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Number of Annexes: 6

TECHNICAL REPORT No. P 054/10

Subject of the test:	roof boxes, roof carriers, carriers on the coupling ball of class A-50										
Article type	<table> <tr> <td>roof box</td> <td>type MAGIC 320 a MAGIC 350</td> </tr> <tr> <td>roof carrier</td> <td>type HK 6, variants 340 ALU a FE, 341 ALU a FE, 342 ALU a FE</td> </tr> <tr> <td>bicycle carrier</td> <td>type NZ 2, variants ALU 2 1154 a ALU 3 1153, type NZ 5 variants TRIP 2 1158 a TRIP 3 1159</td> </tr> <tr> <td>animal carrier</td> <td>type NZ 3, variants 1150</td> </tr> <tr> <td>motorcycle carrier</td> <td>type NZ 4, variants 1151</td> </tr> </table>	roof box	type MAGIC 320 a MAGIC 350	roof carrier	type HK 6, variants 340 ALU a FE, 341 ALU a FE, 342 ALU a FE	bicycle carrier	type NZ 2, variants ALU 2 1154 a ALU 3 1153, type NZ 5 variants TRIP 2 1158 a TRIP 3 1159	animal carrier	type NZ 3, variants 1150	motorcycle carrier	type NZ 4, variants 1151
roof box	type MAGIC 320 a MAGIC 350										
roof carrier	type HK 6, variants 340 ALU a FE, 341 ALU a FE, 342 ALU a FE										
bicycle carrier	type NZ 2, variants ALU 2 1154 a ALU 3 1153, type NZ 5 variants TRIP 2 1158 a TRIP 3 1159										
animal carrier	type NZ 3, variants 1150										
motorcycle carrier	type NZ 4, variants 1151										
Type of the test:	Extension of the technical worthiness approval of the vehicle trim No 1 305/II										
Applicant:	ASN HAKR Brno s.r.o. Štefánikova 413, 664 53 Újezd u Brna										
Manufacturer:	see applicant										
Basis for the test:	Order 102000203 dated 2010-06-29										
Tested and assessed according to:	Czech Act No. č. 56/2001 of the Digest Regulation CMT No. 341/2002 of the Digest ECE Regulation No. 26, Method ZM-A/20.11										
Number of samples	9										
Samples delivered on	2010-09-09										
Elaborated by	Dipl.-Ing. A. Smetana										
Responsible expert:	Dipl.-Ing. B. Kovanda										
Date of issue	2010-11-12										

Provided tests and works:

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Intention and course of the test

Based on the order of the firm ASN HAKR Brno s.r.o. dated on 29. 6. 2010, the technical laboratory TÜV SÜD Czech s.r.o., Praha provided tests and assessment:

1. roof boxes type MAGIC 350 as a representative of types MAGIC 320 and MAGIC 350, intended to trim the vehicles with roof carriers to carry loads up to a mass max. 50 kg.
2. roof carriers type HK 6, variants 340 ALU, as a representative of the variant 340 FE and ALU, variant 341 FE and ALU and variant 342 FE and ALU, intended to carry a load up to a mass max. 75 kg.
3. bicycle carrier type NZ 2 (brand name SWIFT CLIP), variant ALU 2 1154 as a representative of the variant ALU 1 1154 and ALU 3 1153, intended to be fastened to the coupling device of passenger cars and commercial vehicles to a max. width 1900 mm and intended to carry a load up to a mass max. 100 kg.
4. animal carrier type NZ 3 (brand name SWIFT CLIP), variant 1150, intended to be fastened to the coupling device of passenger cars and commercial vehicles to a max. width 1900 mm and intended to carry a load up to a mass max. 100 kg.
5. motorcycle carrier type NZ 4 (brand name SWIFT CLIP), variant 1151, intended to be fastened to the coupling device of passenger cars and commercial vehicles to a max. width 1900 mm and intended to carry a load up to a mass max. 100 kg.
6. bicycle carrier type NZ 5 (brand name SWIFT CLIP), variants TRIP 2 1158, TRIP 3 1159 intended to be fastened to the coupling device of passenger cars and commercial vehicles to a max. width 1900 mm and intended to carry a load up to a mass max. 100 kg.

