



Index du dossier de réception d'une homologation par type en application d'un Règlement
Index to the information package of a type approval with regard to a Regulation

Dernière Série d'amende- ments applicable <i>Last applicable Series of amendments</i>	N° de la réception de base et mise à jour <i>Base approval and update No</i>	Extension N° <i>Extension No</i>	Révision N° <i>Revision No</i>	Date d'émission <i>Issue date</i>	Fiche de renseignements <i>Information document</i>	
					Référence <i>Reference</i>	Nombre de pages <i>Number of pages</i>
48-05	00	-	-	24.10.2014	BAL SIGNAL	27

Vu pour être annexé à la fiche de réception,
Approved and to be attached to the approval certificate,
Le Conseiller,
The Advisor,

ir. A. DESCAMPS

N° d'homologation mis à jour : <i>Updated Approval No</i>	E6-48R-050405	BEVASYS : 201414237
Mise à jour N° : <i>Update No</i>	00	Date d'émission : <i>Issue date</i> 24.10.2014
		P 1

COMMUNICATION CONCERNANT L'HOMOLOGATION D'UN TYPE DE VEHICULE POUR CE QUI EST DU
COMMUNICATION CONCERNING THE APPROVAL OF A TYPE OF VEHICLE WITH REGARD TO THE
MONTAGE DES DISPOSITIFS D'ECLAIRAGE EN APPLICATION DU REGLEMENT N° 48-05
INSTALLATION OF LIGHTING AND LIGHT-SIGNALLING DEVICES, PURSUANT TO REGULATION NO. 48-05

N° d'homologation : E6-48R-050405

Approval No

1. Marque de fabrique ou de commerce du véhicule : Benalu
1. Trade name or mark of the vehicle
2. Désignation du type de véhicule par le fabricant : BAL SIGNAL
2. Manufacturer's name for the type of vehicle
3. Nom et adresse du fabricant :
3. Manufacturer's name and address

Benalu
Rue Fresnel
Boîte Postale 80 0018
62800 – Lievin
France

4. Nom et adresse du mandataire du fabricant (le cas échéant) : -
4. If applicable, name and address of the manufacturer's representative

5. Dispositif soumis à l'homologation le : 2014/05/18 & 2017/07/18
5. Submitted for approval on

6. Service technique chargé des essais :
6. Technical service responsible for conducting approval tests

AIB VINCOTTE INTERNATIONAL
Jan Olieslagerslaan 35
1800 VILVOORDE
BELGIUM

7. Date du procès-verbal d'essai : 18.08.2014
7. Date of test report

8. Numéro du procès-verbal d'essai : H1460268001/029
8. Number of test report

9. Description sommaire : Dispositifs d'éclairage et de signalisation lumineuse présents sur le véhicule :
9. Concise description : Lighting and light-signalling devices on the vehicle

voir fiche de renseignements

- 9.1. Feux-route : oui / non
9.1. *Main-beam headlamps : yes / no*
- 9.2. Feux-croisement : oui / non
9.2. *Dipped-beam headlamps : yes / no*
- 9.3. Feux avant brouillard : oui / non
9.3. *Front fog lamps : yes / no*
- 9.4. Feux-marche arrière : oui / non
9.4. *Reversing lamps : yes / no*
- 9.5. Feux-indicateurs de direction avant : oui / non
9.5. *Front direction-indicators : yes / no*
- 9.6. Feux-indicateurs de direction arrière : oui / non
9.6. *Rear direction-indicators : yes / no*
- 9.7. Feux-indicateurs de direction latéraux : oui / non
9.7. *Side direction-indicators : yes / no*
- 9.8. Signal de détresse : oui / non
9.8. *Hazard warning signal : yes / no*
- 9.9. Feux-stop : oui / non
9.9. *Stop lamps : yes / no*
- 9.10. Dispositif d'éclairage de la plaque d'immatriculation arrière : oui / non
9.10. *Rear registration plate illuminating device : yes / no*
- 9.11. Feux-position avant : oui / non
9.11. *Front position lamps : yes / no*
- 9.12. Feux-position arrière : oui / non
9.12. *Rear position lamps : yes / no*
- 9.13. Feux arrière brouillard: oui / non
9.13. *Rear fog lamps : yes / no*
- 9.14. Feux-stationnement : oui / non
9.14. *Parking lamps : yes / no*
- 9.15. Feux-encombrement : oui / non
9.15. *End-outline marker lamps : yes / no*
- 9.16. Catadioptres arrière, non triangulaires : oui / non
9.16. *Rear retro-reflectors, non-triangular : yes / no*
- 9.17. Catadioptres arrière, triangulaires : oui / non
9.17. *Rear retro-reflectors, triangular : yes / no*
- 9.18. Catadioptres avant, non triangulaires : oui / non
9.18. *Front retro-reflectors, non-triangular : yes / no*
- 9.19. Catadioptres latéraux, non triangulaires : oui / non
9.19. *Side retro-reflectors, non-triangular : yes / no*
- 9.20. Feux-position latéraux : oui / non
9.20. *Side-marker lamps : yes / no*
- 9.21. Feux-circulation diurnes : oui / non
9.21. *Daytime running lamps : yes / no*

- 9.22. Système d'éclairage avant adaptatif (AFS) : oui / non
 9.22. *Adaptive front lighting system (AFS) : yes / no*
- 9.23. Feux-d'angle : oui / non
 9.23. *Cornering lamps : yes / no*
- 9.24. Marquages à grande visibilité : oui / non
 9.24. *Conspicuity markings : yes / no*
- 9.24.1. Marquage intégral de gabarit : oui / non (arrière), oui / non (latéraux)
 9.24.1. *Full contour markings : yes / no (rear), yes / no (side)*
- 9.24.2. Marquage partiel de gabarit : oui / non (arrière), oui / non (latéraux)
 9.24.2. *Partial contour markings : yes / no (rear), yes / no (side)*
- 9.24.3. Marquage linéaire : oui / non (arrière), oui / non (latéraux)
 9.24.3. *Line markings : yes / no (rear), yes / no (side)*
- 9.24.4. Exemption concernant le marquage à grande visibilité conformément au paragraphe 6.21.1.2.5 :
 oui / non (arrière) commentaires : non
 oui / non (latéraux) commentaires : non
 9.24.4. *Exemption regarding conspicuity marking according to paragraph 6.21.1.2.5 :*
yes / no (rear) comments :
yes / no (side) comments :
- 9.25. Signal de freinage d'urgence : oui / non
 9.25. *Emergency stop signal : yes / no*
- 9.26. Feux de manœuvre : oui / non
 9.26. *Manoeuvring lamps : yes / no*
- 9.27. Feux de courtoisie extérieur : oui / non
 9.27. *Exterior courtesy lamps : yes / no*
- 9.28. Feux équivalents : oui / non
 9.28. *Equivalent lamps : yes / no*
- 9.29. Charge maximale autorisée dans le coffre : -
 9.29. *Maximum permissible load in the boot*
10. Remarques : -
 10. *Comments*
- 10.1. Remarques éventuelles sur les éléments mobiles : -
 10.1. *Any comments on movable components*
- 10.2. La méthode utilisée pour la définition de la surface apparente :
 10.2. *Method used for the definition of the apparent surface*
 - limite de la plage éclairante, ou
 - *boundary of the illuminating surface or*
 - ~~la surface de sortie de la lumière~~¹
 - *light-emitting surface*¹
- 10.3. Autres remarques (valables pour la conduite à droite ou la conduite à gauche) : -
 10.3. *Other comments (valid for right-hand or left-hand drive vehicles)*
- 10.4. Remarques concernant l'AFS (conformément aux paragraphes 3.2.6 et 6.22.7.4 du présent Règlement) : -
 10.4. *Comments concerning AFS (according to paragraphs 3.2.6 and 6.22.7.4 of the Regulation)*

¹ Biffer la mention inutile - *Strike out what does not apply*

- 10.5. Commentaires au sujet de la surface couverte par le marquage à grande visibilité si elle est inférieure à la valeur minimale de 80% requise aux paragraphes 6.21.4.1.2. et 6.21.4.2.2 : -
 10.5. *Comments regarding the extent of coverage of the conspicuity marking if it is less than the minimum value of 80% required by Paragraphs 6.21.4.1.2. and 6.21.4.2.2.*
- 10.6 For vehicles of M and N categories comments regarding the electrical supply conditions (according to paragraphs 3.2.7. and 5.27. of the Regulation) : -
 10.6 *Pour les véhicules des catégories M et N, observations concernant les conditions d'alimentation électrique (conformément aux paragraphes 3.2.7 et 5.27 du Règlement)*
- 10.7 Commentaires au sujet du marquage à grande visibilité (conformément aux paragraphes 6.21.1.2.5. et 6.21.4.3.1. du présent Règlement) :
 10.7 *Comments regarding conspicuity marking (according to paragraphs 6.21.1.2.5., and 6.21.4.3.1. of this Regulation)*
- 10.8 Commentaires au sujet du marquage à grande visibilité (véhicules incomplets ou véhicules complets conformément aux paragraphes 6.21.1.2.1 et 6.21.1.2.1.1. : voir fiche de renseignements
~~Véhicules incomplets (oui/non), Véhicules complets (oui/non), Véhicules complétés (oui/non)~~
 10.8 *Comments regarding conspicuity marking (Incomplete vehicle or Complete Vehicles according to paragraphs 6.21.1.2.1. and 6.21.1.2.1.1.:*
Incomplete vehicles (yes/no), complete vehicles (yes/no), completed vehicles (yes/no)
11. Position de la marque d'homologation : près de la plaque du constructeur
 11. *Position of the approval mark*
12. Motif(s) de l'extension d'homologation (le cas échéant) : -
 12. *Reason(s) for extension (if applicable)*
13. L'homologation est accordée/étendue.
 13. *Approval granted/extended.*
14. Fait à Bruxelles
 14. *Place*
15. Date : 24.10.2014
 15. *Date*
16. Signature :
 16. *Signature*

AU NOM DU MINISTRE :
 ON BEHALF OF THE MINISTER
 Pour le Directeur Général,
 For the Director General
 Le Conseiller,
 The Advisor,



ir. A. DESCAMPS

17. Les pièces suivantes, portant le numéro d'homologation indiqué ci-dessus, sont disponibles sur demande : fiche de renseignements

17. *The following documents, bearing the approval number shown above, are available on request*

**AIB-VINÇOTTE International n.v.**

Head office: Diamant Building – A. Reyerslaan 80 – B-1030 Brussels

Company number : BE 0462.513.222 – HRB : 621315 – Internet : www.vincotte.com☒ Safety, quality and environmental services

ISO/IEC 17020 Accredited inspection body - Accreditation certificate BELAC No. 016-INSP

AUTOMOTIVE CERTIFICATION

Business Class Kantorenpark – Jan Olieslagerslaan 35 – B-1800 Vilvoorde

Telephone : +32 (0)2/674.58.85 – Fax : +32 (0)2/674.59.62

E-mail: homologation@vincotte.be

**1. SUBJECT : INSTALLATION OF LIGHTING AND LIGHT
SIGNALLING DEVICES**~~76/756/EEC~~ 2008/89/EC & R48-05

2. REF. :	Report number : H1460268001/029	No. of pages : 1 of 21	No. of annexes : -
	Bevasys : 201414237	Approval No. : 0405 00	Update : 00

3. GENERALITIES :

Make of Vehicle : Benalu Category(ies) : O4

Commercial Name : - Hand of drive : -

Type : BAL SIGNAL

Name and address of the manufacturer :

Benalu

Rue Fresnel

Boîte Postale 80 0018

62800 – Lievin

France

4. TESTS : Date and place : 2014/05/18 & 2017/07/18 - Benalu

Applied document(s) : BAL SIGNAL

AVI Inspector : Olivier Jacques-Houssa

Manufacturer's representative : Eric Delohen

Location of E-mark : front right side of the vehicle

5. CONCLUSIONS :


The tests were carried out according to the following specifications :

- ~~Council Directive 76/756/EEC of 27 July 1976 last amended by Commission Directive 2008/89/EC of 24 september 2008~~
- UNECE Regulation 48 incorporating to the 05 series of amendments

The models presented comply with the requirements to be applied.

