in the COP Assessment Protocol.	<u>3.19.3.2.8 對於無後排座椅之車輛(例如雙人座)，僅需涵蓋單一排座椅，並將評估結果揭露於 TNCAP 網站。</u>	
3.2.9 Systems that are not integrated into the vehicle, such as those incorporated into Child Restraint Systems (CRS), will not be rewarded by Euro NCAP.	<u>3.19.3.2.9 未整合於車輛系統之系統，例如整合於兒童保護裝置(CRS)內之裝置，將無法獲得 TNCAP 之分數。</u>	
3.2.10 Over the air updates may be used to modify system software. Where the CPD system functionality is not available during update, the assessment will performed once the update has been completed.	<u>3.19.3.2.10 可透過雲端無線更新(Over-the-Air, OTA)方式修改系統軟體。若兒童遺留偵測系統功能於更新期間無法運作，則評估作業將待更新完成後再執行。</u>	
3.2.11 Temporary system deactivation	<u>3.19.3.2.11 系統暫時性停用</u>	

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3.2.11.1 Temporary deactivation may deactivate all elements in the CPD system for a single journey only.	<u>3.19.3.2.11.1 系統暫時性停用僅允許於單一行程內關閉兒童遺留偵測系統所有功能元件。</u>	
3.2.11.2 All elements of the system must automatically re-arm before or at the commencement of the subsequent journey.	<u>3.19.3.2.11.2 系統各項功能元件必須於下一次行程開始前或行程開始時，自動恢復為啟用狀態。</u>	
3.2.11.3 It is not permitted to deactivate individual parts of the system, e.g. escalation warning only.	<u>3.19.3.2.11.3 不允許僅停用系統之個別功能元件，例如僅停用升級警示功能。</u>	
3.2.11.4 The process of deactivation must be more complicated than a short push of a button to avoid deactivation of the system inadvertently. This must be a different process to that required for delay and cancellation of a signal (Section 4.1.5 & 4.1.6).	<u>3.19.3.2.11.4 為避免系統遭無意間停用，停用程序必須較單一按鍵短按更為複雜，且其操作程序須有與 3.19.4.1.5 及 3.19.4.1.6 所規定之訊號延遲或訊號取消有所區別。</u>	
3.2.11.5 Deactivation may be performed via the system menu but also with the use of a dedicated button, for example on the vehicle, keycard or via an application. Euro NCAP does not define how temporary deactivation is done.	<u>3.19.3.2.11.5 暫時性停用可藉由系統選單執行，亦可使用專用按鈕，例如設置於車輛上、鑰匙卡或應用程式。TNCAP 未具體定義暫時性停用之執行方式。</u>	
3.2.11.6 Where the system can be deactivated from outside the vehicle, this must only be possible in vicinity of vehicle, i.e. not from distance.	<u>3.19.3.2.11.6 若系統能自車輛外部進行停用，則僅於車輛鄰近範圍內操作，即不得透過遠距離停用。</u>	
3.2.11.7 If a system has been deactivated, the inactive status of the CPD system must be indicated by a dedicated telltale that is clearly visible to the driver.	<u>3.19.3.2.11.7 若系統已被停用，則必須以駕駛清晰可見之專用識別標誌(Telltale)，顯示兒童遺留偵測系統之未啟動狀態。</u>	
3.2.11.8 The telltale must be displayed for no less than 10 seconds from the moment of deactivation. The same telltale is also required for a duration of no less than 5 seconds after turning the ignition off.	<u>3.19.3.2.11.8 識別標誌必須自系統停用時起顯示不少於 10 秒。於點火系統關閉後，該識別標誌仍須持續顯示不少於 5 秒。</u>	
3.2.11.9 When there is no physical means to either stop the engine or switch the ignition off at the end of journey, the deactivation telltale	<u>3.19.3.2.11.9 若車輛於行程結束時無實體方式關閉引擎或關閉點火系統，則必須於排檔自「(D 檔)」切換至「P 檔」</u>	

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must be given when the gear has been set from Drive to Park and/or the driver's belt has been unbuckled. The driver's door opening event cannot be used to trigger the telltale. 3.2.11.10 Text messages are acceptable providing all of the following conditions are met: a) They clearly indicate that the system's intended purpose is to warn of an occupant's presence. b) They clearly indicate the system's status ON or OFF. c) They are provided in all languages of the EAA, Technical Bulletin TB 002. 3.2.11.11 If the initial warning has already been triggered, temporary deactivation may be performed. 3.2.12 Pet and camping modes If such a function exists, it must be clear to the user where this would also deactivate the CPD system. For this reason, confirmation must be sought by the system to avoid unintended deactivation of the CPD system. Additionally, if the CPD system is deactivated, the CPD OFF telltale must be displayed as defined in Section 3.2.11.8.	<u>及/或駕駛解開安全帶時，顯示系統停用之識別標誌。不得以開啟駕駛車門作為觸發識別標誌之條件。</u> <u>3.19.3.2.11.10 在符合下列所有條件之前提下，允許使用文字訊息：</u> <u>(1)訊息清楚指示系統之預期目的係針對乘員存在提供警示。</u> <u>(2)訊息清楚指示系統處於「開啟」或「關閉」狀態。</u> <u>(3)訊息提供「繁體中文」及「英文」。</u> <u>3.19.3.2.11.11 若初始警示已被觸發，則仍允許執行暫時性停用。</u> <u>3.2.12 寵物模式及露營模式</u> <u>若車輛具備此功能，則必須明確告知使用者該功能將同時停用兒童遺留偵測系統。為避免兒童遺留偵測系統遭無意停用，系統必須要求使用者進行確認。另若兒童遺留偵測系統被停用，則必須依照 3.2.11.8 規定顯示 CPD 關閉之識別標誌。</u>	

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4. Warning Requirements From 2025 onwards, systems will only be reward when the CPD signal(s) are in compliance with the requirements detailed below. Systems with alerts will NOT be rewarded by Euro NCAP. 4.1 Initial warning 4.1.1 The system must detect the relevant ages of children in all of the configurations detailed in Section 7.9. 4.1.2 For Scenarios 1 and 2, where the system has detected that an unattended child is locked inside a vehicle, an initial warning outside the vehicle is required at the moment the vehicle is locked. Where the system can positively confirm that either an adult is present or no child is in the vehicle, an initial warning is not required. 4.1.2.1 The time between locking and the initial warning must be as short as possible. However, a delay of no more than 15 seconds is permissible to allow the system to assess occupancy. 4.1.2.2 Status notifications inside the vehicle, pre-empting the initial warning at or shortly following ignition off, are permitted but not required to avoid unnecessary notifications and the risk of carers routinely ignoring them. 4.1.3 For Scenario 3, where a child has gained access to the vehicle, and no doors have been locked, a delay of no more than 10 minutes from door closure is permitted to the initial warning. Door closure means the child safety locks are either operational (preventing the door being opened from the inside) or not operational and applies to the door in	<u>3.19.4 警示要求</u> <u>當兒童遺留偵測警示訊號符合下列要求，系統才能獲得分數。僅具備提醒功能(Alert)之系統將不予評分。</u> <u>3.19.4.1 初始警示</u> <u>3.19.4.1.1 系統必須能於 3.19.7.9 詳述之所有配置下，偵測相關年齡層之兒童。</u> <u>3.19.4.1.2 針對情境 1 及情境 2，當系統偵測到無人看管之兒童被鎖在車內，系統必須於車輛上鎖瞬間發出車外初始警示。若系統能確實確認車內有成人在場或無兒童在內，則無需觸發初始警示。</u> <u>3.19.4.1.2.1 車輛上鎖與初始警示間之時間必須盡可能縮短。惟為使系統評估乘員狀態，允許最長不超過 15 秒之延遲。</u> <u>3.19.4.1.2.2 允許（但不強制）於點火系統關閉時或關閉點火系統後短時間內，發出車內狀態通知以預告初始警示，旨在避免過度通知降低照護者因習慣性忽略該通知之風險。</u> <u>3.19.4.1.3 針對情境 3，當兒童自行進入車門未上鎖之車輛，自車門關閉起，允許最長不超過 10 分鐘之延遲才發出初始警示。車門關閉係指兒童安全鎖已啟動（防止車門由內部開啟）或未啟動，且車門處於主要鎖扣位置，即完全關閉狀態。</u>	

