

Manufacturer :
Type : DC-3000

TECHNICAL REPORT

according to ECE-Regulation

Uniform provisions concerning the approval of
Safety-belts, restraint systems, child restraint systems and isofix
child restraint systems for occupants of power-driven vehicles

ECE-R16

including all amendments until

series of Amendments: 04

Supplement 17

Corrigendum 04 to Supplement 15

Previously granted	
ECE - certificate	: ---


Structure of report:

1. Test object(s) and general test information
2. Test minutes
3. Remarks concerning tested object(s)
4. Appendices
5. Statement of conformity



Manufacturer :
Type : DC-3000

0. General information

- 0.1. Make (trade name of the manufacturer) :  , JBM
- 0.2. Type
- Type of safety belt : DC-3000
- Versions : ---
- 0.3. Category of safety belt : Three-point belt
- 0.4. Name and address of the manufacturer :
- 0.5. No. of information folder : DC-3000-00
date of issue : December 07, 2006
date of last amendment : ---

1. Test object(s) and general test information

- 1.1. Test object(s)
- identification number : ---
- version : DC-3000
- 1.2. General test information
- 1.2.1. Test date : March 05, 2007
- 1.2.2. Test site : National Passenger Car Quality Supervision and Inspection Center
Chenglinzhuang Road, Hedong District,
Tianjin, China
- 1.2.3. Remark : The results of the test refer exclusively to the object(s) mentioned
under point 1.1 of this report.



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2. Test minutes

- 2.1. Test facilities : The test equipment used was in compliance with the requirements of the directive/ regulation.
- 2.2. Test results : ~~The type has been examined according to the amendments mentioned in appendix 0.~~

~~An actual test of the type was not required. The results of the previous tests are still valid. delete if unnecessary~~
- Markings : The approval mark is marked clearly and indelibly.
- 2.3. General specifications : The component comply with the requirements of the directive/ regulation. (test results see Appendix 1)
- 2.4. Special requirements : The component comply with the special requirements of the directive/ regulation. (test results see Appendix 1)

3. Remark concerning tested object(s) : All versions as stated in the information document are covered with the tested version(s) and test object(s) respectively.

4. Appendices

- 0 List of modifications
- 1 Test protocol
- Information folder no. : DC-3000-00



Manufacturer :
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5. Statement of conformity

The information folder and the type described there comply with the requirements in the above mentioned directive/
regulation.

The test laboratory is accredited for the above mentioned tests by the RDW, Vehicle Technology and Information Centre,
the Netherlands;

Accreditation Number: RDW-99050014-02.

The technical report comprises the pages 1 to 10 and shall not be reproduced except in full without the written approval
of the test laboratory.

Cologne, March 23, 2007
ODR, TJ



Dipl.-Ing. O.Rothert





Manufacturer :
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List of modifications

Appendix 0


Correction of : ---
Modification of : ---
Addition of : ---
Deletion of : ---



Manufacturer :
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Test protocol

Appendix 1

Paragraphs	Requirements and test description	Sample	Result of examination
6.1	General specifications		
6.1.2 6.1.3	The belt or the restraint system is so designed and constructed that, when correctly installed and properly used by an occupant, its satisfactory operation is assured and it reduces the risk of bodily injury in the event of an accident. The straps of the belt are not liable to assume a dangerous configuration.	1	complying
6.2	Rigid parts		
6.2.1	General		
6.2.1.1	The rigid parts of the safety-belt, such as buckles, adjusting devices, attachments and the like, have no sharp edges liable to cause wear or breakage of the straps by chafing.	1	complying
6.2.1.2	All parts of the belt assembly liable to be affected by corrosion are suitably protected against it. After undergoing the corrosion test prescribed in paragraph 7.2., no signs of deterioration likely to impair the proper functioning of the device or any significant corrosion is visible to the unaided eye of a qualified observer.	1,2	complying
6.2.1.3	Rigid parts intended to absorb energy or to be subjected to or to transmit a load are not fragile.	1,2	complying
6.2.1.4	The rigid items and parts made of plastics of a safety-belt are so located and installed that they are not liable, during every day use of a power-driven vehicle, to become trapped under a moveable seat or in a door of that vehicle.	1,2	complying
6.2.2	Buckle		
6.2.2.1	The buckle is so designed to preclude any possibility of incorrect use. This means, inter alia, that it is not possible for the buckle to be left in a partially-closed condition. The procedure for opening the buckle is evident. The parts of the buckle likely to contact the body of the wearer present a section of not less than 20 cm ² and at least 46 mm in width, measured in a plane situated at a maximal distance of 2.5 mm from the contact surface.	1,2,3,4, 5	complying 