Date : 2014.08.18

Signature :


AIB-VINÇOTTE INTERNATIONAL n.v/sa
Olivier JACQUES-HOUSSA
Automotive Certification

GENERAL SPECIFICATIONS

Characteristics concerned and prescriptions to apply	References D : Directive R : Regulation	Conformity	Not applied	Value
Retain the characteristics laid down under normal conditions of use. It shall not be possible for the lamps to be inadvertently maladjusted.	D : A II 5.1. R : 5.1.	x		
Correct adjustment of the orientation of main-beam head lamps, dipped-beam head lamps and the front fog lamps can easily be carried out.	D : A II 5.2. R : 5.2.		x	
Requirements relating to the alignment of the reference axis of the lamps.	D : A II 5.3. R : 5.3.	x		
Requirements relating to the verification of the height and orientation of the lamps ¹ .	D : A II 5.4. R : 5.4.	x		
Specific requirements relating to lamps constituting a pair.	D : A II 5.5. - 5.6. R : 5.5. - 5.6.	x		
Lamps may be grouped, combined or reciprocally incorporated with one another provided that all requirements regarding colour, position, orientation, geometric visibility, electrical connections and "other requirements", if any, for each lamp, are fulfilled.	D : A II 5.7 R : 5.7.	x		
Requirements relating to the measurement of the height above the ground and position, as regards width. Where the height/width clearly meets the requirements, the exact edges need not to be determined.	D : A II 5.8. R : 5.8.	x		
In the absence of specific instructions, the photometric characteristics (e.g. intensity, colour, apparent surface, etc.) of a lamp shall not be intentionally varied during the period of activation of the lamp.	D : A II 5.9. R : 5.9.	x		
Direction-indicator lamps, the vehicle-hazard warning signal, amber side-marker lamps complying with paragraph 6.18.7. below, and the emergency stop signal shall be flashing lamps.	R : 5.9.1.	x		
Requirements of lamps regarding photometric characteristics.	R : 5.9.2.	x		
No red light which could give rise to confusion shall be emitted from a lamp as defined in paragraph 2.7. in a forward direction and no white light which could give rise to confusion, shall be emitted from a lamp as defined in paragraph 2.7. in a rearward direction. No account shall be taken of lighting devices fitted for the interior lighting of the vehicle.	D : A II 5.10. R : 5.10.			
Visibility of red light to the front		x		
Visibility of white light to the rear.		x		
The electrical connections shall be such that the front and rear position lamps, the end-outline marker lamps, if they exist, the side-marker lamps, if they exist, and the rear registration plate lamp can only be switched ON and OFF simultaneously.	D : A II 5.11. R : 5.11.		x	
This condition does not apply:				

¹ In the case where an AFS is installed, with the system in its neutral state

Characteristics concerned and prescriptions to apply	References D : Directive R : Regulation	Conformity	Not applied	Value
when front and rear position lamps are switched ON, as well as side-marker lamps when combined or reciprocally incorporated with said lamps, as parking lamps; <i>or</i>	D : A II 5.11.1.1 R : 5.11.1.1			
when side-marker lamps flash in conjunction with direction indicators; <i>or</i>	D : A II 5.11.1.2. R : 5.11.1.2.			
when light signalling system operates according to 6.2.7.6.2	D : A II 5.11.1.3. R : 5.11.1.3.			
To front position lamps when their function is substituted under the provisions of paragraph 5.12.1. below.	D : A II 5.11.2. R : 5.11.2.			
In the case of an interdependent lamp system, all light sources shall be switched ON and OFF simultaneously.	D : A II 5.11.3. R : 5.11.3.			
The electrical connections shall be such that the main-beam and dipped-beam headlamps and the front fog lamps cannot be switched on unless the lamps referred to in paragraph 5.11. are also switched on. This requirement shall not apply, however, to main-beam or dipped-beam headlamps when their luminous warnings consist of the intermittent lighting up at short intervals of the main-beam headlamp or the intermittent lighting up at short intervals of the dipped-beam headlamp or the alternate lighting up at short intervals of the main-beam and dipped-beam headlamps.	D : A II 5.12. R : 5.12.		x	
The dipped-beam headlamps and/or the main-beam headlamps and/or the front fog lamps may substitute the function of the front position lamps, provided that:	D : A II 5.12.1 R : 5.12.1			
Their electrical connections are such that in case of failure of any of these lighting devices the front position lamps are automatically re-activated; <i>and</i>	D : A II 5.12.1.1 R : 5.12.1.1			
The substituting lamp/function meets, for the respective position lamp, the requirements concerning:	D : A II 5.12.1.2 R : 5.12.1.2			
(a) The geometric visibility prescribed for the front position lamps in 6.9.5; <i>and</i>				
(b) The minimum photometric values according to the angles of light distribution; <i>and</i>				
Appropriate evidence demonstrating compliance with the requirements indicated in paragraph 5.12.1.2. above is provided in the test reports of the substituting lamp.	D : A II 5.12.1.3 R : 5.12.1.3			
Where a closed-circuit tell-tale is prescribed by this Regulation it may be replaced by an 'operating' tell-tale.	D : A II 5.13. R : 5.13.		x	
Requirements for concealable lamps.	D : A II 5.14. R : 5.14.		x	
Requirements relating colours of the light emitted by the lamps.	D : A II 5.15. R : 5.15.	x		
Requirements relating to the number of lamps.	D : A II 5.16. R : 5.16	x		
Any lamp may be installed on movable components provided that the conditions specified in § 5.18., 5.19. and 5.20. are fulfilled.	D : A II 5.17. R : 5.17.	x		

Characteristics concerned and prescriptions to apply	References D : Directive R : Regulation	Conformity	Not applied	Value
<p>Rear position lamps, rear direction indicators and rear retro- reflectors, triangular as well as non-triangular, may be installed on movable components only :</p> <p>If at all fixed positions of the movable components the lamps on the movable components meet all the position, geometric visibility and photometric requirements for those lamps</p> <p>In the case where the functions referred to in paragraph 5.18. are obtained by an assembly of two lamps marked "D" (see paragraph 2.16.1.), only one of the lamps needs to meet the position, geometric visibility and photometric requirements for those lamps at all fixed positions of the movable components</p> <p><i>or</i></p> <p>Where additional lamps for the above functions are fitted and are activated, when the movable component is in any fixed open position, provided that these additional lamps satisfy all the position, geometric visibility and photometric requirements applicable to the lamps installed on the movable component.</p> <p>In the case where the functions referred to in paragraph 5.18. are obtained by an interdependent lamp system either of the following conditions shall apply :</p> <p>(a) Should the complete interdependent lamp system be mounted on the moving component(s), the requirements of paragraph 5.18.1. shall be satisfied. However, additional lamps for the above functions may be activated, when the movable component is in any fixed open position, provided that these additional lamps satisfy all the position, geometric visibility and photometric requirements applicable to the lamps installed on the movable component.</p> <p><i>or</i></p> <p>(b) Should the interdependent lamp system be partly mounted on the fixed component and partly mounted on a movable component, the interdependent lamp(s) specified by the Applicant during the device approval procedure shall meet all the position, outwards geometric visibility and photometric requirements for those lamps, at all fixed positions of the movable component(s). The inwards geometric visibility requirement(s) is(are) deemed to be satisfied if this(these) interdependent lamp(s) still conform(s) to the photometric values prescribed in the field of light distribution for the approval of the device, at all fixed positions of the movable component(s)</p> <p>When the movable components are in a position other than a "normal position of use" the devices installed on them shall not cause undue discomfort to road users.</p>	<p>D : A II 5.18. R : 5.18.</p> <p>D : A II 5.18.1. R : 5.18.1.</p> <p>D : A II 5.18.2. R : 5.18.2.</p> <p>D : A II 5.18.3. R : 5.18.3.</p> <p>D : A II 5.18.4. R : 5.18.4.</p> <p>D : A II 5.19. R : 5.19.</p>	<p>x</p> <p>x</p> <p>x</p> <p>x</p>		

Characteristics concerned and prescriptions to apply	References D : Directive R : Regulation	Conformity	Not applied	Value
<p>When a lamp is installed on a movable component and the movable component is in the "normal position(s)" of use, the lamp must always return to the position(s) specified by the manufacturer in accordance with this Regulation/Directive. In the case of dipped-beam head lamps and front fog lamps, this requirement shall be considered satisfied if, when the movable components are moved and returned to the normal position 10 times, no value of the angular inclination of these lamps relative to its support, measured after each operation of the movable component, differs by more than 0,15 % from the average of the 10 measured values.</p> <p>If this value is exceeded, each limit specified in § 6.2.6.1.1. shall then be modified by this excess to decrease the allowed range of inclinations when checking the vehicles according to Annex 6.</p> <p>The apparent surface in the direction of the reference axis of front and rear position lamps, front and rear direction-indicator lamps and retro-reflectors shall not be hidden more than 50 % by any movable component, with or without a light-signalling device installed on it, in any fixed position different from the "normal position of use".</p> <p>If the above requirement is not practicable :</p> <p>Additional lamps satisfying all the position, geometric visibility, colorimetric and photometric requirements for the above indicated lamps shall be activated when the apparent surface in the direction of the reference axis of these lamps is more than 50 % hidden by the movable component</p> <p><i>or</i></p> <p>A remark in the communication form (Item 10.1. of Annex 1) shall inform other Administrations that more than 50 % of the apparent surface in the direction of the reference axis can be hidden by the movable components;</p> <p><i>and</i></p> <p>A notice in the vehicle shall inform the user that in certain position(s) of the movable components other road users shall be warned of the presence of the vehicle on the road; for example by means of a warning triangle or other devices according to national requirements for use on the road.</p> <p>§ 5.21.2. does not apply to retro-reflectors.</p>	<p>D : A II 5.20. R : 5.20.</p> <p>D : A II 5.21. R : 5.21.</p> <p>D : A II 5.21.1 R : 5.21.1.</p> <p>D : A II 5.21.2 R : 5.21.2.</p> <p>R : 5.21.3.</p>	<p>x</p>	<p>x</p>	
<p>With the exception of retro-reflectors, a lamp even bearing an approval mark is deemed not to be present when it cannot be made to operate by the sole installation of a light source.</p>	<p>D : A II 5.22. R : 5.22.</p>	<p>x</p>		
<p>Requirements relating to the replacement of light sources.</p>	<p>D : A II 5.23. R : 5.23.</p>	<p>x</p>		
<p>Requirements relating to the temporary fail-safe replacement of the light signalling function of a rear position lamp.</p>	<p>D : A II 5.24. R : 5.24.</p>		<p>x</p>	

Characteristics concerned and prescriptions to apply	References D : Directive R : Regulation	Conformity	Not applied	Value
Where an AFS is fitted, it shall be considered equivalent to a pair of dipped-beam headlamps and, if it provides main-beam function(s), it shall be considered equivalent to a pair of main-beam headlamps	R : 5.25.		x	
Requirements related to rear direction indicator lamps, rear position lamps, stop lamps (except lamps of cat. S4) and rear fog lamps with variable luminous intensity control.	R : 5.26.		x	
For vehicles of M and N categories the applicant shall demonstrate to the Technical Service responsible for type approval testing that the electric power supply conditions for the devices indicated in 2.7.9, 2.7.10, 2.7.12, 2.7.14 and 2.7.15 above comply, when the electrical system of the vehicle is in a constant voltage operating condition, representative for the relevant category of powered vehicle as specified by the applicant, with the following provisions :	D : A II 5.27. R : 5.27.		x	
The voltage supplied at the terminals of devices which, according to their type approval documentation, have been tested by the application of a special power supply/electronic light source control gear, or in a secondary operating mode or at a voltage requested by the applicant, shall not exceed the voltage specified for the relevant devices or functions as they have been approved	D : A II 5.27.1. R : 5.27.1.			
In all cases of electric power supply conditions not covered by paragraph 5.27.1., the voltage at the terminals of the device(s) or function(s) shall not exceed 6.75V (6 Volt-Systems), 13.5V (12 Volt-Systems) or 28.V (24 Volt-Systems) by more than 3 per cent.	D : A II 5.27.2. R : 5.27.2.			
The provisions of paragraphs 5.27.1. and 5.27.2. shall not apply to devices which include an electronic light source control gear or a variable intensity control being part of the device.	D : A II 5.27.3. R : 5.27.3.			
A report shall be attached to the approval documentation describing the methods used to demonstrate compliance and the results obtained.	D : A II 5.27.4. R : 5.27.4.			