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the primary latch position, i.e. fully closed. 4.1.4 The CPD initial warning must consist of at least an audible or visual signal. Haptic signals are also permitted providing they are accompanied by an audible or visual component. 4.1.4.1 The warning must come from either the vehicle or from the key. The key may be either a keycard or an electronic device required for operating the vehicle. 4.1.4.2 The warning must be heard, seen or felt, in accordance with Section 4.1.4, by a person exterior to and in the immediate vicinity of the vehicle. 4.1.4.3 The warning must be distinctive and differ from that used to signal normal locking or other similar daily functions, e.g. unique use of flashing or vibration pattern and audible signal. 4.1.4.4 The warning may be a simple beep and/or flash of lights but must continue for at least 3 seconds or until cancelled. 4.1.4.5 Gaps in the warning signal are permissible providing the start of the signal is positive i.e. audible and/or visual. 4.1.5 Initial warning delay 4.1.5.1 The initial warning may be delayed by the driver/carer for a duration not exceeding 10 minutes, after which the initial warning must either begin again or resume for a minimum duration of 3 seconds. The delay to the initial warning must not exceed 10 minutes and the initial warning must be triggered.	<u>3.19.4.1.4 兒童遺留偵測初始警示必須包含至少聽覺或視覺訊號。亦允許使用觸覺訊號，惟須伴隨聽覺或視覺組件。</u> <u>3.19.4.1.4.1 警示訊號必須來自車輛或鑰匙。鑰匙可為鑰匙卡或操作車輛所需之電子裝置。</u> <u>3.19.4.1.4.2 警示必須能被車外及其鄰近範圍內之人員聽見、看到或感受到（依照 3.19.4.1.4 規定）。</u> <u>3.19.4.1.4.3 警示訊號必須具辨識性，且與車輛正常上鎖或其他日常功能所使用之訊號有所區別，例如使用獨特之閃爍模式、震動模式或聲響訊號。</u> <u>3.19.4.1.4.4 警示可為簡單之逼聲(Beep)及/或燈光閃爍，惟其持續時間至少 3 秒，或直到被取消為止。</u> <u>3.19.4.1.4.5 警示訊號中允許有間隔，惟訊號啟動時必須為明確之聲響及/或視覺提示。</u> <u>3.19.4.1.5 初始警示延遲</u> <u>3.19.4.1.5.1 駕駛/照護者得將初始警示延遲不超過 10 分鐘。延遲結束後，初始警示必須重新開始或恢復執行持續至少 3 秒。初始警示之延遲不得超過 10 分鐘，且必須確保初始警示已被觸發。</u>	

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4.1.5.2 The actions to activate a delay must be more complex than those for cancelling a signal as it allows a significant amount of time before any warnings are issued. For example, this may be done by pushing a specific button or activating a temporary system delay in the system menu.	<u>3.19.4.1.5.2 啟動延遲之操作程序必須較取消警示更複雜，因在任何警示發出前，系統允許長時間之延遲。例如，透過按下特定按鈕，或於系統選單中啟動暫時性系統延遲。</u>	
4.1.6 Initial warning cancellation	<u>3.19.4.1.6 初始警示取消</u>	
4.1.6.1 All aspects of the initial warning may be cancelled by acknowledging the warning. Examples of cancellation include those detailed below but other methods of intentional signal acknowledgement will be accepted.	<u>3.19.4.1.6.1 透過對警示訊號之確認，可取消所有初始警示。取消方式包括但不限下列範例，其他可證實為使用者有意識之操作亦可接受。</u>	
a) Unlocking the vehicle or unlocking and opening any occupant entry/exit door while in the vicinity of the vehicle.	<u>(1)於車輛鄰近範圍內解鎖車輛，或解鎖並開啟任一乘員出入門。</u>	
b) Cancelling via a mobile phone that is used as the vehicle key or directly connected to the vehicle by means of Bluetooth, UWB or Wifi. A 4/5G mobile phone signal is not a permissible method.	<u>(2)透過作為車輛鑰匙之行動電話，或藉由藍牙、超寬頻(Ultrawideband, UWB)或無線網路(Wi-Fi)與車輛直接連線之行動電話進行取消。不允許使用 4G/5G 行動網路信號進行取消。</u>	
4.1.6.2 Cancellation must not affect the timing of the escalation warning or intervention, these are required where a child remains unaccompanied in the vehicle and:	<u>3.19.4.1.6.2 取消初始警示不得影響升級警示或介入措施之觸發時序。當兒童仍單獨留置於車內，且符合下列條件，則仍須執行升級警示或介入措施：</u>	
a) The method of cancellation was an action other than the opening of any occupant entry/exit door and;	<u>(1)所採取消動作並非開啟任一乘員出入門；且</u>	
b) The vehicle has been locked after cancellation.	<u>(2)於取消後車輛已完成上鎖。</u>	
4.1.6.3 Cancellation by opening any occupant entry/exit door may apply to both initial and escalation warnings when a child remains in the	<u>3.19.4.1.6.3 當兒童仍在車內且任一車門保持開啟，透過開啟任一乘員出入車門所進行之取消方式，可同時適用於</u>	

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vehicle and any door remains open. 4.1.6.4 An initial warning that tracks the presence of a mobile phone directly connected to the vehicle, e.g. via Bluetooth, must meet the signal requirements above. It must also warn either using the vehicle or mobile phone if the connection with the phone has been lost. For example, if the phone is out of range of the vehicle. 4.2 Escalation warnings 4.2.1 A reward is given to vehicles that issue escalation warnings if the system detects the continued presence of an unattended child after the initial warning has either ended or been cancelled and all doors are closed. 4.2.2 Rewards for escalation warnings are only available where: 4.2.2.1 An initial warning meets all of the requirements detailed in Section 4.1 and; 4.2.2.2 It has been demonstrated that a child is detected in all of the configurations detailed in Section 7.9. 4.2.3 Where the system can positively confirm that either an adult is present or no child is in the vehicle, an escalation warning is not required. 4.2.4 Timing 4.2.4.1 An escalation warning is required starting no more than 90 seconds after the end of the initial warning. 4.2.4.2 The escalation warning(s) shall repeat at least every 1 minute for no fewer than 20 minutes or cancelled as defined in 4.2.7.	<u>初始警示及升級警示。</u> <u>3.19.4.1.6.4 若初始警示功能係追蹤直接連接車輛之行動電話（例如透過藍牙），則系統必須符合上述之訊號要求。若行動電話連線中斷（例如手機超出車輛感應範圍），則系統必須透過車輛或行動電話發出警示。</u> <u>3.19.4.2 升級警示</u> <u>3.19.4.2.1 若系統於初始警示結束或被取消後，仍偵測到無人看管兒童留置於車內且所有車門皆已關閉，並發出升級警示者，則可獲得分數。</u> <u>3.19.4.2.2 僅在符合下列條件，才可獲得升級警示分數：</u> <u>3.19.4.2.2.1 初始警示符合 3.19.4.1 之全部要求；且</u> <u>3.19.4.2.2.2 系統已證實能於 3.19.7.9 詳述之所有配置下偵測到兒童。</u> <u>3.19.4.2.3 若系統能確實確認車內有成人在場或無兒童在內，則無須觸發升級警示。</u> <u>3.19.4.2.4 時序</u> <u>3.19.4.2.4.1 升級警示必須於初始警示結束後 90 秒內啟動。</u> <u>3.19.4.2.4.2 升級警示應至少每分鐘重複一次，持續時間不得少於 20 分鐘，或直到取消為止（如 3.19.4.2.7 規定）。</u>	