The tests and assessment were provided as a basis for extension of the technical worthiness approval of the system type or component or vehicle fittings No 1 305/II, issued by the Approval Department of the Czech Ministry of Transport.

The tests and assessment were provided according to the Czech Act No. č. 56/2001 of the Digest, Regulation CMT No. 341/2002 of the Digest and Method ZM-A/20.11 in the period of 6-11/2010.

Brief description of the product

1. Roof box type MAGIC 350 serve to transport loads up to a mass max. 50 kg. It is intended to use on all approved types of roof carriers. The extension of the approval is required due to design modifications and shape of the roof box.
2. Roof carriers type HK 6, variants 340 ALU serve to transport loads up to a mass max. 75 kg. The extension of the approval is required due to modification of the clamping system of the carrier to the vehicle and due to increase of the permissible load of the roof carrier.
3. Bicycle carrier type NZ 2, variant ALU 2 1154 (brand name SWIFT CLIP) is intended to be fastened to the coupling device (class A 50) of passenger cars and commercial vehicles to a max. width 1900 mm and intended to carry a load up to a mass max. 100 kg. The extension of the approval is required due to use of light casting alloys on the basis of aluminium for construction of the main bearing parts of the carrier, earlier used steel as a basic material. Due to use of casting alloys the design of the bearing parts has been reinforced and modified. At the same time a modification of the fastening of the bicycle carrier to the vehicle has been provided.
4. Animal carrier type NZ 3 variant 1150 (brand name SWIFT CLIP), is intended to be fastened to the coupling device (class A 50) of passenger cars and commercial vehicles to a max. width 1900 mm and intended to carry a load up to a mass max. 100 kg. The basic bearing part of the animal carrier is a weldment from square profiles of design steel.
5. motorcycle carrier type NZ 4 variant 1151 (brand name SWIFT CLIP), is intended to be fastened to the coupling device of passenger cars and commercial vehicles to a max. width 1900 mm and intended to carry a load up to a mass max. 100 kg. The basic bearing part of the motorcycle carrier is a weldment from square profiles of design steel.
6. bicycle carrier type NZ 5 variants TRIP 2 1158, TRIP 3 1159 (brand name SWIFT CLIP), is intended to be fastened to the coupling device of passenger cars and commercial vehicles to a max. width 1900 mm and intended to carry a load up to a mass max. 100 kg. The basic bearing part of the bicycle carrier is a weldment from square profiles of design steel.

A detailed description of the products is a part of the technical documentation.

Operational test

1.0 Body external safety

1.1 Test according to ECE No. 26 – External projections

1.2 Test results

Roof box MAGIC 350	- Technical report No. 23070-10 - TAC - Annex No. 1
Roof carrier HK 6	- Technical report No. 23071-10 - TAC - Annex No. 2
Carriers NZ 2, NZ 3 a NZ 4	- Technical report No. 23072-10 - TAC - Annex No. 3
Carrier NZ 5	- Technical report No. 23059-13 - TAC - Annex No. 5

Conforms to the Regulation CMT No. 341/2002 of the Digest, § 34, para.. 2 (Annex 15, item 7).

2.0 Carrier's crash resistance

2.1 Test according to the Method ZM – A/20.11 p (test typ B)

2.2 Test results

Roof box MAGIC 350 - Technical report No. 23070-10 - TAC - Annex No. 1
 Expertise No. 23073-10 - TAC - Annex. 5

Roof carrier HK 6 - Technical report No. 23071-10 - TAC - Annex No. 2
 Technical report No. 61064-10 – TAC – Annex No. 4

Carriers NZ 2, NZ 3 a NZ 4 - Technical report No. 23072-10 - TAC - Annex No. 3
 Technical report No. 61064-10 – TAC – Annex No. 4

Carrier NZ 5 - Technical report No. 23059-13 - TAC - Annex No. 7

Conforms to the Regulation CMT No. 341/2002 of the Digest, § 34, para.. 2 (Annex 15, item 7).

3.0 Lighting equipment installation

3.1 Test according to ECE No. 48.04 for the carriers of type NZ 2, NZ 3, NZ 4 and NZ 5 (carriers on the coupling device).