Characteristics concerned and prescriptions to apply	References D : Directive R : Regulation	Conformity	Not applicated	Value
There shall be no obstacle on the inside of the angles of geometric visibility to the propagation of light from any part of the apparent surface of the lamp observed from infinity. However, no account is taken of obstacles, if they were already presented when the lamp was type-approved.	D : A II 5.28.1. R : 5.28.1.	x		
If measurements are taken closer to the lamp, the direction of observation shall be shifted parallel to achieve the same accuracy.	D : A II 5.28.2. R : 5.28.2.	x		
If, when the lamp is installed, any part of the apparent surface of the lamp is hidden by any further parts of the vehicle, proof shall be furnished that the part of the lamp not hidden by obstacles still conforms to the photometric values prescribed for the approval of the device.	D : A II 5.28.3. R : 5.28.3.		x	
When the vertical angle of geometric visibility below the horizontal may be reduced to 5° (lamp at less than 750 mm above the ground) the photometric field of measurements of the installed optical unit may be reduced to 5° below the horizontal.	D : A II 5.28.4. R : 5.28.4.	x		
In the case of an interdependent lamp system the geometric visibility requirements shall be fulfilled when all its interdependent lamps are operated together.	D : A II 5.28.5. R : 5.28.5.	x		

INDIVIDUAL SPECIFICATIONS

Characteristics concerned and prescriptions to apply	Conf. (x) or N.A.	Value
Main-beam head lamps D : AII 6.1. R : 6.1. Make Type Approval mark Intensities Presence mandatory (prohibited on trailers) Number 2 or 4 Colour white Position Geometric visibility Orientation Electrical connections Circuit-closed tell-tale mandatory Maximum intensity must not exceed 430.000 cd	N.A.	
Dipped-beam head lamps D : AII 6.2. R : 6.2. Make Type Approval mark Presence mandatory (prohibited on trailers) Number 2 Colour white Position Geometric visibility Orientation : The initial downward inclination of the cut-off of the dipped-beam to be set in the unladen vehicle state with one person in the driver's seat shall be specified to within 0,1 % by the vehicle manufacturer and indicated in a clearly legible and indelible manner on each vehicle close to either head lamps or the manufacturer's plate by the symbol shown in Annex 7. The vertical inclination of the cut-off of the dipped-beam, expressed in percent, shall be measured in static conditions under all the static conditions of Annex 5. Conformity to the limits and to the initial aiming depending on the mounting height in meters (h) of the lower edge of the apparent surface Adjustment initial downward inclination : Electrical connections Tell-tale optional Other requirements ¹	N.A.	

¹ Dipped-beam headlamps with a light source or LED module(s) producing the principal dipped beam and having a luminous flux exceeding 2,000 lumen, shall only be permitted in conjunction with the installation of headlamp cleaning device(s) according to Regulation No. 45.
 With respect to the vertical inclination the provisions of par. 6.2.6.2.2. above shall not be applied for dipped-beam headlamps :
 (a) with LED module(s) producing the principal dipped beam, or
 (b) with a light source producing the principal dipped beam and having an objective luminous flux which exceeds 2,000 lumen

Characteristics concerned and prescriptions to apply	Conf. (x) or N.A.	Value
Other requirements ¹		
Front fog lamps D : AII 6.3. R : 6.3.	N.A.	
Make		
Type		
Approval mark		
Presence optional (prohibited on trailers)		
Number 2		
Colour white or yellow		
Position		
Geometric visibility		
Orientation		
Electrical connections		
Tell-tale optional		
Reversing lamps D : AII 6.4. R : 6.4.	x	
Make		see information document
Type		see information document
Approval mark		see information document
Presence mandatory (optional cat O ₁)		
Number 1 or 2		
Colour white		
Position		
Geometric visibility		
Orientation		
Electrical connections		
Tell-tale optional		
Direction indicator lamps D : AII 6.5. R : 6.5.	x	
Presence mandatory		
Arrangement		
Front : Make	N.A.	
Type		
Approval mark		
Category		
Number 2		
Colour amber		
Rear : Make	x	see information document
Type		see information document
Approval mark		see information document
Category		
Number 2		
Colour amber		

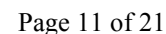
¹ Dipped-beam headlamps with a light source or LED module(s) producing the principal dipped beam and having a luminous flux exceeding 2,000 lumen, shall only be permitted in conjunction with the installation of headlamp cleaning device(s) according to Regulation No. 45.

With respect to the vertical inclination the provisions of par. 6.2.6.2.2. above shall not be applied for dipped-beam headlamps :

(a) with LED module(s) producing the principal dipped beam, or

(b) with a light source producing the principal dipped beam and having an objective luminous flux which exceeds 2,000 lumen

Characteristics concerned and prescriptions to apply	Conf. (x) or N.A.	Value
Side : Make Type Approval mark Category Number 2 Colour amber Position Geometric visibility Orientation Electrical connections Operating tell-tale : - mandatory for front and rear direction-indicator lamps - visual or auditory or both - if visual: in the event of malfunction the direction-indicator lamp is either extinguished, or remains alight without flashing, or shows a marked change of frequency. - if entirely auditory: clearly audible, marked change of frequency Other requirements -the light shall be a flashing light flashing 90 ± 30 times per minute. - emission of light and first extinction within not more than respectively 1.0 s and 1.5 s. - in the event of the failure of one direction indicator lamp, the others must continue to flash.	x	see information document see information document see information document
Hazard warning signal D : AII 6.6. R : 6.6. Make Type Approval mark Presence mandatory As specified for direction indicator lamps, excepted : Electrical connections Circuit-closed tell-tale mandatory Hazard warning signal must be able to function even if the device which starts or stops the engine is in a position which makes it impossible to start the engine.	x	see direction indicator lamps
Stop lamps (category S1 or S2) D : AII 6.7. R : 6.7. Make Type Approval mark Presence mandatory Number 2 Colour red Position Geometric visibility Orientation Electrical connections Operational tell-tale optional	x	see information document see information document see information document

20AQ

Characteristics concerned and prescriptions to apply	Conf. (x) or N.A.	Value
End-outline marker lamp D : AII 6.13. R : 6.13. Make Type Approval mark Presence Cat A or AM (front) Cat R, R1, R2, RM1 or RM2 (rear) mandatory on vehicles exceeding 2.10m in width. Optional on vehicles between 1.80 and 2.10m in width. The rear end-outline marker lamp is optional on chassis-cabs. Number 2 visible from the front (white) and 2 visible from the rear (red), 2 <i>optional</i> Colour white in front, red at rear Position Geometric visibility Orientation Electric connections Circuit-closed tell-tale optional. If it exists, its function shall be carried out by the tell-tale required for the front and rear position lamps. Other requirements : <ul style="list-style-type: none"> - provided that all the other conditions are met, the <i>mandatory or optional lamps</i> visible from the front and the <i>mandatory and optional lamps</i> visible from the rear, on the same side of the vehicle, may be combined in one device. - <i>Two of the lamps visible from the rear may be grouped, combined or reciprocally incorporated in accordance with § 5.7</i> - the position of an end-outline marker lamp in relation to the corresponding position lamp shall be such that the distance between the projections on a transverse vertical plane of the points nearest to one another on the apparent surfaces in the direction of the respective reference axes of the two lamps considered is not less than 200 mm. 	x	see information document see information document see information document
Rear retro reflector, non-triangular D : AII 6.14. R : 6.14. Make Type Approval mark Presence mandatory Number 2 Colour red Position Geometric visibility Orientation The illuminating surface of the retro reflector may have parts in common with the apparent surface of any other lamp situated at the rear.	N.A.	

Characteristics concerned and prescriptions to apply	Conf. (x) or N.A.	Value
Rear retro reflector, triangular D : AII 6.15. R : 6.15. Make Type Approval mark Presence Prohibited on motor vehicles Mandatory on trailers Number 2 Colour red Position Geometric visibility Orientation The illuminating surface of the retro reflector may have parts in common with the apparent surface of any other lamp situated at the rear.	x	see information document see information document see information document
Front retro reflector, non-triangular D : AII 6.16. R : 6.16. Make Type Approval mark Presence optional on motor vehicles Number 2 Colour identical to incident light (= white or colourless retro-reflector) Position Geometric visibility Orientation Other requirements	x	see information document see information document see information document
Side retro reflector, non-triangular D : AII 6.17. R : 6.17. Make Type Approval mark Presence mandatory on all motor vehicles the length of which exceeds 6m. optional on motor vehicles the length of which does not exceed 6m. Number such that the requirements for longitudinal positioning are complied with Colour Position Geometrical visibility Orientation The illuminating surface of the side retro reflector may have parts in common with the apparent surface of any other side lamp.	x	see information document see information document see information document

Characteristics concerned and prescriptions to apply	Conf. (x) or N.A.	Value
Side marker lamp D : AII 6.18. R : 6.18. Make Type Approval mark Presence mandatory on all vehicles the length of which exceeds 6 m, except for chassis-cabs. On M1 & N1 vehicles less than 6 m in length, amber side-marker lamps shall be used, if they supplement the reduced geometric visibility requirements of front and rear position lamps (§ 6.9.5.2 and 6.10.5.2). Optional on all other vehicles the length of which does not exceed 6 m. Minimum number per side such that the rules for longitudinal positioning are complied with Colour Position Geometrical visibility Orientation Circuit-closed tell-tale optional. If it exists its function shall be carried out by the tell-tale required for the front and rear position lamps. Other requirements	x	see information document see information document see information document
Daytime running lamp D : AII 6.19. R : 6.19. Make Type Approval mark Presence <i>mandatory</i> on motor vehicles Number 2 Colour white Position Geometric visibility Orientation Electric connections Tell-tale optional.	N.A.	

⁽¹⁾ The installation of this device may be forbidden on the basis of national regulations

Characteristics concerned and prescriptions to apply	Conf. (x) or N.A.	Value
Cornering lamp D :AII 6.20. R : 6.20. Make Type Approval mark Presence : optional on motors vehicles Number 2 Colour white Position Geometric visibility Orientation Electrical connections Tell-tale none Other requirements	N.A.	
Conspicuity markings D :AII 6.21. R : 6.21. Make Type Approval mark Presence : prohibited on M ₁ and O ₁ Number according to the presence Colour white or yellow to the side red or yellow to the rear Position Visibility Orientation Other requirements	x	see information document see information document see information document
Adaptive Front Lighting System R : 6.22. Make Type Approval mark Presence : optional, prohibited on trailers Number one Colour white Position Visibility Orientation Tell-tale Other requirements	N.A.	

Characteristics concerned and prescriptions to apply	Conf. (x) or N.A.	Value
Emergency stop signal R : 6.23. Make Type Approval mark Presence : optional Number Colour Arrangement Position Geometric Visibility Orientation Electrical connections Tell-tale Other requirements	N.A.	
Exterior Courtesy lamp R : 6.24. Make Type Approval mark Presence : optional Number Colour Arrangement Position Geometric Visibility Orientation Electrical connections Tell-tale Other requirements The exterior courtesy lamp shall not be activated unless the vehicle is stationary and one or more of the following conditions is satisfied: (a) The engine is stopped; or (b) A driver or passenger door is opened; or (c) A load compartment door is opened. The provisions of paragraph 5.10. shall be met in all fixed positions of use.	N.A.	

Characteristics concerned and prescriptions to apply	Conf. (x) or N.A.	Value
Rear-end collision alert signal R : 6.25. Make Type Approval mark Presence : optional The rear-end collision alert signal shall be given by the simultaneous operation of all the direction indicator lamps fitted as described in § 6.25.7. Number Colour Arrangement Position Geometric Visibility Orientation Electrical connections Tell-tale Other requirements The exterior courtesy lamp shall not be activated unless the vehicle is stationary and one or more of the following conditions is satisfied: (a) The engine is stopped; or (b) A driver or passenger door is opened; or (c) A load compartment door is opened. The provisions of paragraph 5.10. shall be met in all fixed positions of use.	N.A.	

FACILITIES AND EQUIPMENT

The facilities and equipment used to carry out the inspections are in compliance with the requirements of the applied Regulatory Act(s).

AFS TEST RESULTS : N.A.

HORIZONTAL ORIENTATION (par. 6.2.6.4)

Results of the swivel angle measurements and the AFS operation accuracy

Left side headlamp

Steering angle (°)	Vehicle speed (km/h)	Turning radius (m)	Cut-off line movement (mm)	Swivel angle (designed) ¹ (°)	Swivel angle (measured) (°)	Swivel angle (meas. - design.) (°)	Criteria ² Maximum swivel angle(°)

Swivel angle of left side headlamp limited to ° for RHD during a left turn

¹ Designed swivel angle = the swivel angle calculated and controlled by the AFS/HLL ECU based on the steering angle and vehicle speed.

² Maximum swivel angle calculated for a mounting height of mm (worst case)

Right side headlamp

Steering angle (°)	Vehicle speed (km/h)	Turning radius (m)	Cut-off line movement (mm)	Swivel angle (designed) ¹ (°)	Swivel angle (measured) (°)	Swivel angle (meas. - design.) (°)	Criteria ² Maximum swivel angle (°)

Swivel angle of right side headlamp limited to ° for RHD during a right turn

¹ Designed swivel angle = the swivel angle calculated and controlled by the AFS/HLL ECU based on the steering angle and vehicle speed.

² Maximum swivel angle calculated for a mounting height of mm (worst case)

TELL-TALE (par. 6.2.8) : N.A.