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4.2.4.3 Alternative warning signal configurations may also be rewarded providing that the timing is equivalent to 4.2.4.1 and 4.2.4.2. 4.2.5 If the initial warning is delayed, as defined in Section 4.1.5, the escalation warning must commence no more than 15 minutes from when the vehicle was first locked. 4.2.6 The escalation warning shall consist of either: 4.2.6.1 A vehicle based visual or audible component aimed at notifying individuals in the direct vicinity of the vehicle. The duration of the warning shall be at least 15 seconds, gaps are permissible providing the start of the signal is positive. Or, 4.2.6.2 Warnings notifying the driver and/or another carer either on the same journey or located elsewhere with any of the following either independently or a combination of: • Haptic and audible feedback via an ignition key/card or mobile device used as the key. • Mobile device via application* • Warning messages to other mobile registered device(s)* * Where the warning is transmitted with the use of a mobile device, for example via an application, the OEM must provide the necessary application to be used with the vehicle/CPD system for the assessment. Supporting instructions and any other information must also be provided in the vehicle handbook. Euro NCAP does not require the OEM to oblige the customer to install/use this app or to accept the connection of the mobile phone with the car/OEM-offered services.	<u>3.19.4.2.4.3 若其他具備等同於 3.19.4.2.4.1 及 3.19.4.2.4.2 規定時序之警示訊號配置，亦可獲得分數。</u> <u>3.19.4.2.5 若初始警示被延遲（如 3.19.4.1.5 規定），則升級警示必須於車輛首次上鎖後 15 分鐘內啟動。</u> <u>3.19.4.2.6 升級警示應包含下列任一項目：</u> <u>3.19.4.2.6.1 基於車輛之視覺或聽覺組件，旨在通知位於車輛鄰近範圍內之人員。該警示持續時間應至少 15 秒，允許有間隔，惟訊號啟動時必須為明確聽覺及/或視覺提示，或</u> <u>3.19.4.2.6.2 透過下列任一單獨方式或組合，通知該行程之駕駛及/或其他位於他處之照護者，以達成警示目的：</u> <u>(1)透過點火鑰匙/鑰匙卡或作為車輛鑰匙之行動裝置，提供觸覺與聽覺回饋；</u> <u>(2)透過行動裝置應用程式發出警示；</u> <u>(3) 發送警示訊息至其他已註冊之行動裝置。</u> <u>當警示透過行動裝置傳送（例如應用程式），車輛業者必須提供必要應用程式以評估該車輛/兒童遺留偵測系統。相關使用說明及其他資訊亦須納入車主手冊。TNCAP 不求車輛業者強制消費者安裝/使用該應用程式，或接受行動電話與車輛/原廠連線服務。</u>	

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Transmission of these warning messages from vehicle shall be free of charge and available at least for the first six years. 4.2.7 Escalation warning cancellation 4.2.7.1 The escalation warning may be cancelled by acknowledging the warning. 4.2.7.2 This may be a simple action such as the press of a button. It does not need to be complex because the consequence on the alert is minimal. For example by: • Unlocking the vehicle, • Opening a door, • Cancelling via the mobile phone of the carer directly connected to the vehicle by means of Bluetooth, UWB or Wifi etc. Mobile phone signal, xG, is not a permissible method. • Cancelling via the mobile phone of another carer directly connected to the vehicle by means of Bluetooth, UWB or Wifi etc. Mobile phone signal, xG, is not a permissible method. 4.2.7.3 After an escalation warning has been cancelled, the system shall check the vehicle after no more than 90 seconds. If a child occupant's presence has been detected and the vehicle is locked the system must trigger another escalation warning cycle (Section 4.2.6) until a door is opened or intervention is initiated, unless Section 4.2.3 applies. 5. Intervention 5.1 A reward is given to vehicles that will initiate an intervention if there is a child in the vehicle and all doors are closed and locked.	<u>該警示訊息之傳輸應免費提供，且至少維持六年。</u> <u>3.19.4.2.7 升級警示取消</u> <u>3.19.4.2.7.1 升級警示可透過對警示之確認進行取消。</u> <u>3.19.4.2.7.2 該確認行為可為簡單操作，例如按下按鈕，由於此舉對警示產生之後續影響甚微，因此無需複雜程序，例如：</u> <u>(1)解鎖車輛，</u> <u>(2)開啟車門，</u> <u>(3)透過照護者之行動電話，直接以藍牙、超寬頻或 Wifi 等方式取消警示。不允許使用行動電話信號（xG）進行取消。</u> <u>(4)透過其他照護者之行動電話，直接以藍牙、超寬頻或 Wifi 等方式取消警示。不允許使用行動電話信號（xG）進行取消。</u> <u>3.19.4.2.7.3 升級警示被取消後，系統應於 90 秒內再次檢查車輛。若偵測到兒童存在且車輛處於上鎖狀態，則系統必須重新觸發升級警示週期（如 3.19.4.2.6），直至車門開啟或啟動介入措施。除非適用 3.19.4.2.3 之規定。</u> <u>3.19.5 介入措施</u> <u>3.19.5.1 當車內留有兒童且所有車門關閉並上鎖，車輛若能啟動介入措施，則可獲得分數。介入措施定義參見</u>	