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6.2.2.2	<p>The buckle, even when not under tension, remains closed whatever the position of the vehicle. It is not possible to release the buckle inadvertently, accidentally or with a force of less than 1 daN. The buckle is easy to use and to grasp; when it is not under tension and when under tension, it is capable of being released by the wearer with a single simple movement of one hand in one direction; in addition, in the case of belt assemblies intended to be used for the front outboard seats, it is capable of being engaged by the wearer with a simple movement of one hand in one direction. The buckle can be released by pressing either a button or a similar device. The surface to which this pressure is applied has the following dimensions, with the button in the actual release position and when projected into a plane perpendicular to the button's initial direction of motion: for enclosed buttons, an area of not less than 4.5 cm² and a width of not less than 15 mm; for non-enclosed buttons, an area of not less than 2.5 cm² and a width of not less than 10 mm.</p> <p>The buckle release area is coloured red. No other part of the buckle is of this colour.</p>	1,2,3,4, 5	complying
6.2.2.3	The buckle, when tested in accordance with paragraph 7.5.3, operates normally.	1,2	complying
6.2.2.4	The buckle is capable of withstanding repeated operation.	1,2	complying
6.2.2.6	The buckle has been tested for strength as prescribed in paragraphs 7.5.1. and, where appropriate, 7.5.5. It did not break, was not seriously distorted or became detached under the tension set up by the prescribed load (980 daN).	3	complying
6.2.2.7	For the buckles which incorporate a component common to two assemblies, the strength and release tests of paragraphs 7.7. and 7.8. have also be carried out with the part of the buckle pertaining to one assembly being engaged in the mating part pertaining to the other, if it is possible for the buckle to be so assembled in use.	3	n.a.
6.2.3	Belt adjusting device		
6.2.3.1	The belt after being put on by the wearer, adjust automatically to fit him It is such that the manually adjusting device is readily accessible to the seated wearer and is convenient and easy to use. It also allows the belt to be tightened with one hand to suit the wearer's body size and the position of the vehicle seat.		
6.2.3.2	Two samples of each belt adjusting device have been tested in accordance with the requirements of paragraph 7.3. The strap slip as shown did not exceed 25 mm for each sample of adjusting device and the sum of shifts for all the adjusting devices did not exceed 40 mm.	4,5	n.a.



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6.2.3.3	All the adjustment devices have been tested for strength as prescribed in paragraph 7.5.1. They did not break or become detached under the tension set up by the prescribed load.	3	n.a.
6.2.3.4	During test in accordance with paragraph 7.5.6, the force required to operate any manually adjusting device did not exceed 5 daN.	4	n.a.
6.2.4	Attachments and belt adjustment devices for height. The attachments have been tested for strength as prescribed in paragraphs 7.5.1. and 7.5.2. These parts did not break or become detached under the tension set up by the prescribed load.	3	n.a.
6.2.5	Retractors		
6.2.5.1	Requirements for manually unlocking retractors.	1,2	n.a.
6.2.5.2	Requirements for Automatically locking retractors.	1,2	n.a.
6.2.5.3	Emergency locking retractors		
6.2.5.3.1.1 6.2.5.3.3	The locking occurred when the deceleration of the vehicle reached 0.45 g in the case of type 4. The amount of strap movement which occurred before the retractor locks did not exceed 50 mm before and after conditioning according to 6.2.5.3.5.	1	Before: 23 mm After : 22 mm
		2	Before: 25 mm After : 24 mm
6.2.5.3.1.2 6.2.5.3.3	It did not lock for values of acceleration of the strap measured in the direction of the extraction of the strap of less than 0.8 g in the case of type 4.	1,2	complying
6.2.5.3.1.3 6.2.5.3.1.4 6.2.5.3.3	It did not lock when its sensing device was tilted 12° or less in any direction from the installation position specified by its manufacturer. It locked when its sensing device was tilted by more than 27° in the case of type 4 retractors in any direction from the installation position specified by its manufacturer.	1	Before: front 22 rear 24 left 24 right 22 After: front 21 rear 21 left 24 right 22
		2	Before: front 24 rear 22 left 24 right 23 After: front 22 rear 23 left 21 right 23
6.2.5.3.1.5	The operation of a retractor depends on an external signal or power source.	1,2	n.a.
6.2.5.3.2 6.2.5.3.3	During test in accordance with paragraph 7.6.2., the emergency locking retractor with multiple sensitivity, including strap sensitivity, complied with the specified requirements and also lock up when strap acceleration measured in the direction of unreeling was not less than 2.0 g. The amount of strap movement which occurred before the retractor locks did not exceed 50 mm before and after conditioning according to 6.2.5.3.5.	1	Before: 15 mm After : 18 mm
		2	Before: 16 mm After : 18 mm