Results of the AFS fail-safe check

Failures creating a malfunction of the displacement of the kink of the elbow of the cut-off (*operational tell-tale is mandatory*)

Item	Action	Operational tell-tale available (flashing warning light)	Result

Results of the additional checks

Failures which do not create a malfunction of the displacement of the kink of the elbow of the cut-off (*operational tell-tale is not mandatory*)

Item	Action	Operational tell-tale available (flashing warning light)	Result

OTHER REQUIREMENTS (par. 6.2.9) : N.A.

Results of the test

Test condition	Activation of the AFS system	Result
Gear shift in the reverse drive position	No activation of the AFS system when turning the steering to the left/right	
Stopping condition (vehicle speed signal corresponding to a vehicle speed of 0 km/h)	No activation of the AFS system when turning the steering to the left/right	

AFS TEST VEHICLE SPECIFICATIONS : N.A.**Vehicle**

Type :
Identification number :

Headlamps (fitted with AFS)

Make :
Type :

AFS/HLL ECU

Make :
Type :

FICHE DE RENSEIGNEMENTS : BAL SIGNAL

=====

ETABLIE CONFORMEMENT A LA REVISION 2 DU REGLEMENT 48 CORRESPONDANT AUX
PRESCRIPTIONS UNIFORMES RELATIVES A L'HOMOLOGATION DES VEHICULES EN CE QUI CONCERNE
L'INSTALLATION DES DISPOSITIFS D'ECLAIRAGE ET DE SIGNALISATION LUMINEUSE

=====

0. GENERALITES

- 0.1. Marque (raison sociale du constructeur) : **BENALU**
- 0.2. Type et description(s) commerciale(s) : **BAL SIGNAL**
- 0.3. Moyen d'identification du type figurant le cas échéant sur le véhicule (b) :
- 0.3.1. Emplacement de cette inscription :
- 0.4. Catégorie de véhicule (c) : **O4**
- 0.5. Nom et adresse du constructeur : **BENALU**
Rue Fresnel / CS 80018
62801 – LIEVIN Cedex
- 0.8. Adresse(s) de l'usine (des usines) de montage : **BENALU**
Rue Fresnel
62800 – LIEVIN
BENNES MARREL
Rue Auguste Colonna
42161 – ANDREZIEUX BOUTHEON

1. CONSTITUTION GENERALE DU VEHICULE

- 1.1. Photos et/ou dessins d'un véhicule type : **Voir Annexe I**
- 1.8. Côte de conduite : droite / gauche : **NA**
- 1.8.1. Le véhicule est équipé pour la conduite à droite / gauche : **A droite et à gauche**

2. MASSES ET DIMENSIONS (e) (en kg et mm)

- 2.1. Empattement(s) (à pleine charge) : **Mini = 4,350 m / Maxi = 8,00 m**
- 2.4. Gamme des dimensions du véhicule (hors tout) :
- 2.4.1. Châssis sans carrosserie
- 2.4.1.1. Longueur : **Mini = 6,920 m / Maxi = 14,040 m**
- 2.4.1.2. Largeur :
- 2.4.1.2.1. Largeur maximale : **2,55 m**
- 2.4.1.2.2. Largeur minimale : **2,45 m**
- 2.4.1.3. Hauteur (à vide) (lorsque la suspension est réglable en hauteur, indiquer la position de marche normale) :
MINI = 0,900 m / MAXI = 2,110 m

2.4.2. Châssis avec carrosserie

2.4.2.1. Longueur : **Mini = 7,070 m / Maxi = 14,040 m**

2.4.2.2. Largeur : **2,55 m**

2.4.2.3. Hauteur (à vide) (lorsque la suspension est réglable en hauteur, indiquer la position de marche normale) :
MINI = 2,200 m / MAXI = 4,000 m

2.5. Masse du véhicule avec carrosserie et avec dispositif d'attelage dans le cas d'un véhicule tracteur appartenant à une catégorie autre que M1, en ordre de marche, ou masse du châssis-cabine si le constructeur ne place pas la carrosserie et/ou le dispositif d'attelage (avec liquide de refroidissement, lubrifiants, carburant, totalité des autres liquides mis à part les eaux usées, outils, roue de secours et conducteur, et pour les autobus et autocars, la masse de l'accompagnateur (75 kg) si le véhicule est équipé d'un siège pour accompagnateur). (valeurs maximale et minimale pour chaque variante) : **Voir Annexe II**

2.5.1. Répartition de cette masse sur les essieux et, dans le cas d'une semi-remorque ou d'une remorque à essieu central, charge au point d'attelage (valeurs maximale et minimale) : **Voir Annexe II**

2.8. Masse maximale en charge techniquement admissible déclarée par le constructeur (valeurs maximale et minimale) : **Voir Annexe II**

2.8.1. Répartition de cette masse sur les essieux et, dans le cas d'une semi-remorque ou d'une remorque à essieu central, charge au point d'attelage (valeurs maximale et minimale) : **Voir Annexe II**

3. MOTEUR

3.2.5. Système électrique

6. SUSPENSION

6.2.1. Réglage de niveau : **OUI**

6.6. Pneumatiques et roues

6.6.2. Limites supérieure et inférieure des rayons de roulement

6.6.2.1. Essieu n° 1 : **MINI : 474 mm MAXI : 520 mm**

6.6.2.2. Essieu n° 2 : **MINI : 474 mm MAXI : 520 mm**

6.6.2.3. Essieu n° 3 : **MINI : 474 mm MAXI : 520 mm**

9. CARROSSERIE

9.10.3. Sièges

9.10.3.1. Nombre : **NA**

9.10.3.2. Emplacement et disposition : **NA**

10. DISPOSITIF D'ECLAIRAGE ET DE SIGNALISATION LUMINEUSE

- 10.1. Liste de tous les dispositifs : nombre, marque, modèle, marque de réception, intensité maximale des feux de route, couleur, témoins : **VOIR LISTE DISPOSITIF D'ECLAIRAGE + VOIR CERTIFICATS DES FEUX ANNEXES AU DOSSIER MAIS DISPONIBLE SUR SIMPLE DEMANDE**
- 10.2. Dessin montrant l'emplacement des dispositifs d'éclairage et de signalisation lumineuse : **VOIR ANNEXE**
- 10.3. Pour tous les feux et les catadioptres spécifiés dans la Directive 76/756/CEE, fournir les renseignements suivants (par écrit et/ou sous forme de schémas).
- 10.3.1. Dessin montrant l'étendue de la plage éclairante : **VOIR CERTIFICATS DES FEUX NON ANNEXES AU DOSSIER MAIS DISPONIBLE SUR SIMPLE DEMANDE**
- 10.3.2. Méthode utilisée pour la définition de la surface apparente (point 2.10. des documents mentionnés à l'annexe II point 1 de la Directive 76/756/CEE : **VOIR CERTIFICATS DES FEUX NON ANNEXES AU DOSSIER MAIS DISPONIBLE SUR SIMPLE DEMANDE**
- 10.3.3. Axe de référence et centre de référence : **VOIR CERTIFICATS DES FEUX NON ANNEXES AU DOSSIER MAIS DISPONIBLE SUR SIMPLE DEMANDE**
- 10.3.4. Mode de fonctionnement des feux occultables : **NA**
- 10.3.5. Dispositions spécifiques pour le montage et le câblage : **NA**
- 10.4. Feux de croisement : orientation normale mesurée conformément au point 6.2.6.1. des documents mentionnés à l'Annexe II point 1 de la Directive 76/756/CEE : **NA**

