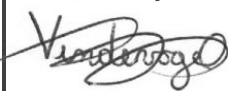
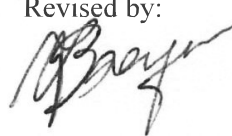


1. Report	No.: <i>HLIG181001TM1</i>	Update: 00
	Ref.:	Annexes: see 6

2. Test Subject	Installation of lighting devices
According to: ECE R48-06	Supplement 8
	EC 661/2009

3. Information	
Manufacturer:	<i>Van 'n Bike BVBA</i> <i>Kortestraat 12</i> <i>2980 Zoersel</i> <i>Belgium</i>
Make of the vehicle:	Fiat
Commercial description:	Ducato
Category(ies):	M1/N1
Vehicle identification	ZFA25000002807877

4. Test		
Place and date:	ESTL, Wafelstraat 46, Deerlijk, Belgium	12/10/2018
Manufacturer's representative:	Mr. René Verelst	
Test Engineer:	Ba. Matthias Vindevogel	
Test Equipment ref.:	T_DHM_01; T_STL_01 T_WKH_01; T_AHM_03 T_LMT_3M_01	
Technical documentation:	-	
Location of E-mark:	-	

5. Conclusion	
The models presented fulfils the prescriptions contained in Regulation ECE R48-06	
Performed by:	Revised by:
	
Ba. Matthias Vindevogel Test Engineer	Ing. K Baeyens Test responsible
Date: 12/10/2018	



Report : **HLIG181001TM1**

Report type : Base report / ~~Extension~~ / ~~Revision~~
Reason for extension / -
Scope for approval : Individual / ~~National series~~ / ~~EU series~~
Worst case evaluation :-

1. Informatio

Make of the vehicle: Fiat
Commercial description: Ducato
Chassisnummer: ZFA25000002807877
Sample Reception Date: 4/05/2018

2. Requirements

REAR POSITION LAMP (Par .6.10)

ECE R7

Presence: Mandatory
Number: Two
Colour: Red

Position

$h_{\min} \geq 350\text{mm}$
 $H_{\max} \leq 1500\text{mm}$ (or 2100mm if the shape of the bodywork makes it
 $E \leq 400\text{mm}$
 $A \geq 600\text{mm}$ if $L \geq 1300\text{mm}$ (except N1)
 $A \geq 400\text{mm}$ if $L < 1300\text{mm}$ (except N1)

Geometric visibility

Horizontal: 80° outwards, 45° inwards
Vertical: 15° up and downwards (downwards may be reduced to 5° if

Electrical connections

If a rear position lamp is reciprocally incorporated with a direction-indicator, the electrical connection of the rear position lamp on the relevant side of the vehicle or the reciprocally incorporated part of it
Marking?

See vehicle approval

COMPLIES
COMPLIES

See vehicle approval

STOP LAMP (Par .6.7)

ECE R7

Presence: Mandatory
Number: Two S1 or S2 cat. devices and one (or two) S3 or
Colour: Red

Position

(S1 or S2) $h_{\min} \geq 350\text{mm}$
(S1 or S2) $H_{\max} \leq 1500\text{mm}$ (or 2100mm if the shape of the bodywork
(S3) $H_{\min} \geq 850\text{mm}$ (mounted above the S1/S2 lamps)
 $E \leq 400\text{mm}$
 $A \geq 600\text{mm}$ if $L \geq 1300\text{mm}$
 $A \geq 400\text{mm}$ if $L < 1300\text{mm}$

Geometric visibility

Horizontal: (S1 or S2) 45° outwards, 45° inwards
(S3) 10° outwards and inwards
Vertical: (S1 and S2) 15° up and downwards (downwards may be
(S3) 10° and 5° below the horizontal

Electrical connections

All stop lamps shall light up simultaneously when the braking system
The stop lamps need not function if the ignition key is in the off
Marking?

See vehicle approval

COMPLIES
COMPLIES
COMPLIES
COMPLIES

See vehicle approval

REAR REGISTRATION PLATE LAMP (Par .6.8)**ECE R4**

Presence: Mandatory
 Number: Such that the device illuminates the site of the

Position

Such that the device illuminates the site of the registration plate.
 In width, height and length.