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Intervention is defined in Section 2.5. Examples of intervention include, but are not limited to, those detailed below. 5.2 Rewards for intervention are only available where: 5.2.1 Initial and escalation warnings meet the respective requirements in Sections 4.1 and 4.2 and; 5.2.2 It has been demonstrated that a child is detected in all of the configurations detailed in Section 7.9 and; 5.2.3 The intervention must actively reduce the threat of hyperthermia to any children in the vehicle by either: a) Instigating rescue of the child. For example, with the use of a mobile application*, eCall Advanced, contact with a third-party service (TPS) or other means of direct contact with other carers located elsewhere (not a driver or passenger on the same journey). If the system does NOT contact a carer located elsewhere as a form of escalation warning, then this can be considered as a form of intervention providing it meets the requirements in Section 4.2.6.2. Or, b) Allowing access to the child, for example unlocking the doors or, c) Reducing or controlling the interior temperature (excluding lowering windows). * Where the warning is transmitted with the use of a mobile device, for example via an application, the OEM must provide the necessary application to be used with the vehicle/CPD system. Supporting instructions and any other information must also be provided in the vehicle handbook. Euro NCAP does not require the OEM to oblige the	<u>3.19.2.5。介入措施之範例包括但不限於下列所述。</u> <u>3.19.5.2 介入措施之得分僅適用於符合下列條件：</u> <u>3.19.5.2.1 初始警示及升級警示分別符合 3.19.4.1 及 3.19.4.2 之規定且；</u> <u>3.19.5.2.2 系統已證實能於3.19.7.9詳述之所有配置下偵測到兒童。</u> <u>3.19.5.2.3 介入措施必須主動降低車內兒童罹患體溫過高之風險，其具體方式包括下列任一項：</u> <u>(1)促成兒童救援行動。例如透過行動應用程式、先進 eCall、與第三方服務支援（TPS）或其他直接聯繫位於他處之照護者（非同行行程之駕駛或乘客）之方式。若系統未將聯繫其他照護者作為升級警示之形式，則符合 3.19.4.2.6.2 之規定，得視為介入措施；或</u> <u>(2)允許接觸兒童，例如車門解鎖；或</u> <u>(3)降低或控制車內溫度（不包括降下車窗）。</u> <u>當警示係透過行動裝置傳送（例如應用程式），車輛業者必須提供必要之應用程式以評估該車輛/CPD 系統。相關使用說明及其他資訊亦須納入車主手冊。TNCAP 不要求車廠強制消費者安裝/使用該應用程式，或接受行動電話與</u>	

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customer to install/use this app or to accept the connection of the mobile phone with the car/OEM-offered services. Transmission of these warning messages (e.g. TPS eCall) from the vehicle shall be free of charge and available at least for the first six years. 5.2.4 In addition to the intervention(s) detailed in Section 5.2.3, supplementary warnings, in addition to those used as escalations to contact the child carer(s) on the same journey (passenger and/or driver), must also be provided within the timings detailed in Section 5.2.5. For example, with the use of a mobile application* (see above) or other means of direct contact. 5.2.5 Intervention must occur within either: a) 10 minutes of the vehicle being locked or, b) 5 minutes after the first escalation was triggered (including initial warning delay) or, c) The internal vehicle temperature or temperature gradient becomes critical, a duration and time of ‘critical temperature’ have not yet been defined. 6. Scoring 6.1 Scoring From 2025 onwards, no points will be awarded to either vehicles with indirect sensing or where a vehicle is equipped with either an alert or initial warning only.	<u>車輛/原廠連線服務。該警示訊息之傳輸（例如第三方服務 TPS eCall）應免費提供，且至少維持六年。</u> <u>3.19.5.2.4 除 3.19.5.2.3 所述之介入措施外，系統另應於 3.19.5.2.5 規定之時間內，提供額外之補充警示，此警示必須獨立於原先用於聯繫同行行程之兒童照護者（乘客及/或駕駛）之升級警示。例如透過行動應用程式（參見前述說明）或其他直接聯繫方式。</u> <u>3.19.5.2.5 介入措施必須於以下任一條件下啟動：</u> <u>(1)車輛上鎖後 10 分鐘內；或</u> <u>(2)首次升級警示觸發（包括初始警示延遲期間）後 5 分鐘內；或</u> <u>(3)車內溫度或溫度梯度達到危急狀態。</u> <u>3.19.6 評分</u> <u>3.19.6.1 對於採用間接感測系統之車輛，或僅配備提醒功能或初始警示之車輛，將不予給分。</u>	

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Sensing	Warnings and intervention	Points		<u>感測系統</u>	<u>警示與介入措施</u>	<u>分數</u>		
		All seats	Rear seats only			<u>所有座位</u>	<u>後排座位</u>	
Direct sensing only Coverage of Scenario 1,2&3	Initial and escalation warnings	3	1.5	<u>僅限直接感測涵蓋情境1、情境2及情境3</u>	<u>初始警示及升級警示</u>	<u>3</u>	<u>1.5</u>	
	Initial, escalation and Intervention	4	2		<u>初始警示、升級警示及介入措施</u>	<u>4</u>	<u>2</u>	
Sensing	Warnings and intervention	Points		<u>感測系統</u>	<u>警示與介入措施</u>	<u>分數</u>		
		All passenger seats	Rear seats only			<u>所有乘客座</u>	<u>後排座位</u>	
Direct sensing only Coverage of Scenario 1,2	Initial and escalation warnings	2	1	<u>僅限直接感測涵蓋情境1及情境2</u>	<u>初始警示及升級警示</u>	<u>2</u>	<u>1</u>	
	Initial, escalation and Intervention	3	1.5		<u>初始警示、升級警示及介入措施</u>	<u>3</u>	<u>1.5</u>	
7. Direct Sensing System Evaluation				<u>3.19.7 直接感測系統評估</u>				
7.1 The evaluation of direct sensing systems will be based on information provided by the vehicle manufacturer and laboratory checks. A dossier is required detailing how the system establishes the presence of a child and the sequence, including timing, of subsequent warnings and intervention(s). The information required is detailed in the following sections.				<u>3.19.7.1 直接感測系統之評估，將基於車輛業者所提供之資訊及實驗室檢測結果。車輛業者必須提交詳細技術資料，詳述系統如何確認兒童存在，以及後續警示及介入措施之觸發流程與時序。所需資訊詳列於下述條文。</u>				

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7.2 Euro NCAP reserves the right to check any and/or all of the CPD requirements during the vehicle assessment. This includes all system functionality such as sensing, warnings, intervention and HMI.	<u>3.19.7.2 TNCAP 保留於車輛評估期間檢查任何或全部兒童遺留偵測要求之權利。此包括但不限於系統功能性，例如感測、警示、介入措施及人機介面。</u>	
7.3 In order for any points to be awarded, the dossier must contain the information detailed in the following sections and system must react correctly to all of the scenarios outlined in this section.	<u>3.19.7.3 為取得分數，車輛業者所提交之詳細技術資料必須包含下列各節所列資訊，且系統須能對本章節所述之所有情境做出正確反應。</u>	
7.4 The sensing test tool validation must be approved by Euro NCAP in advance of dossier delivery and vehicle assessment. Where a technology is presented to Euro NCAP that is not adequately evaluated with the test procedure, the OEM must contact the Euro NCAP Secretariat and a way to proceed will be developed.	<u>3.19.7.4 感測測試工具之驗證，必須於提交詳細技術資料及車輛評估前獲得 TNCAP 核准。若所提交之技術無法透過現有測試程序進行充分評估，則車輛業者必須主動聯繫 TNCAP 執行機構，協議後續評估方式。</u>	
7.4.1 If the test tool is already approved by Euro NCAP and listed in TB 029 it will not be necessary to provide further validation of the tool providing the tool is listed in combination with the corresponding sensor technology used in the vehicle under assessment.	<u>3.19.7.4.1 若測試工具已獲 TNCAP 核准，且列於 Euro NCAP 技術通報 TB 029 中，且該工具與受評車輛所使用之感測技術相對應，則無須另行提供該工具驗證資料。</u>	
7.5 Dossier contents It is the OEM's responsibility to provide all of the necessary information required to demonstrate the performance of the system in accordance with the Euro NCAP assessments. The following must be included as a minimum:	<u>3.19.7.5 詳細技術資料 車輛業者有責任提供所有必要資訊，證明其系統之性能符合 TNCAP 評等標準。技術資料至少須包含下列項目：</u>	
7.5.1 General system information – required for laboratory checks: • Sensor type and principle: wi-fi, RF, camera etc. • Sensor location and CPD system architecture • Detection: movement, respiration etc.	<u>3.19.7.5.1 一般系統資訊 — 供實驗室檢測使用：</u> <u>(1)感測器類型與原理：例如 Wi-fi、射頻(RF)、攝影機等；</u> <u>(2)感測器安裝位置及兒童遺留偵測系統架構；</u> <u>(3)偵測方式：例如動作、呼吸等；</u>	