ANNEXE I

D044786-00-A

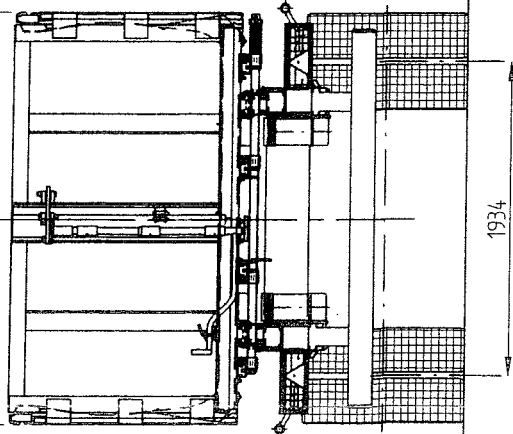
Date : Janvier 2005



8605 HORS-TOUT avec passerelle
8070 HORS-TOUT sans passerelle
7227 UTILE

22,10 m3

2540



1934

2953

2872 1658

1250 à vide
1230 en charge

1263

4530

1960

400

470

1360

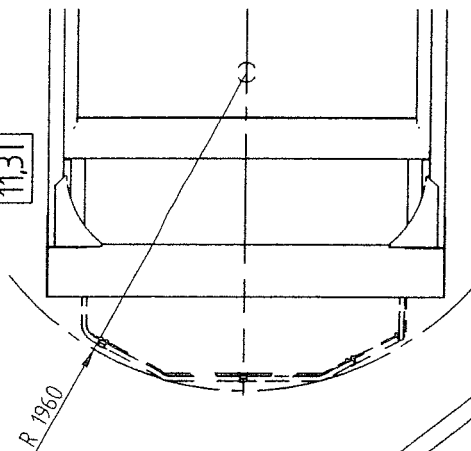
1305

1485 en charge
1577 à vide

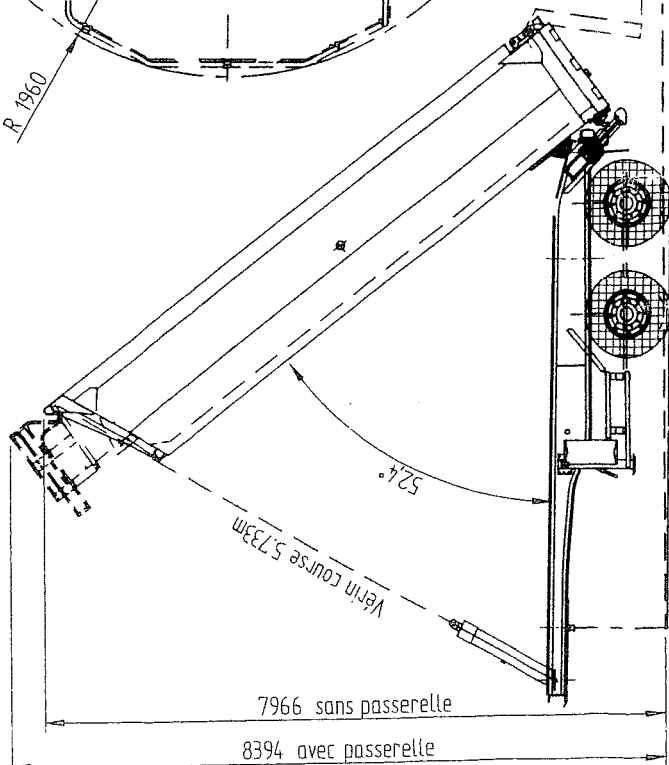
695

451

11,3T



R 1960



Vérin course 5,73m
52°

7966 sans passerelle

8394 avec passerelle

PTAC 33T
PNEUMATIQUES EN MONTE
JUMEEE 11R22.5
SUSPENSION 11 LAMES
PORTE UNIVERSELLE

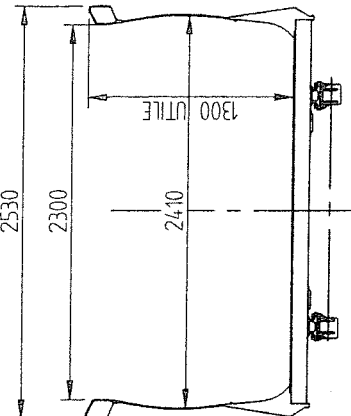
2530

2300

2410

1300 UTILE

21,7T



Matière : -

Masse : -

Dessiné par : jbeyaert

Date : 28/11/2008

Vérifié par : jbeyaert

Date : 28/11/2008

Titre : EPURE SIDERALE 72 MJ F2F H1300

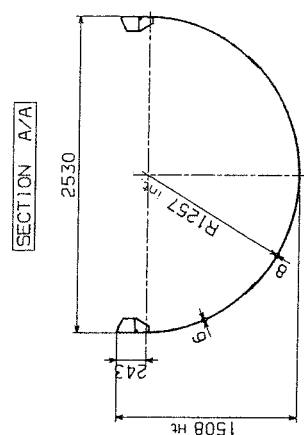
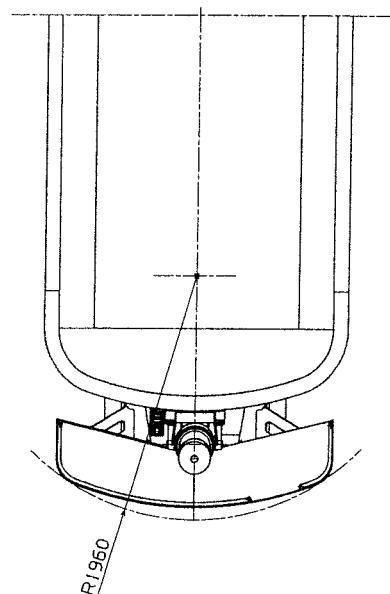
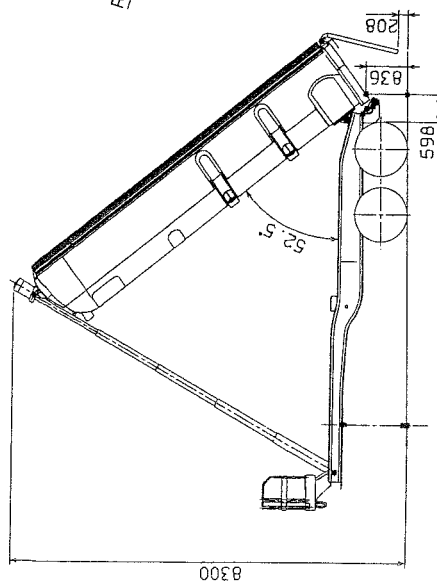
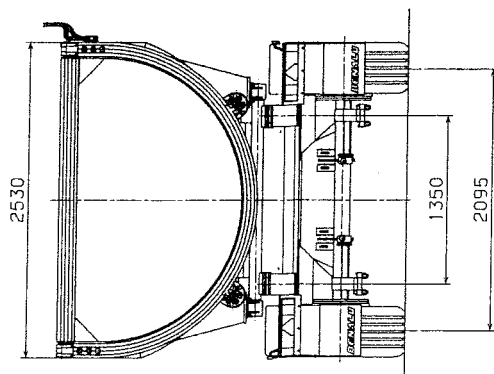
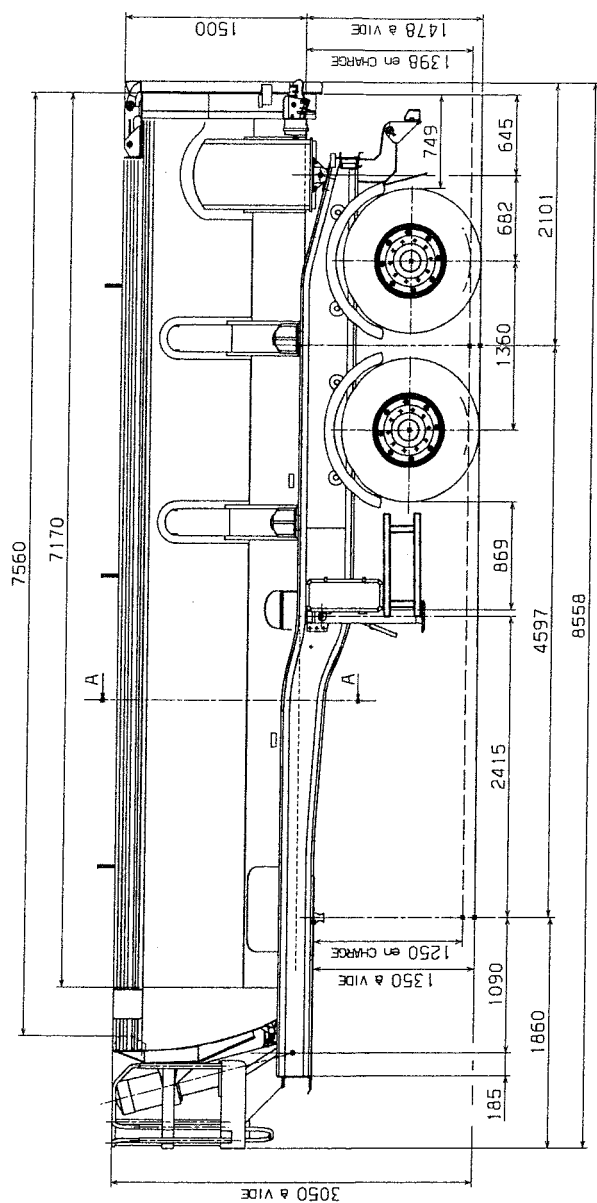


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N° :

0045138-00

Rév. :



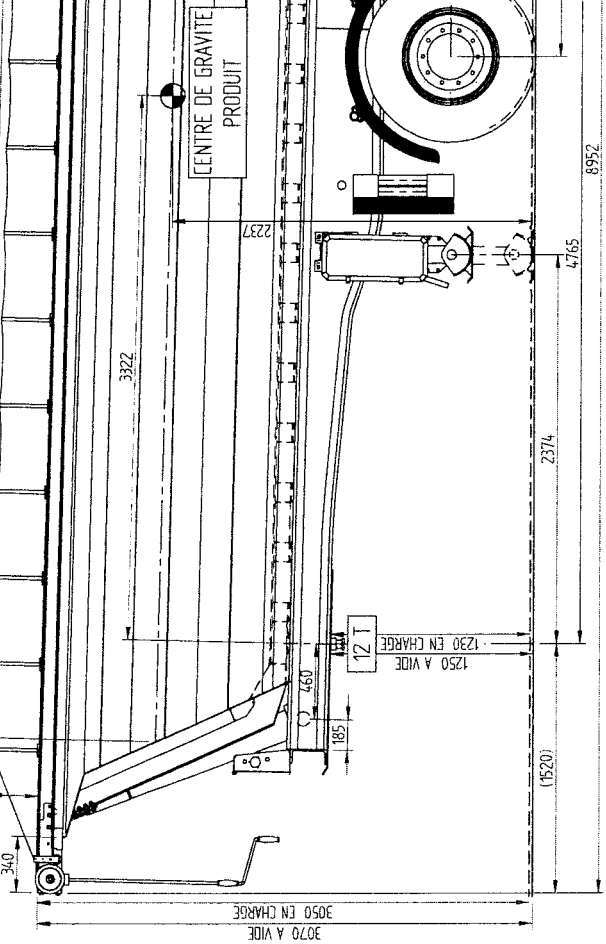
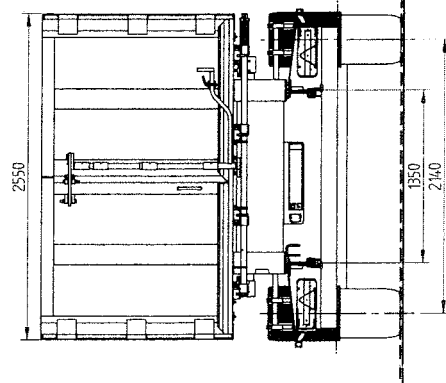
PM : 4500 Kg sur BN2 11 lames
VEHICULE PEINT sans BACHAGE
VOLUME : 23 m3
P.T.C : 33 T
Rav: 11,7T / Rav: 21,3T

Ind.	Date	Dessinateur	Modification	N° modif

7882

300 FLECHE ARCEAUX

VUE ARRIERE DU VEHICULE

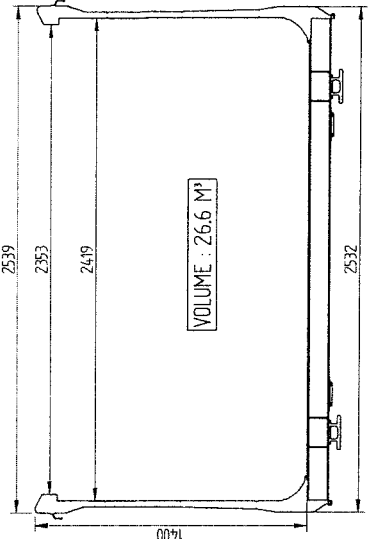


CENTRE DE GRAVITE
PRODUIT

27 T

12 T

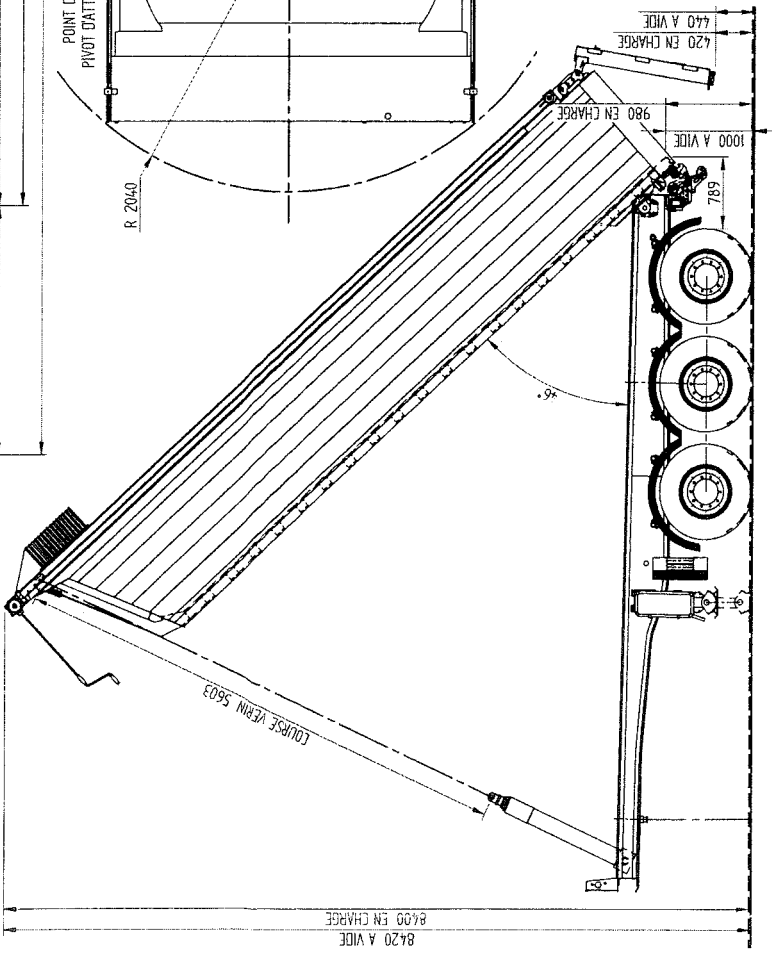
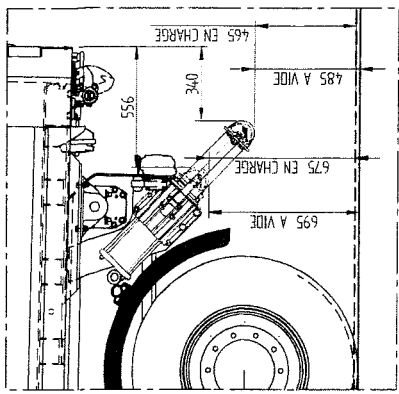
VUE EN LOUPE CAISSE SIDERALE II



POINT DU
PIVOT D'ATTACHE

R 2040

PARE-CHOC PNEUMATIQUE



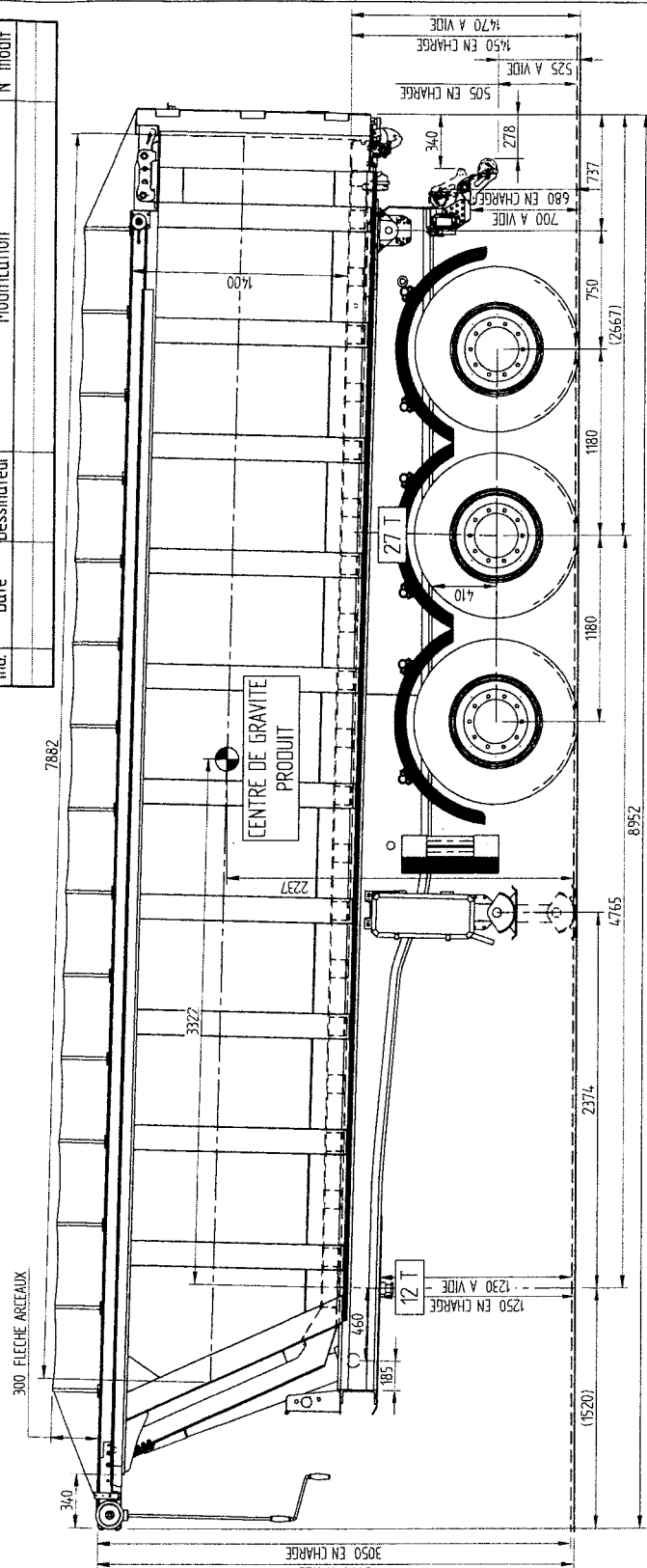
Matière : III	Masse : III	BENALU	
Dessiné par : ghenier	Date : 09/11/2012		
Vérifié par : ghenier	Date : 09/11/2012		
Titre : TP78 SID II MS 2x180 AIR 410 H1400			
N° : D059394-01			
Rev : A			

