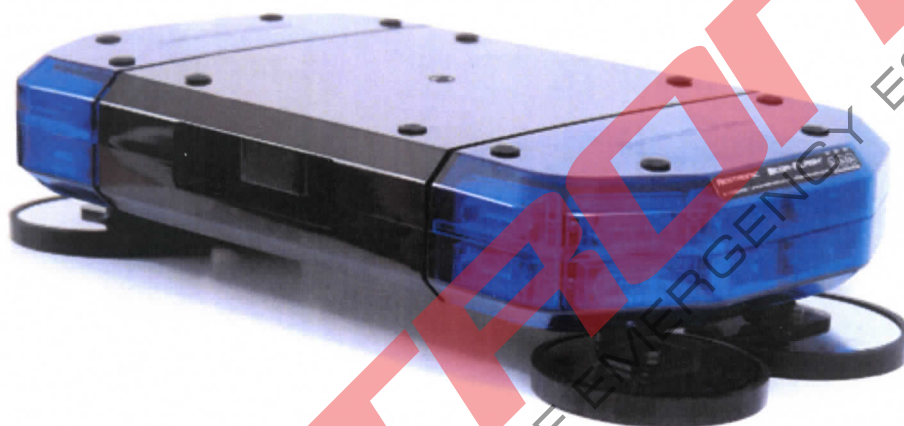


Applicant : Redtronic Ltd., Elland HX5 9BX, United Kingdom
Type : Mega-Flash 360 Lightbar

Test Report

Durability confirmation of a magnetic lightbar for highspeed and braking tests.



Automotive part : Lightbar (magnetic)

Type : Mega-Flash 360 Lightbar

Trade name : Mega-Flash

Manufacturer : REDTRONIC

Applicant : Redtronic Limited
Unit 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 : **Mega-Flash 360 Lightbar**

I Scope

Testing the durability of a magnetic lightbar type "Mega-Flash 360 Lightbar". In cooperation with the applicant the durability was tested by a highspeed and 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 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 : Mega Flash 360 Lightbar

Identical-No. : none

Weight : 9,8 kg

Dimensions

Length : 545 mm

Width : 305 mm

Hight : 120 mm

Max. distance between magnetic foots (center, lateral) : 455 mm

Min. distance between magnetic foots (center, lateral) : 368 mm

Distance between magnetic foots (center, longitudinal) : 125 mm

Applicant : **Redtronic Ltd., Elland HX5 9BX, United Kingdom**
Type : **Mega-Flash 360 Lightbar**

Number of magnetic foots : 4
Diameter magnetic foots : 87 mm
Height magentic foots : 8 mm
Remark : A double tilted steel (wall thickness 2mm) 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, but because of the construction and strong magnetic force, are small movements possible.

III Test protocol

1 Test conditions

1.1 Test vehicle

1.1.1 Name of manufacturer : Porsche
1.1.2 Type : 92A
1.1.3 Trade name : Cayenne S
1.1.4 Vehicle class : M1G
1.1.4 Engine power : 294 kW / 6500 min⁻¹

1.2 Measuring and testing equipment : Measuring and evaluation system
Speed sensor
Footpedal sensor
DecelARATION sensor
Scale
Measuring tape

1.3 Further requirements

1.3.1 Weather conditions : Cloudy, drizzling rain
1.3.2 Air temperature (°C) : 7
1.3.3 Wind velocity (m/s) : < 4,5
1.3.4 Test area : DEKRA Test Oval, 01998 Klettwitz, Germany

Applicant : Redtronic Ltd., Elland HX5 9BX, United Kingdom
Type : Mega-Flash 360 Lightbar

2 Mounting and preparation

The Redtronic lightbar type "Mega-Flash 360 lightbar" was mounted at a dry and clean roof of the test vehicle. Easy installation with magnetic foots. Afterwards was checked if all four foots are in contact with the roof. Further the lightbar was secured by a strap on each side. This was made just for safety reasons, the strap was not tighten! For checking any movements of the lightbar at the roof, there made some stripes next to the magnetic foots.

3 Highspeed test

Test run	Tested speed [km/h]	Position Lightbar
1	235,0	OK
2	235,4	OK
3	234,9	OK

4 Braking test

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

Test run	Test speed [km/h]	Measured brake performance [m/s ²]	Measured force applied to control [N]	Position Lightbar
1	100	10,00	238	OK
2	150	10,04	259	OK
3	200	9,91	336	OK

5 Remarks

The lightbar was fixed on the roof under dry conditions, the test was made by drizzling rain. There was no influence for the test, also the mounted straps where not tighten!

Applicant : **Redtronic Ltd., Elland HX5 9BX, United Kingdom**
Type : **Mega-Flash 360 Lightbar**

IV Statement

The result of the test is, that the durability of the lightbar "Mega-Flash 360" can be confirmed. The lightbar was tested up to a speed of 235 km/h and a deceleration rate of 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 lihgtbar, that is has to be fixed by dry and clean conditions on a magnetic roof. Further the connection between the four magnetic foots and the roof as well as the self locking nuts has to be checked continuously.