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- Coverage areas, including influence of unoccupied seat range adjustments, footwell and all optional seats, e.g. 3rd row - Deactivation: temporary/long term (where applicable) - CPD mobile device applications necessary for warnings (where applicable) - Occupant age coverage for children and, where applicable adults 7.5.2 Sensing data: - Respiration monitoring output - Movement monitoring output, other as applicable - Triggering thresholds and any grey zone information - Influence from any external interference e.g. sunlight, electromagnetic or radio waves Sensing data is required to demonstrate detection capabilities and validate functionality in ‘worst case’ conditions, see Section 7.8. 7.5.3 Demonstration of system compliance: - Sensing of scenarios detailed in Section 3.2 and 7.6 - Sensing and decision time to warning activation detailed in Sections, 4.1, 4.2 and 5. - Warning and intervention functionality detailed in Sections, 4.1, 4.2 and 5 - CRS to be used as detailed in Section 7.6.3: - Warning signal demonstration - Intervention demonstration (where applicable, not mandatory)	(4)涵蓋範圍，包括無人乘坐座椅位置調整範圍之影響、腳踏空間以及所有選配座椅（例如第三排座椅）。 (5)停用機制：暫時性/長期性（依實際狀況）； (6)警示功能所需之兒童遺留偵測行動裝置應用程式（依實際狀況）； (7)兒童乘員之年齡涵蓋範圍，及成人涵蓋範圍（依實際狀況）。 3.19.7.5.2 感測數據： (1)呼吸監測輸出； (2)動作監測輸出，及其他適用之監測輸出； (3)觸發門檻及任何灰色區域資訊； (4)外部干擾影響，例如陽光、電磁波或無線電波。 感測數據用以證明系統於「最嚴苛條件」下之偵測能力，並驗證其功能，詳見 3.19.7.8。 3.19.7.5.3 系統符合性展示： (1)3.19.3.2 及 3.19.7.6 所述情境之感測； (2)感測及決策觸發警示所需時間，詳見 3.19.4.1、3.19.4.2 及 3.19.5； (3)3.19.4.1、3.19.4.2 及 3.19.5 規定之警示與介入措施； (4)3.19.7.6.3 所使用之兒童保護裝置； (5)警示訊號之展示； (6)介入措施之展示（依實際狀況，非強制）。	

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7.5.4 Validation of test tool (where applicable) • See Section 7.8 for further information 7.6 Evaluation scenarios Direct sensing systems must be able to react correctly to all possible use cases. The necessary required child occupant details are below. The assessments may be performed either in-door (parking garage) or outside. However, elements that are necessary to the function of the system should be present, such as phone signals and temperature where applicable. 7.6.1 Scenarios 1 & 2 (forgotten and intentionally left behind) 7.6.1.1 New-born infant in a rearward-facing CRS: • Sleeping without limb movement under blanket/sun shield 7.6.1.2 One-year old infant/child in a rearward-facing CRS: • Sleeping under blanket without limb movement • Awake under blanket with limb movement 7.6.1.3 Three-years old child in forward-facing CRS: • Sleeping under blanket without limb movement • Awake under blanket with limb movement 7.6.1.4 Six-years old on booster cushion installed with three-point belt • Sleeping without limb movement • Awake with limb movement	<u>3.19.7.5.4 測試工具驗證（依實際狀況）</u> <u>詳見 3.19.7.8 之更多資訊。</u> <u>3.19.7.6 評估情境</u> <u>直接感測系統必須對所有可能的使用情境做出正確反應。</u> <u>所需之兒童乘員細節詳述如下：</u> <u>評估可於室內（如停車場）或室外進行。</u> <u>然而，系統功能所需之要素（依實際狀況，例如行動電話信號及溫度等）應具備。</u> <u>3.19.7.6.1 情境 1 及情境 2（遺忘及有意留置於車內）</u> <u>3.19.7.6.1.1 新生兒置於後向兒童保護裝置：</u> <u>(1)在毯子或遮陽罩下，睡眠且無肢體動作。</u> <u>3.19.7.6.1.2 一歲嬰幼兒置於後向兒童保護裝置：</u> <u>(1)在毯子下，睡眠且無肢體動作。</u> <u>(2)在毯子下，清醒且有肢體動作。</u> <u>3.19.7.6.1.3 三歲兒童置於前向兒童保護裝置：</u> <u>(1)在毯子下，睡眠且無肢體動作。</u> <u>(2)在毯子下，清醒且有肢體動作。</u> <u>3.19.7.6.1.4 六歲兒童使用三點式安全帶安裝之增高座墊：</u> <u>(1)睡眠，且無肢體動作。</u> <u>(2)清醒，且有肢體動作。</u>	

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7.6.2 Blanket and sun-shade For the sleeping situations the blanket shall be placed over the child from the shoulders down to cover the feet with arms beneath. For the awake situations, the blanket shall be placed over the child from the chest down to cover the feet with the arms above the material. The blanket to be used shall be no less than 70cm x 90cm, 300GSM in weight and made from Cotton or Polyester. A sun-shade shall also be used with rearwards facing CRS that attaches from the carry handle to the seat shell around the head. Alternatively, a shade may be improvised from a cotton cloth placed around the shell of the CRS and covering the opening. 7.6.3 CRS to be installed The following CRS must be used for each of the use cases detailed in Section 7.9. The CRS will be installed on ‘relevant’ vehicle positions, for example Universal CRS on all belted seating positions. a) New-born infant (4kg) in a Maxi Cosi Cabriofix or Pebble 360. Universal CRS, belted installation rearward facing. b) New-born infant (4kg) in a Maxi Cosi Pebble 360 on FamilyFix 360 base, rearward facing. Installation of child only, CRS (base and shell) already installed in vehicle. c) P3 or Q3 in Britax Roemer King II LS, belted installation, forward facing. d) Q6 on a Concord Vario XT-5, belted installation, or Joie Signature i-Spin XL forward facing.	<u>3.19.7.6.2 毯子及遮陽罩</u> <u>於睡眠狀態下，毯子應自肩部覆蓋至足部，雙手置於毯子內。於清醒狀態下，毯子應自胸部覆蓋至足部，雙手置於毯子外。所使用之毯子尺寸不得小於 70 公分x90 公分，重量為 300 公克/平方公尺，材質為棉或聚酯纖維。</u> <u>後向兒童保護裝置應配備遮陽罩，遮陽罩須由提把處連接至覆蓋頭部周圍之座椅外殼。另可使用棉質布料繞於兒童保護裝置外殼並覆蓋開口處，作為臨時遮陽用途。</u> <u>3.19.7.6.3 兒童保護裝置安裝要求</u> <u>下列兒童保護裝置必須用於 3.19.7.9 所述之各種使用情境。CRS 應安裝於車輛「相關」位置，例如通用型兒童保護裝置安裝於配有安全帶之所有座位。</u> <u>(1)新生兒（4 公斤）使用 JOIE I-JEMINI 通用型兒童保護裝置，以安全帶安裝，後向安裝。</u> <u>(2)新生兒（4 公斤）使用 JOIE I-HARBOUR 搭配底座，後向安裝。僅放入兒童，CRS（底座及殼體）已預先安裝於車輛內。</u> <u>(3)P3 或 Q3 人偶使用 Chicco Eletta 寶貝舒適全歲段安全汽座，以安全帶安裝，前向安裝。</u> <u>(4)Q6 人偶使用 PERO Luce90，以安全帶安裝，前向安裝。</u>	

