

Applicant : Redtronic Ltd., Elland HX5 9BX, United Kingdom
Type / Part No. : Spartan X/ SBX55SB0BBIN4S0M

Test Report

Durability confirmation of a magnetic beacon for high-speed and emergency braking tests.



Automotive part : Lightbar (magnetic)

Type : SpartanX LED Lightbar (magnetic)

Brand name : SpartanX

Manufacturer : REDTRONIC

Applicant : Redtronic Limited
Unit 1-9 Wellington Business Park
Quebec Street
Elland
West Yorkshire
HX5 9BX
United Kingdom

Year of manufacture : n.a.

Applicant : Redtronic Ltd., Elland HX5 9BX, United Kingdom
Type / Part No. : Spartan X/ SBX55SB0BBIN4S0M

I Scope

Testing the durability of a SpartanX LED Lightbar (magnetic, siren) brand name "SpartanX". In cooperation with the applicant the durability was tested by a highspeed and emergency braking test.

Preliminary remark

The test included the data acquisition for masses and dimensions, the dynamic high-speed und braking tests.

The test comprised no checkup for the electronic components.

Applicant : Redtronic Limited
Unit 1-9 Wellington Business Park
Quebec Street
Elland
West Yorkshire
HX5 9BX
United Kingdom

II Technical Details of the appraised lightbar

Technical documents (mounting informations) : n.a.

Automotive part : Lightbar (magnetic)

Type : SpartanX LED Lightbar (magnetic)

Serial-No. : 183009

Weight : 8.409 g

Dimensions

Diameter (outside) : 546 mm

Width : 312 mm

Height : 117 mm

Max. distance between magnetic foots (centre, lateral) : 450 mm (Distance is adjustable)

Min. distance between magnetic foots (centre, lateral) : 240 mm

Distance between magnetic foots (centre, longitudinal) : 220 mm

Applicant : **Redtronic Ltd., Elland HX5 9BX, United Kingdom**
Type / Part No. : **Spartan X/ SBX55SB0BBIN4S0M**

Number of magnetic foots : 4 magnetic foots with 12 small magnets each
Diameter magnetic foots : 88 mm
Height magnetic foots : 8 mm
Manufacturer magnets : No information
Remark : A plastic bracket is fixed below the lightbar with 4 self locking nuts. Two of this parts are fixed, therefore is the lateral distance adjustable. On each of this parts are two magnetic foots fixed mounted. The foots are not movable!

III Test protocol

1 Test conditions

1.1 Test vehicle

1.1.1 Name of manufacturer : Volkswagen
1.1.2 Type / Engine code : AU / CHHB
1.1.3 Trade name : Golf GTI
1.1.4 Vehicle class : M1
1.2 Measuring and testing equipment : Measuring and evaluation system
Speed sensor
Deceleration sensor
Scale
Measuring tape
1.3 Further requirements
1.3.1 Weather conditions : Cloudy
1.3.2 Air temperature (°C) : 14
1.3.3 Wind velocity (m/s) : < 3,0
1.3.4 Date of test : 12.04.2017
1.3.5 Test area : DEKRA Test Oval, 01998 Klettwitz, Germany

2 Mounting and preparation

The Redtronic lightbar type "SpartanX LED Lightbar (magnetic)" was mounted at a dry and clean roof of the test vehicle. Easy installation with magnetic foot. Afterwards was checked if the complete magnetic surface is in contact with the roof.

Test Report:

201740954 – SpartanX



Applicant : Redtronic Ltd., Elland HX5 9BX, United Kingdom
Type / Part No. : Spartan X/ SBX55SB0BBIN4S0M

3 High-speed test

Test run	Tested speed [km/h]	Position Lightbar
1	232,2	OK
2	235,2	OK
3	232,5	OK
4	233,5	OK

4 Braking test

The Braking test was made from different test speeds with an emergency brake!

Test run	Test speed [km/h]	Measured brake performance [m/s ²]	Brake pedal force applied to control [N]	Position Lightbar
1	100			OK
2	150	> 10	< 500	OK
3	230			OK

5 Remarks

None

Test Report:

201740954 – SpartanX



Applicant : **Redtronic Ltd., Elland HX5 9BX, United Kingdom**
Type / Part No. : **Spartan X/ SBX55SB0BBIN4S0M**

IV Statement

The result of the test is, that the durability of the magnetic lightbar "SpartanX" can be confirmed. The lightbar was tested up to a speed of 235 kph and a deceleration rate of more than 10,00 m/s² (this is equivalent to an emergency brake). There was no movement of the lightbar on the roof after the tests recognizable.

For the customers is an instruction manuel necessary! With mounting instructions of the Lightbar, that is has to be fixed by dry and clean conditions on a magnetic roof. Further the connection between the magnetic foot and the roof has to be checked continuously.

The Test Report comprises the pages 1 to 10. (including annex)
The Test Report shall be reproduced and published in full only and by the client only. It shall be reproduced partially with the written permission of the Test Laboratory only.