PTAC = 39 T

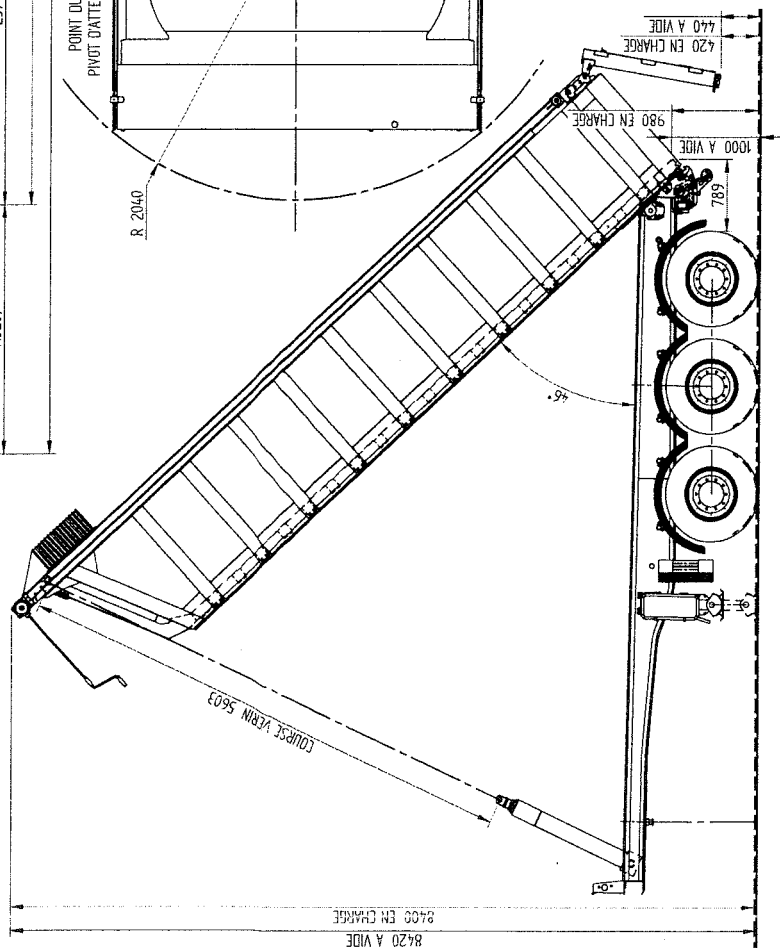
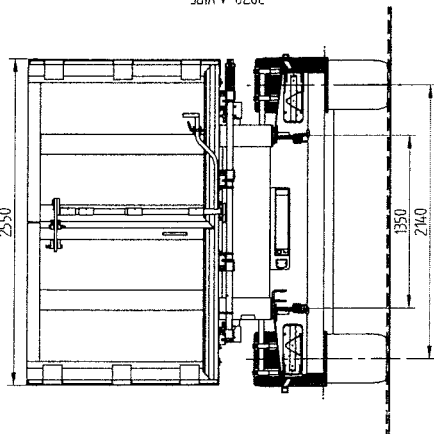
RAV = 12 T / RAR = 27 T

Nous vous remercions d'avoir choisi le produit de nos gammes. Nous vous invitons à nous adresser toutes vos demandes de renseignements, conseils, avis ou suggestions. Nous vous remercions de votre confiance.

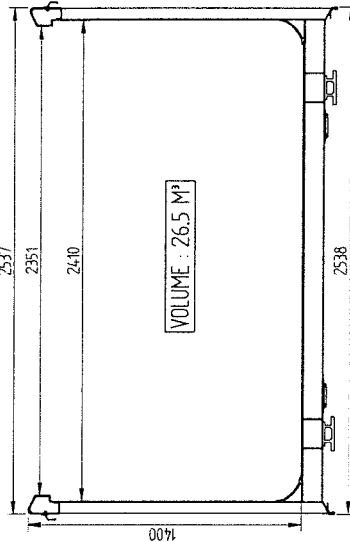
Ind.	Date	Dessinateur	Modification	N° modif



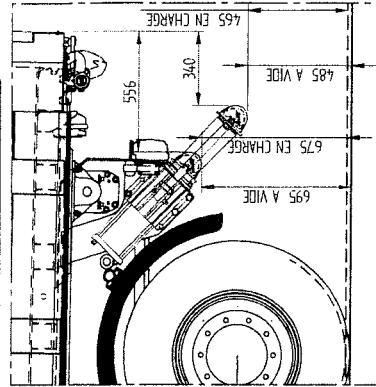
VUE ARRIERE DU VEHICULE



VUE EN COUPE CAISSE MULTIRUNNER FNL



PARE-CHOIX PNEUMATIQUE



Matériau : III	Masse : III
Dessiné par : ghvenier	Date : 06/11/2012
Vérifié par : ghvenier	Date : 06/11/2012
Titre : TP78 MULTI FNL MS 2x180 AIR 410 H1400	
Rav : A	
N° : D059394-02	



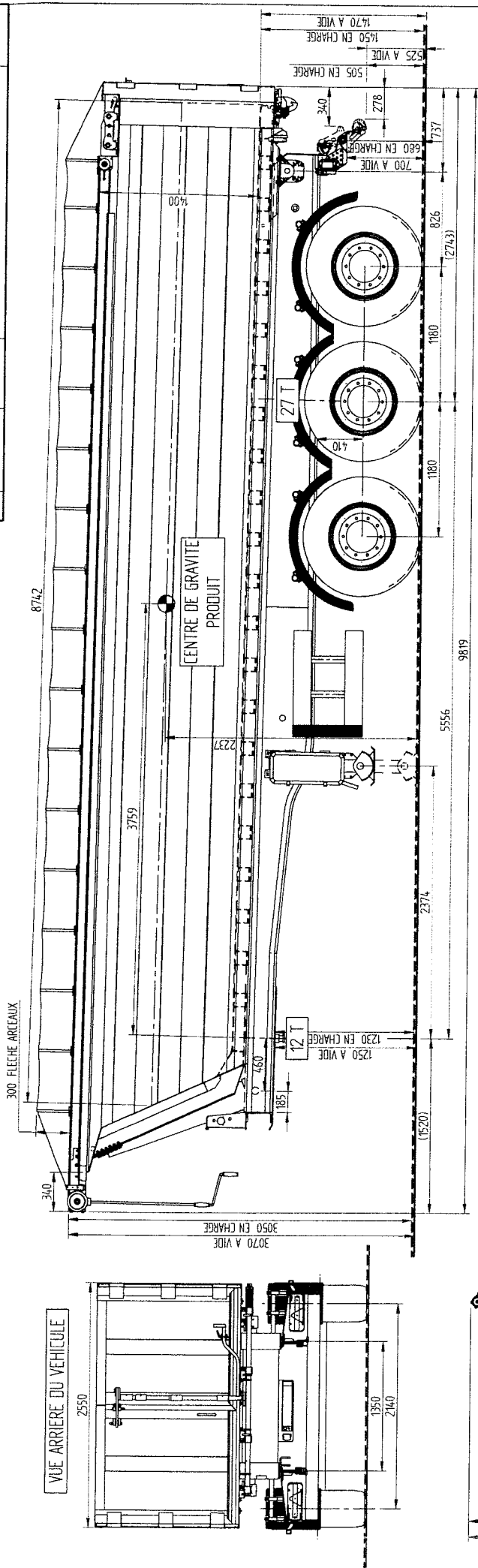
PTAC = 39 T

RAV = 12 T / RAR = 27 T

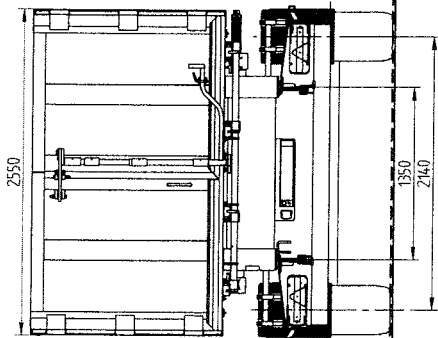
Benalu s'engage à leur moment le seul dépositaire des modifications
des plans et des documents techniques et à leur faire
reproduire à l'usage des administrations publiques.



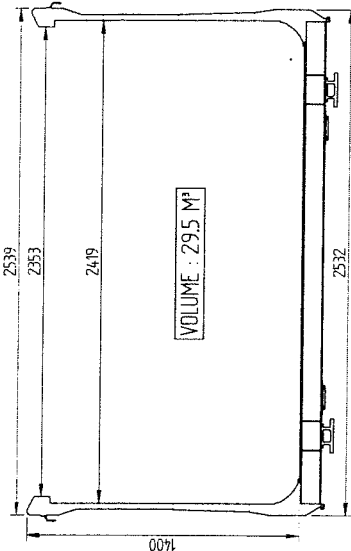
Ind.	Date	Dessinateur	Modification	N° modif



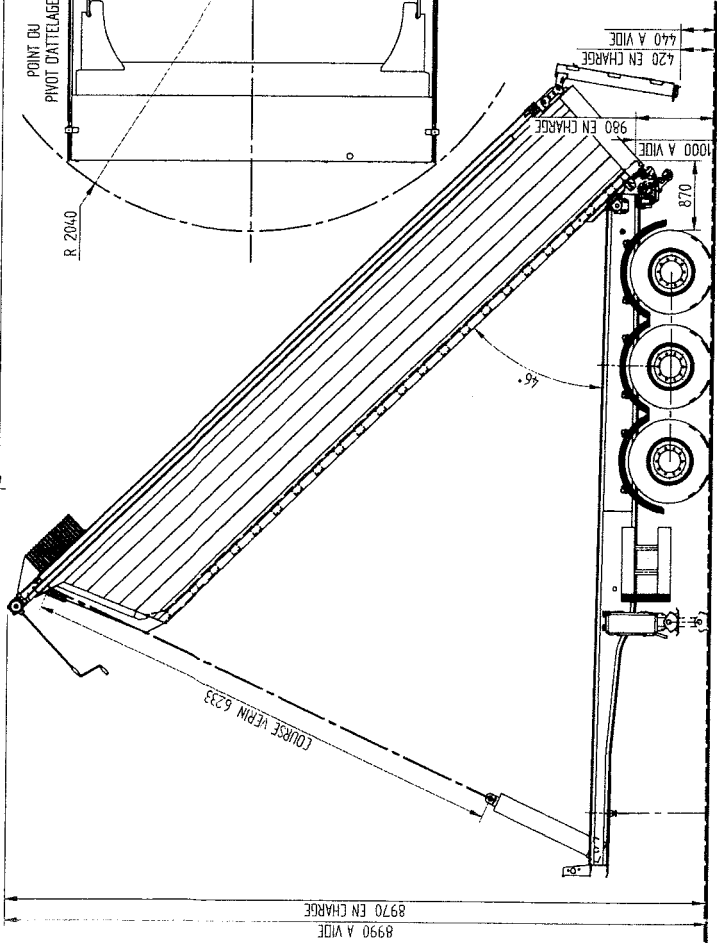
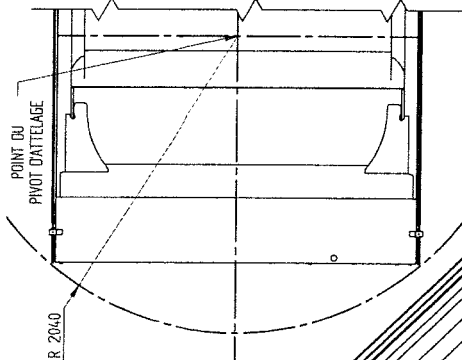
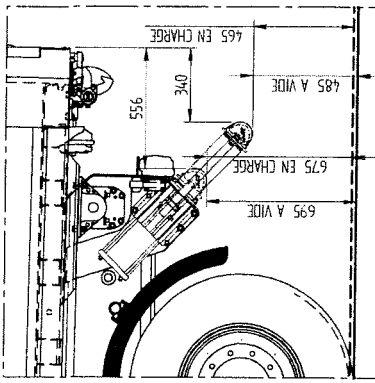
VUE ARRIERE DU VEHICULE