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7.6.4 Scenario 3 (child enters unlocked vehicle), The conditions for evaluating Scenario 3 are detailed below. 7.6.4.1 Parked vehicle with unlocked doors 7.6.4.2 A door (any door) is opened, test subject enters vehicle and door is closed (not locked) but with child lock activated 7.6.4.3 Sensor is triggered (directly, or after a delay time detailed in Section 4.1.3) to check if a living being is in the vehicle (footwell included) 7.6.4.4 Where presence is confirmed, the initial warning must be triggered in accordance with Section 4.1.3. 7.7 Specific system requirements Systems may use a range of parameters either individually or in combination to establish occupancy and/or categorisation. For systems that detect occupant respiration or movement, the individual parameters to be proven by the OEM are as follows: <u>Respiration</u> The following respiration rates shall be used for sleeping children: • New-born infant 30bpm • One year old 22bpm • Three year old child 20bpm • Six year old 18bpm <u>Movement and motion</u> Presence of childlike manikin, sizes and cases requiring random movement.	<u>3.19.7.6.4 情境 3（兒童進入未上鎖車輛）</u> <u>評估情境 3 之條件詳述如下。</u> <u>3.19.7.6.4.1 車輛停妥且車門未上鎖。</u> <u>3.19.7.6.4.2 任一車門開啟，測試對象進入車內並關閉車門（未上鎖），但兒童安全鎖已啟動。</u> <u>3.19.7.6.4.3 感測器被觸發（直接觸發，或依 3.19.4.1.3 規定之延遲時間後觸發），檢測車內（包含腳踏空間）是否有生物存在。</u> <u>3.19.7.6.4.4 若確認存在，則必須依照 3.19.4.1.3 觸發初始警示。</u> <u>3.19.7.7 特定系統要求</u> <u>系統可使用單一或組合參數來確定乘員存在及/或進行分類。對於偵測乘員呼吸或動作之系統，車輛業者必須證明下述個別參數：</u> <u>(1)呼吸</u> <u>睡眠中的兒童，應使用下列呼吸頻率：</u> <u>(A)新生兒：30 次/分鐘</u> <u>(B)一歲兒童：22 次/分鐘</u> <u>(C)三歲兒童：20 次/分鐘</u> <u>(D)六歲兒童：18 次/分鐘</u> <u>(2)動作及活動</u> <u>必須使用兒童體形之模型，且尺寸及情況須涵蓋隨機動作。</u>	

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The following movement is accepted for children in a CRS: • Head: Pitch, roll, yaw • Upper and lower limbs: Waving, kicking, playing on a mobile phone... <u>Day and night</u> Systems that rely on optical sensing methods, such as cameras, demonstrations will be required to show that occupants can be detected in a range of lighting conditions, for example day and night-time. 7.8 Test tool validation The OEM and/or system supplier is required to provide information detailing the validation of any test tools used. Where tools are used in place of human subjects, validation data is required to demonstrate that the test tool can be used as a suitable human surrogate. A direct comparison between the output recorded with humans and the test tool(s) is required in a vehicle environment. The test scenarios described above shall be replicated along with details of the ‘worst case’ conditions/subject for the sensing technology. A range of human subjects is required from new-born to 6YO, along with age, weight and stature must also be provided to demonstrate the worst-case human for the detection system is covered by the test tool. Depending on what parameter is being evaluated, it may be necessary to seat the children, or position the respective test tool(s), in an appropriate CRS. Where human subjects are used either in the development of test tools or validation of a CPD system, all relevant ethical and privacy guidelines	<u>下列為兒童保護裝置內兒童可被接受之動作：</u> <u>(A)頭部：俯仰(Pitch)、滾轉(Roll)、偏擺(Yaw)</u> <u>(B)上肢及下肢：揮動、踢腿、玩手機等</u> <u>(3)白天及夜晚</u> <u>對於依賴光學感測方法（例如攝影機）之系統，必須展示證明能在各種光照條件下（例如日間及夜間）偵測乘員。</u> <u>3.19.7.8 測試工具驗證</u> <u>車輛業者及/或系統供應商必須提供所使用之測試工具驗證資訊。當使用測試工具替代真人受試者，則必須提供驗證數據，以證明該工具能作為合適之人體代替物。</u> <u>須於車輛環境中，將真人受試者的輸出與測試工具之輸出進行直接比較。應重現前述測試場景，並提供感測技術最嚴苛條件或最難偵測受試者之詳細資訊。受試者範圍須涵蓋新生兒至 6 歲兒童，並提供年齡、體重及身高資料，以證明偵測系統所能偵測最嚴苛人體條件已涵蓋於測試工具之範圍。根據評估參數，可能需要將兒童或相應之測試工具安置於適當兒童保護裝置中。</u> <u>如使用真人受試者，於測試工具開發或兒童遺留偵測系統驗證過程中，必須遵守所有相關之倫理及隱私規範。</u>	

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must be followed. 7.9 Laboratory tests Vehicle assessments will be carried out by the vehicle inspectors and assessed using a number of ‘use cases’ representing typical journey conditions. The use cases, detailed below, represent typical situations that might occur when a child is taken on a journey. Only systems that trigger a correct response in all defined use cases below are eligible for scoring. Each use case is detailed with the use of certain subsequent steps (actions) to be carried out in a specific order. The assessment will be carried out by following the individual actions in the order detailed for each use case. The numerical part of each action details the type of action to be performed, such as opening/closing doors and locking the vehicle. The alphabetic part of each step provides specific details of what action to perform where multiple possibilities exist. The key to each of the individual actions is in Section 8. 1) Preparation 2) Simulated entry – adult and/or child 3) Driving 4) Stopping 5) Simulated exit 6) Activation – at end of journey 7) Warning – required or not	<u>3.19.7.9 檢測機構測試</u> <u>車輛評估將由車輛檢驗人員執行，並透過多個代表典型行程條件之「使用案例」進行評估。以下所述之使用案例，代表兒童乘車過程中可能發生之典型狀況。僅有在所有定義之使用案例中均能觸發正確反應之系統，才具有得分資格。</u> <u>每個使用案例均詳細列出須依特定順序執行之後續步驟（動作）。評估將依據每個使用案例所述之動作順序逐步進行。</u> <u>每個動作的數字代表需執行之動作類型，例如開門/關門及鎖車。每個步驟之字母則代表多種可能情況下應執行之具體細節。各個動作之說明對應參見 3.19.8。</u> <u>(1)準備階段</u> <u>(2)模擬進入 - 成人及/或兒童</u> <u>(3)行駛階段</u> <u>(4)停車階段</u> <u>(5)模擬離開</u> <u>(6)啟動 - 行駛結束時</u> <u>(7)警示 - 是否必須發出</u>	