TECHNICAL SERVICE

designated by
designation body – KBA-P 00006-95
Type Approval Division – RDW-99050017
NSAI – National Standards Authority of Ireland – Technical Service No. 91

accredited by
Deutsche Akkreditierungsstelle GmbH
Federal Republic of Germany
Test Laboratory D-PL-11060-01-00
Inspection Body D-IS-11060-01-00

Klettwitz, 27.04.2017



Dipl.-Ing.(FH) René Kölling
Specialist

Test Report:

201740954 – SpartanX

Annex: Foto Documentation



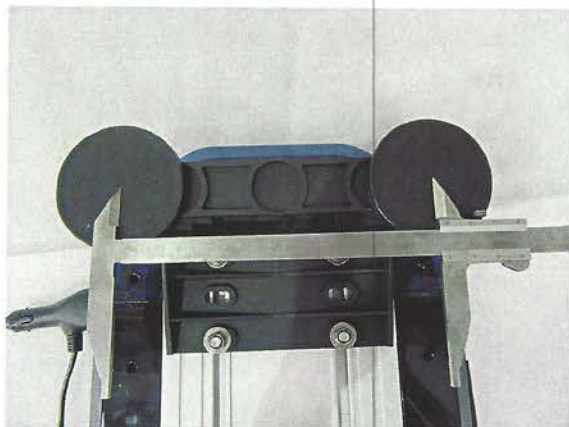
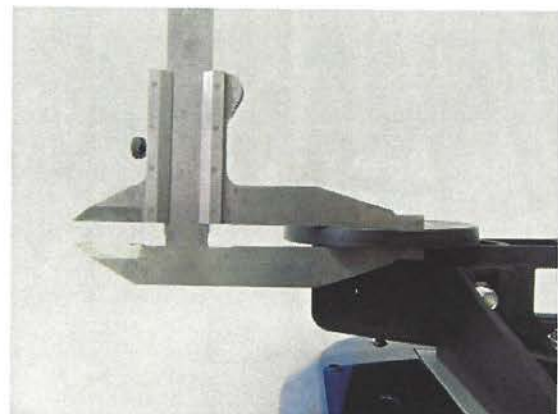
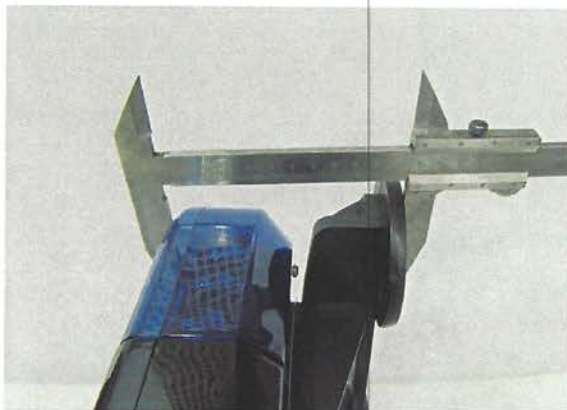
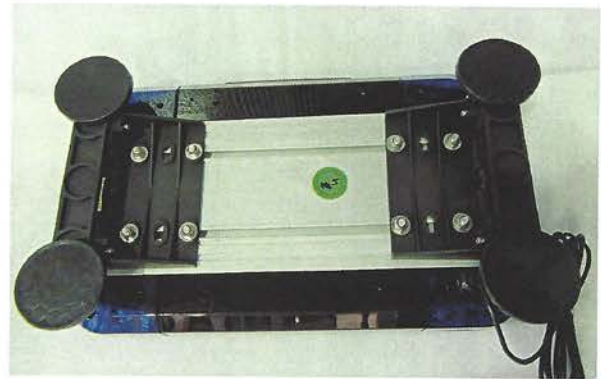
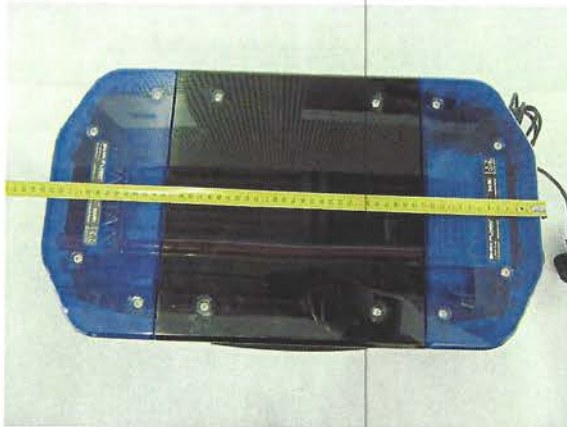
Applicant : Redtronic Ltd., Elland HX5 9BX, United Kingdom
Type / Part No. : Spartan Basic/ TR12SCBB

SpartanX LED Lightbar





Details





Test Vehicle

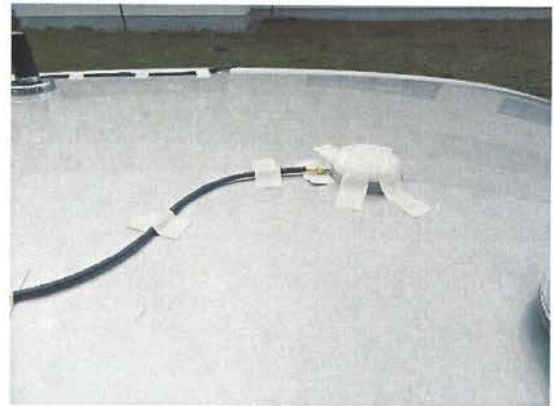




Measuring and testing equipment



Measuring device



GPS Mouse

Positioning test samples



Position before testing



Position after testing