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6.2.5.3.4	If the retractor is part of a lap belt, the retracting force of the strap shall be not less than 0.7 daN before and after conditioning according to 6.2.5.3.5. If the retractor is part of an upper torso restraint, the retracting force of the strap shall be not less than 0.1 daN and not more than 0.7 daN w before and after conditioning according to 6.2.5.3.5.	1	[] part of a lap belt	Before: 0.33 daN		
		2	[✓] part of an upper torso restraint	After : 0.29 daN	Before: 0.31 daN	
6.2.6	Pre-loading device					
6.2.6.1	After corrosion testing in accordance with paragraph 7.2, the pre-loading device (including the impact sensor connected to the device by the original plugs but without any current passing through them) operates normally.	1,2		n.a.		
6.2.6.2	It has been verified that inadvertent operation of the device does not involve any risk of bodily injury for wearer.	1,2		n.a.		
6.2.6.3.1	After conditioning in accordance with paragraph 7.9.2, operation of the pre-loading device has not been activated by temperature and the device operates normally.	1,2		n.a.		
6.2.6.3.2	Precautions have been taken to prevent the hot gases expelled from igniting adjacent flammable materials.	1,2		n.a.		
6.3	Straps	1' to 10'	refer to test report No. 85-R16-350/06 corresponding to type approval No. E4-16R-0436213			
6.4.2.1	For both samples conditioned in compliance with paragraph 7.4.1.6, the breaking strength has been assessed as prescribed in paragraphs 7.4.2. and 7.5. It has been at least equal to 75 per cent of the breaking strength average determined during tests on unabrased straps and not less than the minimum load specified for the item being tested. Difference between breaking strength of the two samples have not exceeded 20 per cent of the highest measured breaking strength. For type 1 and type 2 procedures, the breaking strength test has been carried out on strap samples only (para. 7.4.2.). For type 3 procedure, the breaking strength test has been carried out on the strap in combination with the metal component involved (para. 7.5.).	Test procedure	Sample	breaking load of Strap (daN)	percent of breaking load (%)	percent of difference (%)
				2	4	2670
		3	4	2560	90.4	5.1
			5	2430	85.8	
6.4	Belt assembly or restraint system					
6.4.1	Dynamic test					



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6.4.1.2	The dynamic test has been performed on two belt assemblies which have not previously been under load. except in the case of belt assemblies forming part of restraint systems when the dynamic test shall be performed on the restraint systems intended for one group of seats which have not previously been under load. The buckles of the belt assemblies to be tested have met the requirements of paragraph 6.2.2.4. above. In the case of safety-belts with retractors, the retractor has been subjected to the dust resistance test laid down in paragraph 7.6.3.; in addition, in the case of safety-belts or restraint systems equipped with a pre-loading device comprising pyrotechnic means, the device has been subjected to the conditioning specified in paragraph 7.9.2.				
6.4.1.2.1	The belts have undergone the corrosion test described in paragraph 7.2., after which the buckles have been subjected to 500 additional opening and closing cycles under normal conditions of use.				
6.4.1.2.2	Safety-belts with retractors have been subjected to the tests described in paragraph 6.2.5.2. or to those described in paragraph 6.2.5.3. If, however, a retractor has already been subjected to the corrosion test in accordance with the provisions of paragraph 6.4.1.2.1., above, this test has not repeated.				
6.4.1.2.3	In the case of a belt intended for use with a belt adjustment device for height, as defined in paragraph 2.9.6. above, the test has been carried out with the device adjusted in the most unfavourable position(s) chosen by the technical service responsible for testing.				
6.4.1.2.4	In the case of safety-belt with a preloading device the minimum displacement specified in paragraph 6.4.1.3.2. below may be reduced by half. For the purpose of this test, the preloading device has been in operation.				
6.4.1.3	During this test, the following requirements shall be met:				
6.4.1.3.1	No part of the belt assembly or a restraint system affecting the restraint of the occupant did break and no buckles or locking system or displacement system did release or unlock;	1,2	complying		
6.4.1.3.2	The forward displacement of the manikin has been between 80 and 200 mm at pelvic level in the case of lap belts. In the case of other types of belts, the forward displacement has been between 80 and 200 mm at pelvic level and between 100 and 300 mm at chest level.	Sample	pelvic level (mm)	chest level (mm)	force to open the buckle after test (daN)
6.4.1.3.3 6.2.2.5			1	155	210
	In the case of a safety belt intended to be used in an outboard front seating position protected by an airbag in front of it, the displacement of the chest reference point may exceed that specified in paragraph 6.4.1.3.2. above if its speed at this value does not exceed 24 km/h. (worst case)	2	120	195	5.3
	The force required to open the buckle in the test as prescribed in paragraph 7.8. is shown and does not exceed 6 daN.				
6.4.1.4	In the case of a restraint system		n.a.		



