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EUROPEAN NEW CAR
ASSESSMENT PROGRAMME

Technical Bulletin

Assessment of Automatic Passenger Airbag Disabling Systems

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Assessment of Automatic Passenger Airbag Disabling Systems

1. Introduction

Euro NCAP recognises the need to introduce a standard method of assessment for automatic passenger airbag disabling systems fitted to vehicles going through the programme.

The laboratory must check if the minimum requirements are followed:

- Airbag is OFF when using a Rearward Facing CRS
- Airbag is ON for a 5th occupant and above

The rest (forward facing CRS + child alone) is the responsibility of the OEM and there are different strategies. The following requirements and test matrix aim to cover a variety of possible occupant sizes and installation modes.

2. Requirement for Airbag Status

Occupant	Requirement for Airbag Status					Can it be done by Lab?	
	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	The system does not need a real human being	The system needs a real human being
new born	OFF	forbidden	forbidden	forbidden	forbidden	Yes	No
1.5 yo	OFF	? (1)	forbidden	forbidden	forbidden	Yes	No
3 yo	OFF	? (1)	? (1)	forbidden	forbidden	Yes	No
6 yo	OFF	? (1)	? (1)	forbidden	forbidden	Yes	No
10 yo	N/A *	N/A	? (1)	? (1)	forbidden	Yes	No
5th					ON	Yes	Yes
50th					ON	Yes	Yes
95th					ON	Yes	Yes

Shaded area = Mandatory minimum requirements

N/A*: in theory it is possible to have a group 3 rwd facing CRS but none are known at present to exist.

(1) It is the decision from the OEM. There is no mandatory status requirement, however if strategy is airbag ON OEM should show that this does not lead to higher risk than with airbag OFF.

For CRS installations involving a child the weight range for the various groups for which the CRS is approved will be adhered to.

3. Test Matrix

Occupant	Installation to checks				
	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 II 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

Installation of CRS listed in the table above and settings are done according to “Installation of Top Pick List Child Restraints” (TPL) in the Testing Protocol – child occupant protection.

List of child seats needed:

CRS on TPL?

#1 – Maxi Cosi Cabriofix Belted	Yes
#2 – Maxi Cosi Cabriofix + EasyBase 2 B+L	Yes
#3 – Maxi Cosi Cabriofix + FamilyFix I+L	Yes
#4 – Britax Römer King II LS Universal	Yes
#5 – Britax Römer Two-way Elite Universal	No
#6 – Britax Römer Duo Plus I+S	Yes
#7 - Britax Römer Advansafix II SICT B+I	No
#8 - Britax Römer KidFix XP Belted	Yes
#9 - Britax Römer KidFix XP B+I	Yes
#10 Britax Römer KidFix XP cushion only Belted	Yes

Isofix CRS (#3, #6, #7, #9) only if Isofix on Front seat

It should be noted that Euro NCAP has used a small selection of CRS available on the market in order to test a variety of CRS groups, orientation and attachment methods.

When dealing with automatic airbag disabling systems it should not be forgotten that the Child assessment protocol requires the following:

2.5.3 Additional Requirements for Automatic Switches Only

- a) The system must ensure that the airbag is OFF for ANY rearward facing CRS and obviate any risk associated with airbag deployment
- b) If, with the ignition on and with engine running or not, the airbag status can be changed, the entire system must immediately react to the change correctly. Systems will be checked once the vehicle diagnostics/system checks have been completed.
- c) The system must automatically re-activate the airbag when the seat is occupied by a person who is not required to use a child restraint.