VUE EN COUPE CAISSE SIDERALE II



PARE-CHOCS PNEUMATIQUE



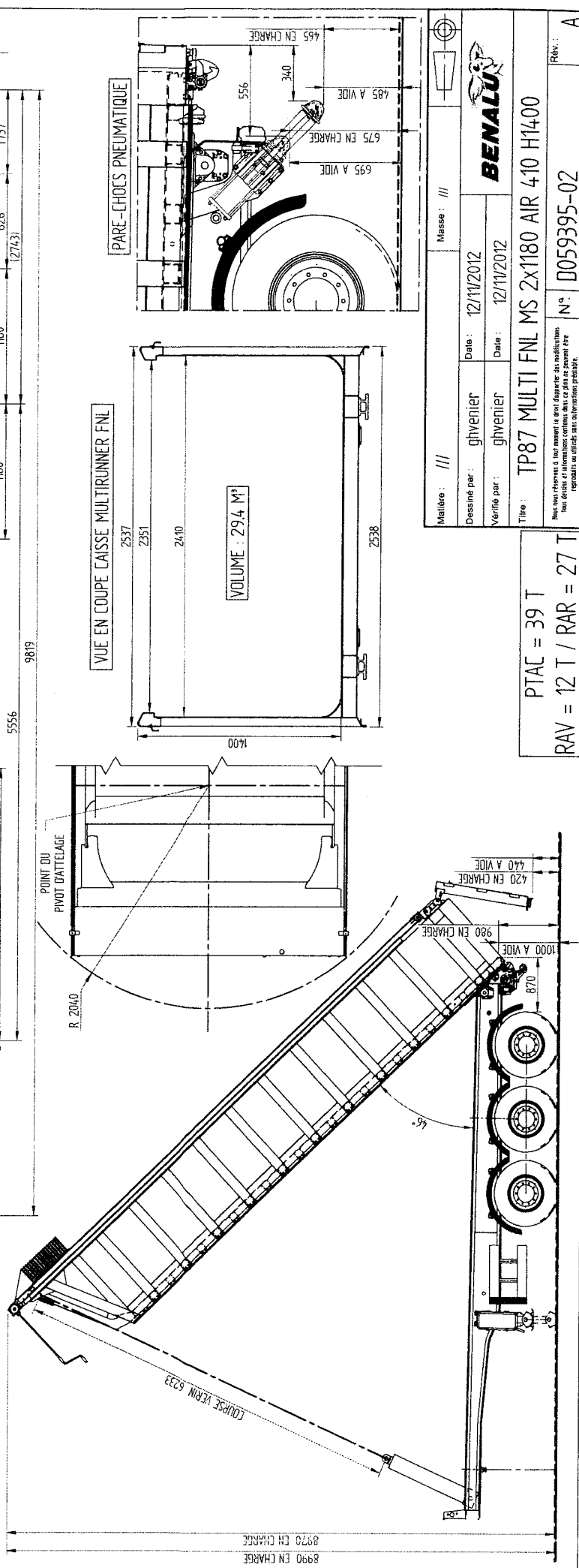
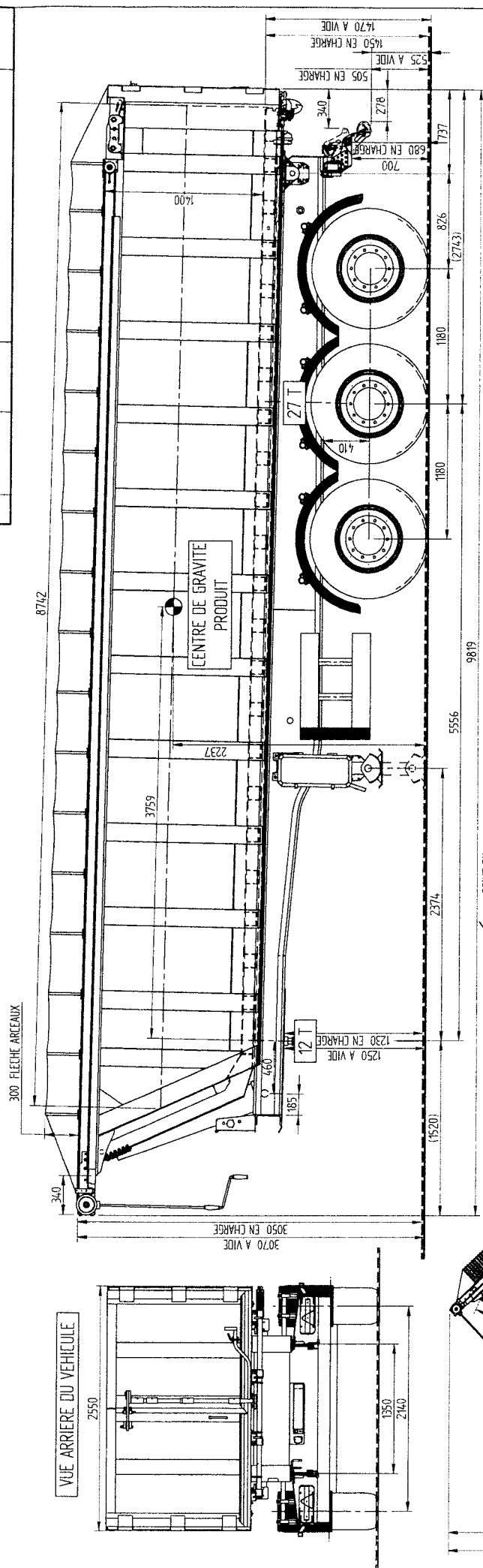
Matière : III	Masse : III
Dessiné par : ghenier	Date : 07/11/2012
Vérifié par : ghenier	Date : 08/11/2012
Titre : TP87 SID II MS 2x1180 AIR 410 H1400	
N° : D059395-01	
Rév. : A	



PTAC = 39 T

RAV = 12 T / RAR = 27 T

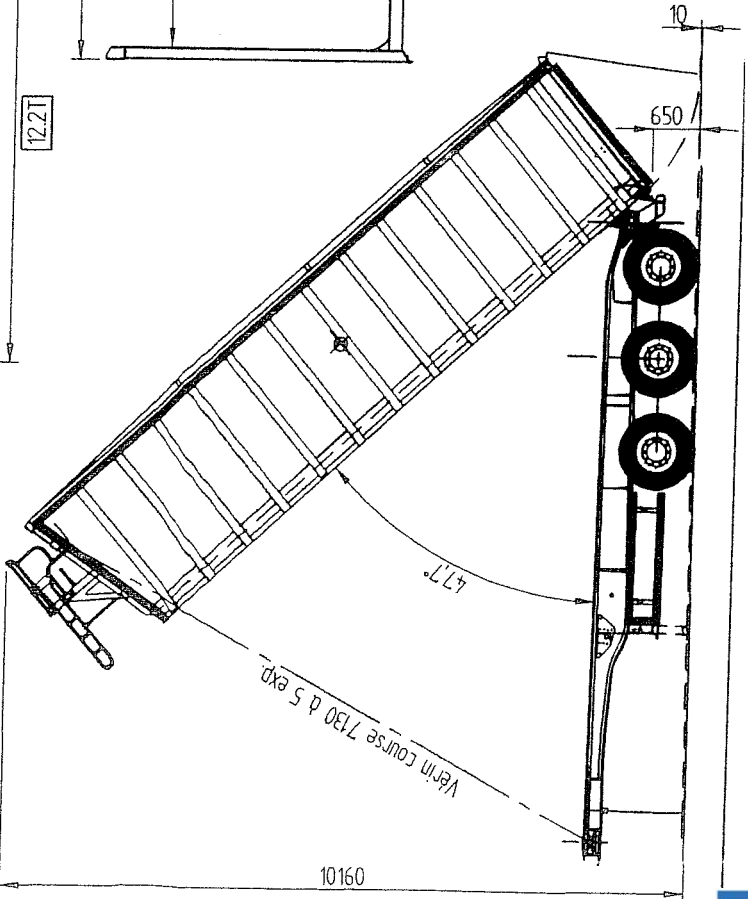
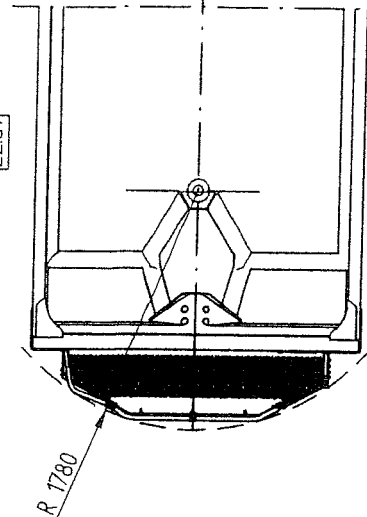
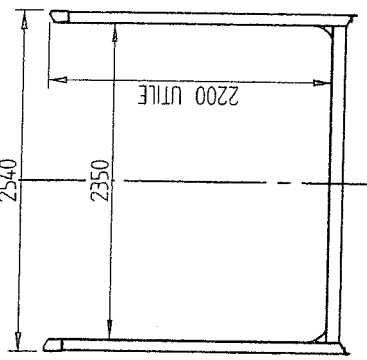
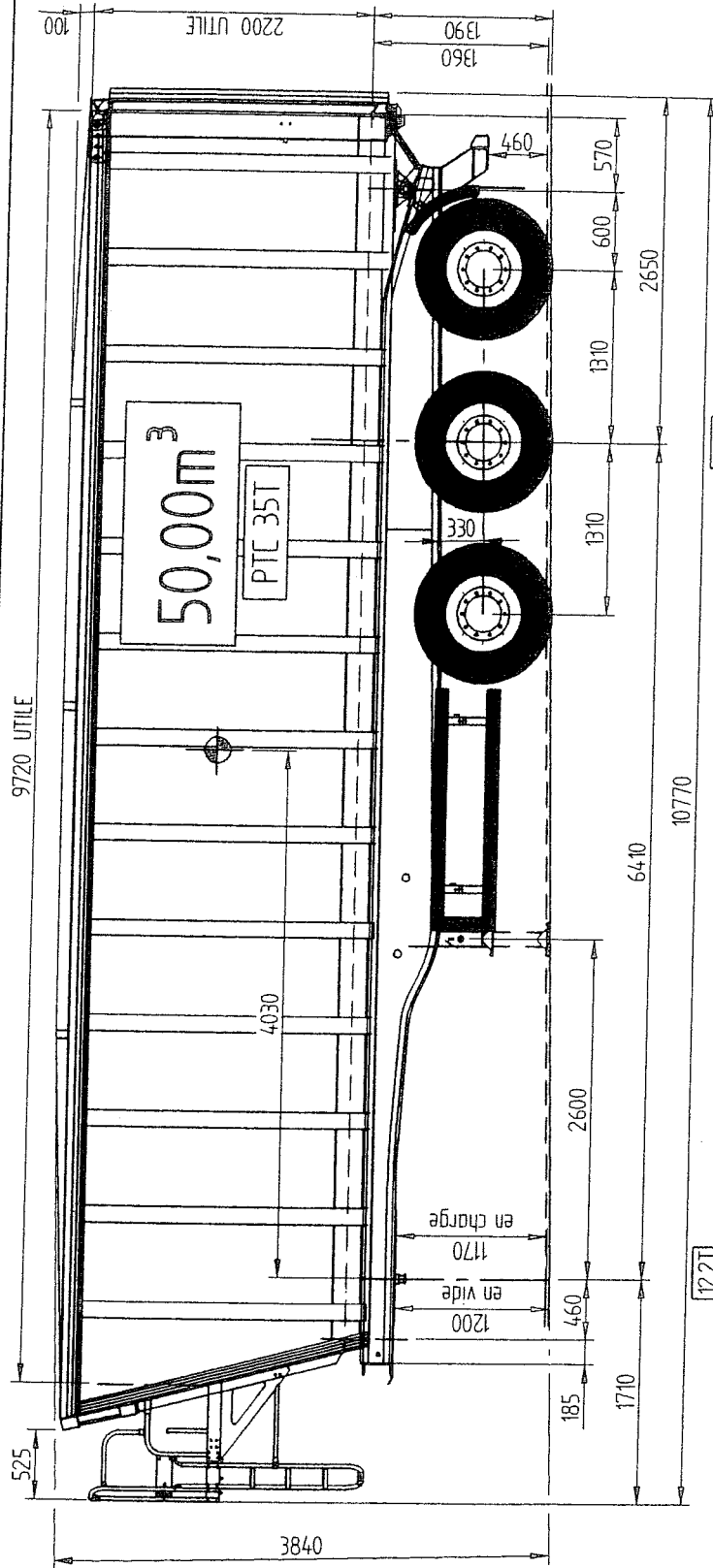
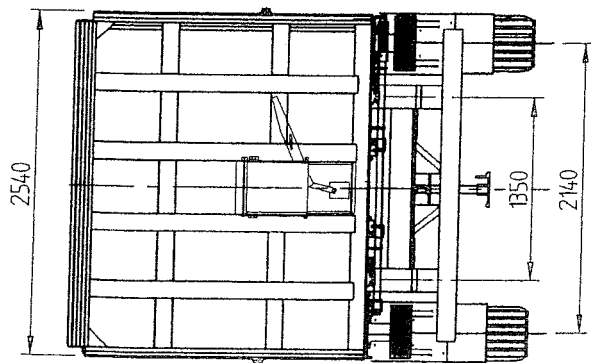