RDW

Vehicle Technology Division

THE NETHERLANDS
(N E D E R L A N D)



COMMUNICATION

Concerning ⁽¹⁾:

- approval granted
- approval extended
- approval refused
- approval withdrawn
- production definitely discontinued

of a type of safety-belt or restraint system for adult occupants of power-driven vehicles pursuant to Regulation number 16.

Approval number: E4-16R-0436275


Extension number: 00

Approval mark

: ArAm



04 36275

1. ~~Restraint system (with) /three-point belt/ lap belt/ special type belt/ fitted (with) energy absorber/ retractor/ device for height adjustment of the upper pillar loop~~ ⁽²⁾
2. Trade name or mark :  , JBM
3. Manufacturer's designation of the type : DC-3000
of belt or restraining system
4. Manufacturer's name :
5. If applicable, name of his representative : n.a.
6. Address :
7. Submitted for approval on : December 07, 2006

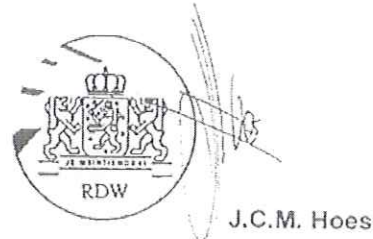
P.O. Box 777
2700 AT Zoetermeer
The Netherlands

Tel. + 31 (0)79 345 81 43
Fax + 31 (0)79 345 80 43
www.rdw.nl

Vehicle Approval and Information



8. Technical service responsible for : TÜV Kraftfahrt GmbH
conducting approval tests TÜV Rheinland Group
Technologiezentrum Verkehrssicherheit
Typprüfstelle Fahrzeuge/Fahrzeugteile
Am Grauen Stein,
D-51105 Köln (Poll)
9. Date of test report issued by that service : March 23, 2007
10. Number of test report issued by that service : 85-R16-100/07
11. Approval : granted/~~refused~~⁽¹⁾ for general use/~~for use in a particular vehicle or in particular types of vehicles~~^{(1) (3)}
12. Position and nature of the marking : Label sewed on the belt
13. Place : Zoetermeer
14. Date : 06-April-2007
15. Signature :



The signature of J.C.M. Hoes is written in blue ink over a circular stamp. The stamp features the RDW logo, which includes a crown at the top, a central shield with a lion and a bear, and the text 'RDW' at the bottom.

16. The list of documents in the approval file deposited at the administration services having delivered the approval and which can be obtained upon request:
- Application form, relating to ECE approval for a type of safety belt or restraint system pursuant to Regulation No 16.
 - Description including drawings and specifications.
 - Test report.

⁽¹⁾ Strike out what does not apply.

⁽²⁾ Indicate which type.

⁽³⁾ If a safety-belt is approved following the provisions of paragraph 6.4.1.3.3. of this Regulation, this safety-belt shall only be installed in an outboard front seating position protected by an airbag in front of it, under the condition that the vehicle concerned is approved to Regulation number 94, 01 series of amendments or its later version in force, or to the European Community Directive 96/79/EC.