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Where the system can only detect occupants and not classify, triggering of the system may be done with any human subject. 7.9.1 This simulates two separate journeys, one is starting with a locked and the other an unlocked vehicle. In both cases, the driver forgets to remove the child at the end of the journey and locks the vehicle. A CPD initial warning is required. These are two independent use cases that should be assessed separately. Actions Locked 1A→ 2B→ 3C→ 4B→ 5A→ 6A→ 7A→ End Unlocked 1B→ 2B→ 3C→ 4B→ 5A→ 6A→ 7A→ End 7.9.2 This simulates a journey, starting with a locked vehicle, where a child remains in the vehicle at the end of the journey but only the driver door is opened and closed. No other doors are opened and, where fitted, the CPD initial warning is delayed by the driver for example refuelling. A CPD warning is required within 10 minutes of delay activation. Actions 1A→ 2B→ 3C→ 4B→ 5A→ 6C→ 7B→ 10mins (max) → 7A End If a system does not offer the possibility to delay the CPD signal, this assessment can be ignored.	<u>系統若僅能偵測乘員而無法進行分類，則可使用任何人體試驗對象來觸發系統。</u> <u>3.19.7.9.1 模擬兩次獨立行駛，一次由車輛上鎖開始，另一次由車輛未上鎖開始。兩種情況下，駕駛於行駛結束時忘記將兒童帶離並鎖上車門。此時需觸發 CPD 初始警示。兩種情況為獨立使用案例，應分別進行評估。</u> <u>(1)動作流程</u> <u>車輛上鎖(Locked)：1A → 2B → 3C → 4B → 5A → 6A → 7A → 結束</u> <u>車輛未鎖車(Unlocked)：1B → 2B → 3C → 4B → 5A → 6A → 7A → 結束</u> <u>3.19.7.9.2 模擬一段行程，由車輛上鎖狀態開始，行程結束時兒童仍留在車內，但僅開啟並關閉駕駛座車門，其他車門未開啟。若系統具備此功能，駕駛因加油等原因延遲 CPD 初始警示。系統必須於延遲啟動後 10 分鐘內發出 CPD 警示。</u> <u>(1)動作流程</u> <u>1A → 2B → 3C → 4B → 5A → 6C → 7B → 10 分鐘（至多）→ 7A → 結束</u> <u>若系統未提供延遲兒童遺留車內警示之功能，則可忽略此評估。</u>	

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7.9.3 This simulates a journey, starting with a locked vehicle, where a child is installed in the vehicle and only the driver door is opened and closed during a journey. No other doors are opened and, where fitted, the CPD signal is delayed by the driver for refuelling. The driver then continues the journey (within 10 mins) and then forgets to remove the child at the end of the journey (only). A CPD initial warning is required upon door locking at the end of the journey. This is one single use case for one journey. Actions 1A→ 2B→ 3C→ 4B→ 5A→ 6C→ 7B→ <10min Journey recommences 1A→ 2A→ 3C→ 4B→ 5A→ 6A→ 7A End If a system does not offer the possibility to delay the CPD signal, this assessment can be ignored. 7.9.4 This simulates a journey, starting with a locked vehicle, where a child is installed in the vehicle but only the driver door is opened and closed. No other doors are opened and, where fitted, the CPD initial warning is delayed by the driver for refuelling. A warning is expected within 10 minutes of delay activation. The same journey recommences (within 15min of door locking), the driver forgets the child at the end of the journey, no other doors have been opened, a CPD warning is required. This is one single use case in one journey. Actions 1A→ 2B→ 3C→ 4B→ 5A→ 6C→ 7B→ 10mins→ 7A	3.19.7.9.3 模擬一段行程，由車輛上鎖狀態開始，有一名兒童被安置於車內，且行程中僅開啟並關閉駕駛座車門，其他車門未開啟。若系統具備此功能，駕駛會因加油等原因延遲 CPD 警示。接著，駕駛於 10 分鐘內返回繼續行程，最終於行程結束時忘記將兒童帶離車輛。當行程結束車門上鎖，系統必須發出 CPD 初始警示。此為單一行程之單一使用案例。 (1)動作流程 1A→ 2B→ 3C→ 4B→ 5A→ 6C→ 7B→ <10 分鐘 (2)重新開始行程 1A→ 2A→ 3C→ 4B→ 5A→ 6A→ 7A 結束 若系統未提供延遲兒童遺留車內警示之功能，則可忽略此項評估。 3.19.7.9.4 模擬一段行程，由車輛上鎖狀態開始，車內已安置一名兒童，但僅開啟並關閉駕駛座車門，其他車門未開啟。若系統具備此功能，駕駛因加油等原因延遲 CPD 初始警示。接著，於延遲警示後 10 分鐘內觸發警示。於車門上鎖 15 分鐘內，同一行程重新開始，駕駛於行程結束時遺留車內兒童，且未開啟其他車門，系統須觸發 CPD 警示。此為單一行程之單一使用案例。 (1)動作流程 1A→ 2B→ 3C→ 4B→ 5A→ 6C→ 7B→ 10 分鐘→ 7A	

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Journey recommences 1A→ 2A→ 3C→ 4B→ 5A→ 6A→ 7A End If a system does not offer the possibility to delay the CPD signal, this assessment can be ignored. 7.9.5 This simulates a journey, starting with a locked vehicle with no rear doors, where the driver forgets to remove the child at the end of the journey and locks the vehicle. A CPD warning is expected if the actions required to access the rear seat and child (e.g. move driver's seat) are not repeated before door locking. Actions 1A→ 2B*→ 3C→ 4B→ 5A→ 6A→ 7A End *2B shall include the necessary actions to access the rear seats. 7.9.6 This simulates a journey, starting with a locked vehicle, where there are two children installed in the vehicle. One child exits the vehicle mid-journey and the journey continues. At the end of the journey the driver exits the vehicle and forgets the one remaining child. A CPD warning is required. Actions 1A→2B→ 3C→ 4C→ 5E→ 5A→ 6A→ 7A End 7.9.7 This simulates a journey, starting with a locked vehicle, where there is no child in the vehicle at the start of the journey. A child then enters the vehicle mid-journey and the journey continues. At the end of the journey the driver exits the vehicle and forgets the child. A CPD warning is required.	<u>(2)重新開始行程</u> <u>1A→ 2A→ 3C→ 4B→ 5A→ 6A→ 7A 結束</u> <u>若系統未提供延遲兒童遺留車內警示之功能，則可忽略此項評估。</u> <u>3.19.7.9.5 模擬一段行程，由無後車門之車輛且上鎖狀態開始，駕駛於行程結束時忘記將兒童帶離車輛外並鎖上車門。若車門上鎖前，未重複執行進入後座接觸兒童之必要動作（例如移動駕駛座椅），則系統須發出 CPD 警示。</u> <u>(1)動作流程</u> <u>1A→ 2B→ 3C→ 4B→ 5A→ 6A→ 7A 結束</u> <u>其中，2B應包含進入後座所需之必要動作。</u> <u>3.19.7.9.6 模擬一段行程，由車輛上鎖狀態且車內乘坐兩名兒童開始。其中一名兒童於行程中下車，接著行程繼續。行程結束時，駕駛下車且忘記車內另一名兒童。系統須觸發CPD警示。</u> <u>(1)動作流程</u> <u>1A→2B→ 3C→ 4C→ 5E→ 5A→ 6A→ 7A 結束</u> <u>3.19.7.9.7 模擬一段行程，由車輛上鎖狀態開始，行程開始時車內並無兒童。接著，一名兒童於行程中進入車內並繼續行程。行程結束時，駕駛下車且忘記該名兒童。系統須發出CPD警示。</u>	