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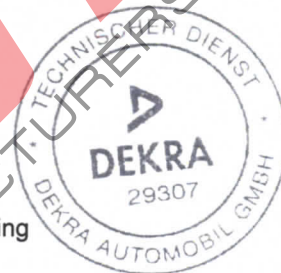
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Test Laboratory D-PL-11060-01-00
Inspection Body D-IS-11060-01-00

Klettwitz, 14.03.2012


Dipl.-Ing. (FH) René Kölling
Specialist



Test Report:
201227704

Annex: Foto Documentation



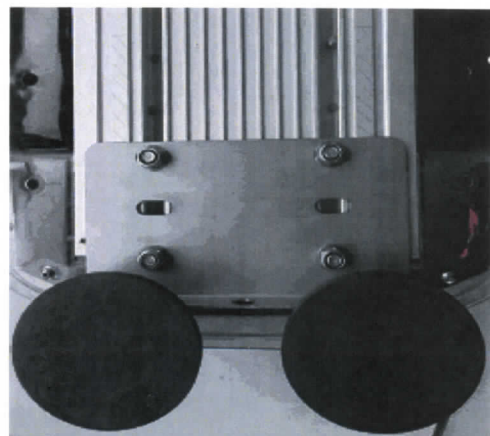
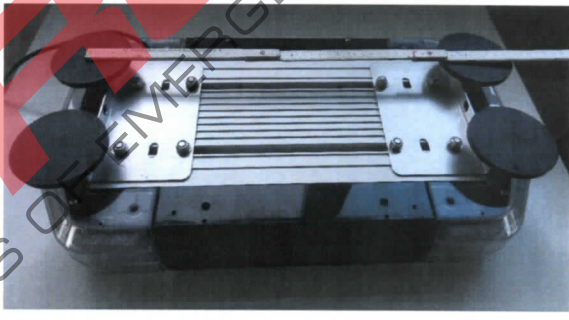
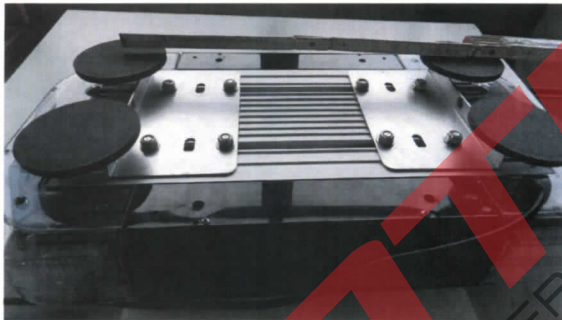
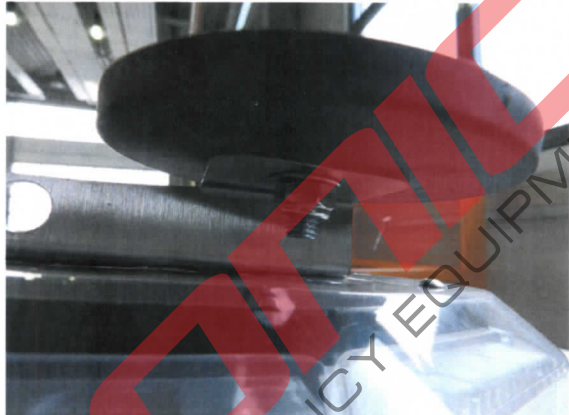
Applicant : **Redtronic Ltd., Elland HX5 9BX, United Kingdom**
Type : **Mega-Flash 360 Lightbar**

Mega-Flash 360 Lightbar (front view, side view)



Applicant : Redtronic Ltd., Elland HX5 9BX, United Kingdom
Type : Mega-Flash 360 Lightbar

Details

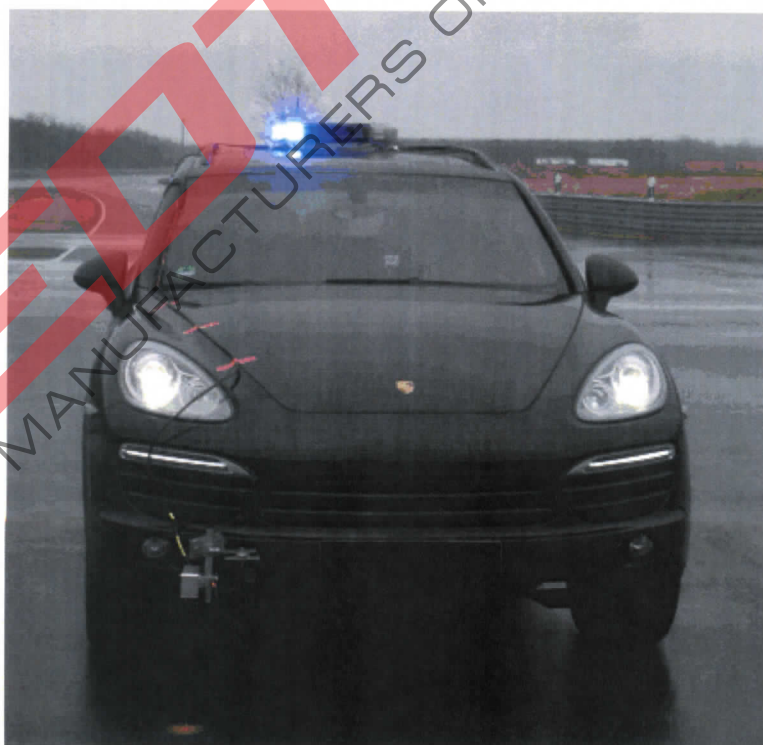


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201227704



Applicant : **Redtronic Ltd., Elland HX5 9BX, United Kingdom**
Type : **Mega-Flash 360 Lightbar**

Test Vehicle



Applicant : **Redtronic Ltd., Elland HX5 9BX, United Kingdom**
Type : **Mega-Flash 360 Lightbar**

Measuring and testing equipment