3.2 Test results Technical report No. 23074-10 - TAC - Annex No. 6 and Technical report No. 23060-13 - TAC - Annex No. 8.

Conforms to the Regulation CMT No. 341/2002 of the Digest, § 34, para.. 2 (Annex 15, item 7).

4.0 Rear registration plate

4.1 Test according to the Directive No. 70/222/EHS for the carriers of the type NZ 2, NZ 3 , NZ 4 and NZ 5 (carriers on the coupling device).

4.2 Test results

4.2.1 Shape and dimensions of the place for the installation of the rear registration plates

Flat area in the shape of a rectangle		
	Measured [mm]	Requirement [mm]
Width	520	520
Height	120	120

4.2.2 Location of the place for the plate and its fastening

4.2.2.1 Location of the plate in relation to the medial plane of the vehicle:

- left edge of the plate is situated 260 mm to left from the medial plane of the vehicle
- the plate | nearly perpendicular to the medial plane of the vehicle

4.2.2.2 Location of the registration plate above the ground

Height of the registration plate		
	Measured [mm]	Requirement [mm]
Bottom edge	310	min 300
Upper edge	430	max. 2000

Measured on an unloaded vehicle.

4.2.2.3 Geometric visibility requirements

The registration plate is visible in the space circumscribed by four planes		
	Measured [°]	Requirement [°]
Two vertical planes in contact with the side edges of the plate and having an angle to the longitudinal medium plane of the vehicle outwards in value	50,0	min 30
A plane in contact with the upper edge of the plate and having an angle with the horizontal upwards in value	25,0	min 15
A plane through the bottom edge of the plate	N/A	N/A

Closing: The Technical laboratory TÜV SÜD Czech s.r.o., Praha provided the test for extension of technical worthiness approval:

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2. roof carriers type HK 6, variants 340 ALU, as a representative of the variant 340 FE and ALU, variant 341 FE and ALU and variant 342 FE and ALU, intended to carry a load up to a mass max. 75 kg.
3. bicycle carrier type NZ 2 (brand name SWIFT CLIP), variant ALU 2 1154 as a representative of the variant ALU 1 1154 and ALU 3 1153, intended to be fastened to the coupling device of passenger cars and commercial vehicles to a max. width 1900 mm and intended to carry a load up to a mass max. 100 kg.
4. animal carrier type NZ 3 (brand name SWIFT CLIP), variant 1150, intended to be fastened to the coupling device of passenger cars and commercial vehicles to a max. width 1900 mm and intended to carry a load up to a mass max. 100 kg.
5. motorcycle carrier type NZ 4 (brand name SWIFT CLIP), variant 1151, intended to be fastened to the coupling device of passenger cars and commercial vehicles to a max. width 1900 mm and intended to carry a load up to a mass max. 100 kg.
6. bicycle carrier type NZ 5 (brand name SWIFT CLIP), variants TRIP 2 1158, TRIP 3 1159 intended to be fastened to the coupling device of passenger cars and commercial vehicles to a max. width 1900 mm and intended to carry a load up to a mass max. 100 kg.

c o m p l i e s

the requirement of the Czech Act No. č. 56/2001 of the Digest, provided:

- the manufacture shall mark the approval at the sale in the documentation of the product as well as in the Instruction Manual
- the manufacture shall mark the products with the prescribed marking according to the proposal of the marking.

Dokumentation: all documentation concerning the provided tests are deposited in the testing laboratory TÜV SÜD Czech Ltd archival collection under Centre No. 5401623.



For TÜV SÜD Czech:

Ing. Martin Hron
Business Centre Manager – Vehicle Certification

List of Annexes

- Annex No. 1 Technical report No. 23070 – 10 – TAC
 - Annex No. 2 Technical report No. 23071 – 10 – TAC
 - Annex No. 3 Technical report No. 23072 – 10 – TAC
 - Annex No. 4 Expertise No. 61064 – 10 -TAC
 - Annex No. 5 Expertise No. 23073 – 10 - TAC
 - Annex No. 6 Technical report No. 23074 – 10 - TAC
 - Annex No. 7 Technical report No. 23059 – 13 - TAC
 - Annex No. 8 Technical report No. 23060 – 13 - TAC
- Photos