Euro NCAP 原文	TNCAP 條文草案	說明
Actions 1A→ 2A→ 3C→ 4C→ 2D→ 3E→ 4D→ 5A→ 6A→ 7A End For vehicles with seven seats and a 3rd row, the child entry mid-journey (2D) shall be through the boot door to access the 3rd row seats where the boot is considered a reasonable means of access. 7.9.8 This simulates a journey, starting with a locked vehicle, where a child is installed in the vehicle. The journey ends and the driver exits the vehicle. The rear door adjacent to the child is opened and closed without the child being removed from the vehicle, which is then locked. This is the intentionally left case and a CPD warning is required. This scenario (2) is monitored for 2025 and the outcome will not be included in the system assessment. However, the datasheet and website publication will detail if this scenario is covered by the system or not.	<u>(1)動作流程</u> <u>1A→ 2A→ 3C→ 4C→ 2D→ 3E→ 4D→ 5A→ 6A→ 7A 結束</u> <u>對於配備七個座椅及第三排座椅之車輛，若後車廂被視為合理之進出通道，則中途兒童進入車內（2D）動作應由後車廂門進入第三排座椅。</u> <u>3.19.7.9.8 模擬一段行程，由車輛上鎖狀態開始，車內已安置一名兒童。行駛結束後，駕駛下車，並開啟再關閉靠近兒童之後車門，但未將兒童帶離車輛，隨後車輛上鎖。此有意留置兒童情境，系統須觸發CPD警示。該情境（情境2）僅進行監測，其結果不納入系統評分，惟資訊表將註明系統是否涵蓋此情境。</u>	
Actions 1A→ 2B→ 3C→ 4B→ 5B→ 6A→ 7A End 7.9.9 Avoid false positives Systems will be checked for false positives in the two scenarios detailed below. However, although compliance with the case below is strongly recommended, the outcome will not be included in the system assessment. This simulates a journey, starting with a locked vehicle, where the driver removes the child at the end of the journey. No children are in the vehicle when locked, in this case a warning is NOT required.	<u>(1)動作流程</u> <u>1A→ 2B→ 3C→ 4B→ 5B→ 6A→ 7A 結束</u> <u>3.19.7.9.9 避免誤報</u> <u>系統將針對下列兩種情境進行誤報檢測。雖強烈建議系統符合下述情境，但其結果不納入系統評分。</u> <u>模擬一段行程，由車輛上鎖狀態開始，駕駛於行程結束時已將兒童帶離車輛。車輛上鎖時，車內無兒童，系統不需發出警示。</u>	

Euro NCAP 原文	TNCAP 條文草案	說明
Actions 1A→ 2B→ 3C→ 4B→ 5D→ 6A→ 7B End This simulates a journey, starting with a locked vehicle, where the driver opens the door and places/hangs and object in the rear before the journey. At the end of the journey, the door remains unopened at the time of locking, in this case a warning is NOT required. Actions 1A→ 2C→ 3C→ 4B→ 5A→ 6A→ 7B End	<u>(1)動作流程</u> <u>1A→ 2B→ 3C→ 4B→ 5D→ 6A→ 7B 結束</u> <u>模擬一段行程，由車輛上鎖狀態開始，駕駛於行程開始前開啟後門並放置或懸掛物品於後座。行程結束時，上鎖時車門保持未開啟狀態，系統不須發出警示。</u> <u>(2)動作流程</u> <u>1A→ 2C→ 3C→ 4B→ 5A→ 6A→ 7B 結束</u>	

8. Key to Use Cases

			A	B	C	D	E
1	Prepare		Unlock car	Start with unlocked car, left for [30] minutes			
2	Simulate entry		Open driver's door	Open any door (for at least 7 sec, no more than 12 sec) adjacent to where a child can be placed*	Open any door (for at least 7 sec, no more than 12 sec) adjacent to where a child can be placed*	Open any door (for at least 7 sec, no more than 12 sec) adjacent to where a child can be placed*	Open any door (for at least 7 sec, no more than 12 sec) adjacent to where a child can be placed*
			Close driver's door	Place surrogate/CRS on seat**	Close door	Place surrogate/CRS on seat**	Close door
				Close door	Open driver's door	Close door	
				Open driver's door	Close driver's door		
3	Journey (in motion)			Close driver's door			
			No action	Ignition on	Ignition on	Ignition on	Simulate driving
					Simulate driving	Simulate driving	
4	Stopping					Simulate second entry or exit***	
			No action	Ignition off	Vehicle stops, ignition on	Vehicle stops, ignition off	
5	Simulate exit		Driver door opens	Driver door opens	Door adjacent to seating position where child can be retrieved is opened	Driver door opens	Door adjacent to seating position where child can be retrieved is opened
			Driver door closes	Driver door closes	Simulate further driving/Stopping/Exit	Driver door closes	Retrieve child surrogate
				Door adjacent to seating position where child can be retrieved is opened		Door adjacent to seating position where child can be retrieved is opened	Simulate further driving/Stopping/Exit
				Door closed		Retrieve child surrogate	
						Door closed	
6	Activation		Doors locked	No further actions performed.	Doors locked, delay active		
7	Initial warning		Warning expected	Warning not expected			
	Key:		Highlighted actions can be performed out of order		*for 3 door car, driver's door included		
					**for 3 door car, perform action to access rear seats		
					***7 seaters, access through boot door		

3.19.8使用案例說明表

			A	B	C	D	E
1	準備		解鎖車輛	由車輛未上鎖狀態開始，放置 30 分鐘			
2	模擬進入		開啟駕駛座車門	打開任一靠近可放置兒童位置之 車門，持續開啟時間不少於 7 秒 且不超過 12 秒 ¹	打開任一靠近可放置兒童位置之 車門，持續開啟時間不少於 7 秒 且不超過 12 秒 ¹	打開任一靠近可放置兒童位置之 車門，持續開啟時間不少於 7 秒 且不超過 12 秒 ¹	打開任一靠近可放置兒童位置之 車門，持續開啟時間不少於 7 秒 且不超過 12 秒 ¹
			關閉駕駛座車門	將人偶/兒童保護裝置放置於座 位 ²	關閉車門	將人偶/兒童保護裝置放置於座 位 ²	關閉車門
				關閉車門	開啟駕駛座車門	關閉車門	
				開啟駕駛座車門	關閉駕駛座車門		
				關閉駕駛座車門			
3	行程中		無動作	啟動點火系統	啟動點火系統	啟動點火系統	模擬駕駛
					模擬駕駛	模擬駕駛	
						模擬第二次進入或離開 ³	
4	停止		無動作	關閉點火系統	車輛停止，啟動點火系統	車輛停止，關閉點火系統	
5	模擬離開		開啟駕駛座車門	開啟駕駛座車門	打開靠近可取出兒童座位之車門	開啟駕駛座車門	打開靠近可取出兒童座位之車門
			關閉駕駛座車門	關閉駕駛座車門	模擬後續駕駛/停車/離開操作	關閉駕駛座車門	取出兒童人偶
				打開靠近可取出兒童座位之車門		打開靠近可取出兒童座位之車門	模擬後續駕駛/停車/離開操作
				關閉車門		取出兒童人偶	
						關閉車門	
6	啟動		車門上鎖	未進行任何後續操作	車門已上鎖，延遲功能啟動中		
7	初始警示		預期警示	未預期警示			

 標示的動作可不按順序執行

備註：1.針對三門車輛，駕駛座車門亦包含在內。

2.針對三門車輛，執行操作以進入後座。

3.針對七人座車輛，從後車廂門進入。