See vehicle approval

Geometric visibility

Such that the device illuminates the site of the registration plate.
 Marking?

REAR FOG LAMP (Par .6.11)**ECE R38**

Presence: Mandatory
 Number: One or two devices of F or F1 or F2 categories
 Colour: Red

Position $h_{\min} \geq 250\text{mm}$ $H_{\max} \leq 1000\text{mm}$

If one rear fog lamp installed: placement left or in the center of the
 Distance to braking light A* > 100mm

See vehicle approval

Electrical connections

The rear fog-lamp(s) cannot be switched on unless the main beams,
 Can be switched off independently of any other lamp.

Geometric visibility

Horizontal: 25° outwards and inwards

Vertical: 5° up and downwards

Marking?

COMPLIES

COMPLIES

See vehicle approval

REVERSING LAMP (Par .6.4)**ECE R23**

Presence: Mandatory
 Number: L<6000mm and cat. M1/N1: One device mandatory (one optional)
 L>6000mm except cat. M1/N1: Two mandatory, two optional
 Colour: White

Position $h_{\min} \geq 250\text{mm}$ $H_{\max} \leq 1200\text{mm}$

See vehicle approval

Electrical connections

May only light up if reverse gear is engaged and if the contact is on.
 Optional devices may only light up if mandatory devices light up.
 Par. 6.4.7.2 devices on the side may be switched on for slow

Geometric visibility

Horizontal: One device: 45° outwards and inwards

Two devices: 45° outwards, 30° inwards

Vertical: 15° up and 5° downwards

Marking?

COMPLIES

COMPLIES

COMPLIES

See vehicle approval

REAR RETRO-REFLECTOR, NON-TRIANGULAR (Par .6.14)**ECE R3**

Presence: Mandatory
 Number: Two, performance of Class IA or Class IB.
 Colour: Red

Position

$h_{\min} \geq 250\text{mm}$
 $H_{\max} \leq 900\text{mm}$ (or 1500mm if the shape of the bodywork makes it)
 $E \leq 400\text{mm}$
 $A \geq 600\text{mm}$ if $L \geq 1300\text{mm}$ (not for cat M1)
 $A \geq 400\text{mm}$ if $L < 1300\text{mm}$ (not for cat M1)

See vehicle approval

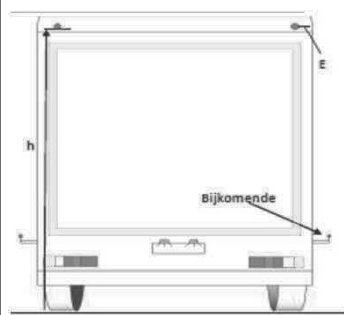
Geometric visibility

Horizontal: 30° outwards and inwards
 Vertical: 10° up and downwards (downwards may be reduced to 5° if
 Marking?

COMPLIES

COMPLIES

See vehicle approval

END-OUTLINE MARKER LAMP (Par 6.13)**ECE R7**

Presence: Mandatory if $L > 2,1\text{m}$ (Optional if $1,8\text{m} < L <$
 Number: Two mandatory, two optional
 Colour: White

Position

h_{\max} maximum height compatible with the other requirements
 $E \leq 400\text{mm}$ (as wide as possible)

See vehicle approval

Geometric visibility

Horizontal: 80° outwards
 Vertical: 5° up and 20° downwards
 Marking?

COMPLIES

COMPLIES

See vehicle approval

5. Conclusions and remarks

This evaluation confirms that the mounted luggage carrying system doesn't interfere with the visibility angles of the evaluated mandatory rear lights on the test vehicle. Every time the luggage carrying system is mounted on a vehicle, the visibility angles must be re-checked and these must comply with the R48 regulation.

If the geometry of other vehicles (Citroen Jumper, Peugeot Boxer, other Fiat Ducato) is equal to the tested vehicle (Fiat Ducato MY), this report is also valid for these vehicles.

6. Annexes

No.	Description	# Pages
A	Representative vehicle	1
B	Drawing of the luggage carrying system	1