Ind.	Date	Dessinateur	Modification	N° modif



Matériau : ///	Masse : ///		
			
Dessiné par : ghenier	Date : 12/11/2012		
Verifié par : ghenier	Date : 12/11/2012		
Titre : TP87 MULTI FNL MS 2x1180 AIR 410 H1400			
Nous vous remercions de tout l'intérêt et tout l'appui que vous nous apportez. Nos services et informations continuent de se développer et nous espérons vous apporter de nouvelles satisfactions.		N° :	Révisé : A
		D059395-02	

$$\begin{aligned} \text{PTAC} &= 39 \text{ T} \\ \text{RAV} &= 12 \text{ T} / \text{RAR} = 27 \text{ T} \end{aligned}$$

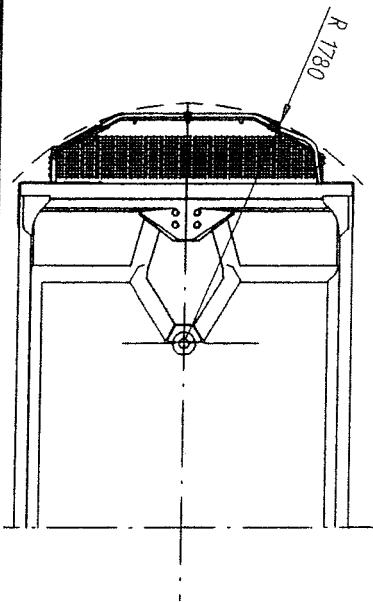
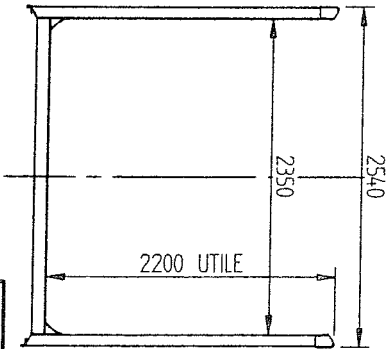
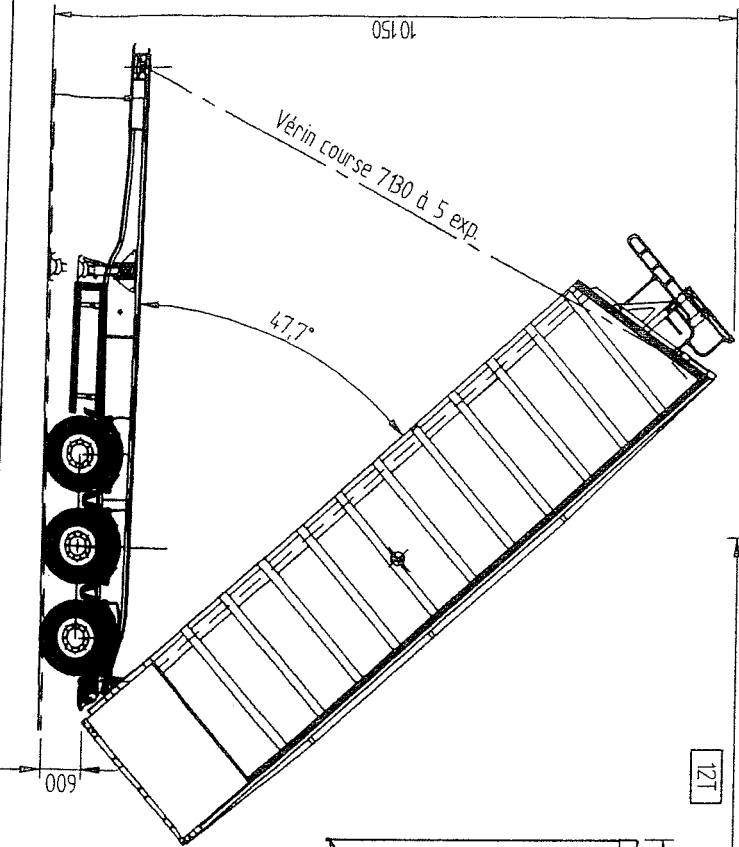
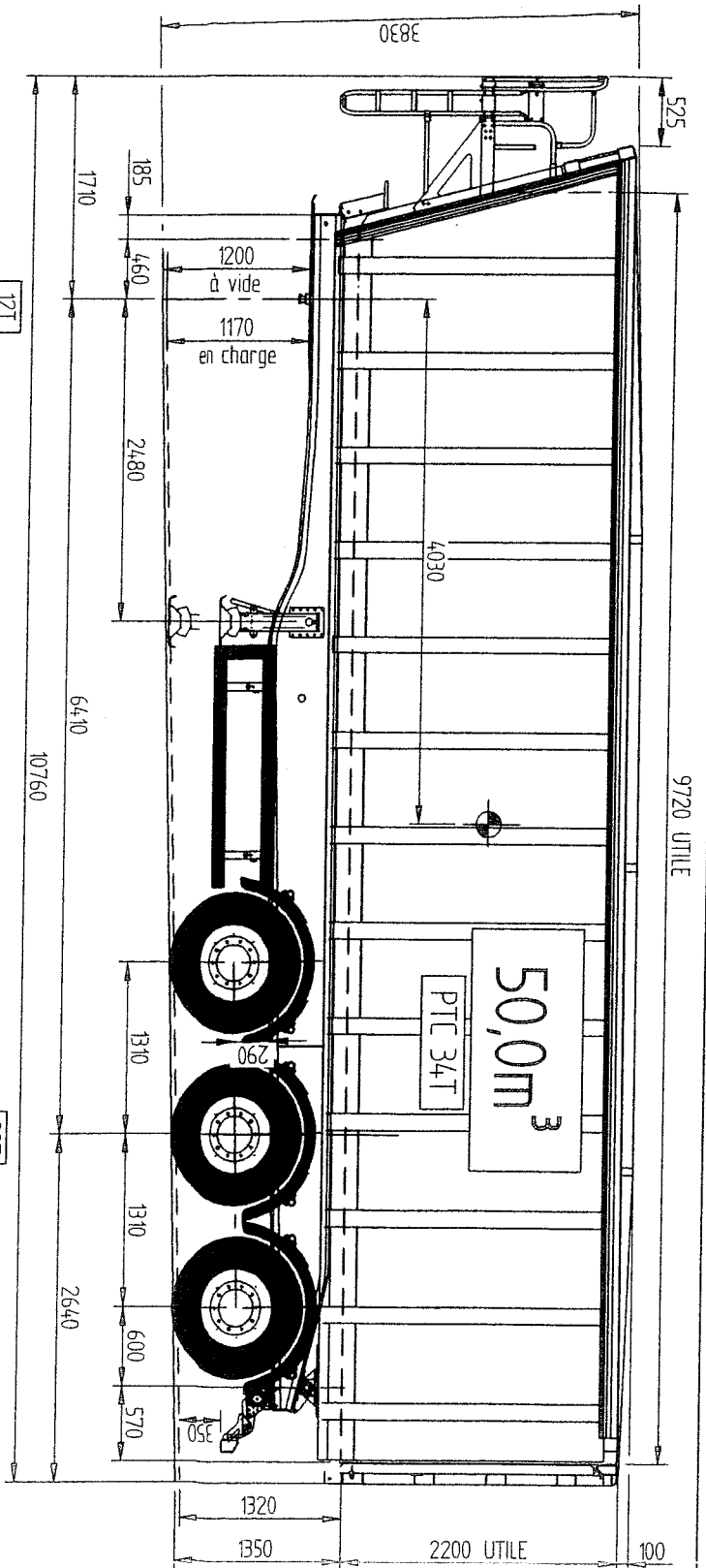


Pneumatiques
385/65 R22.5



Matière : -	Masse : -
Dessiné par : jbevaert	Date : 06/05/2009
Vérifié par : jbevaert	Date : 06/05/2009
Titre : EPURE LANDLINER 95 POS H2200	
N° : 0050879-20	
Rév. : A	



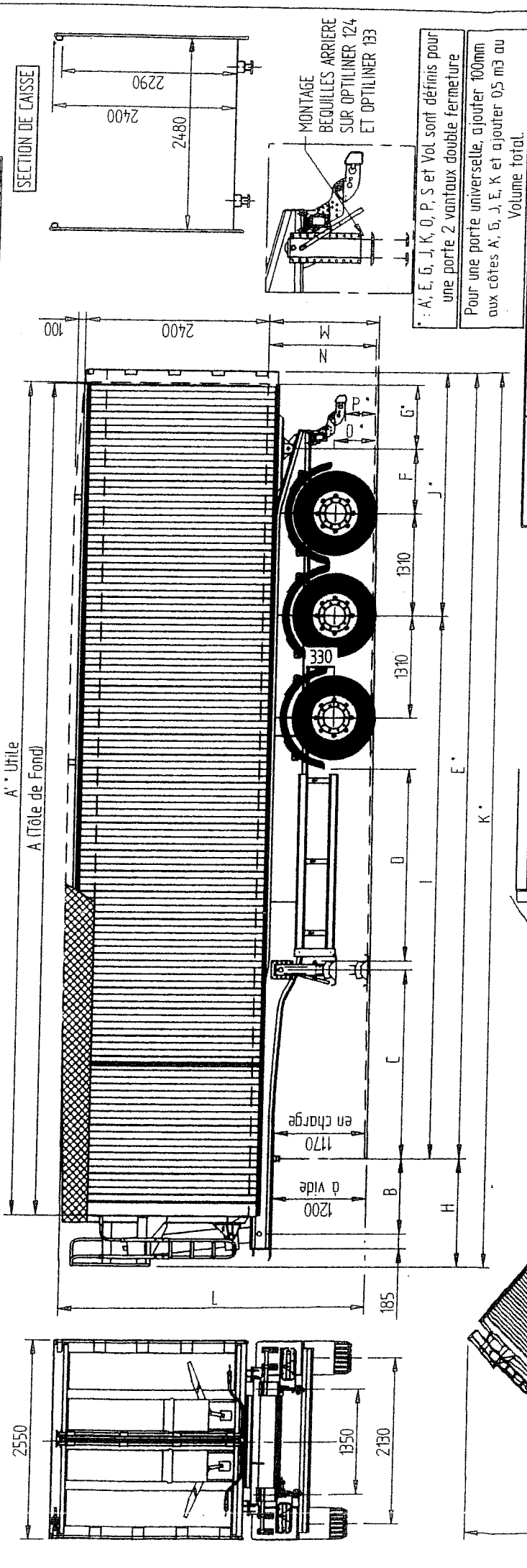
Vous nous réservons à tout moment le droit d'apporter des modifications
à nos dessins et informations contenues dans ce plan ne peuvent être
reproduits ou utilisés sans autorisation préalable.



Pneumatiques
385/65 R22.5

Matière : -		Masse : -			
Dessiné par : jbeyaert		Date : 10/06/2009			
Vérifié par : jbeyaert		Date : 02/09/2009			
Titre : EPURE AGRILINER 95 P2VDF H2200					
Nous nous réservons à tout moment le droit d'apporter des modifications dans certains et/ou tous les contenus dans ce plan ne peuvent être reproduits ou utilisés sans autorisations préalable				N° : D051047-10	
				Rév. : B	

	A	A*	B	C	D	E*	F	G*	H	I	J*	K*	L	M	N	O*	P*	Q	R	S*	X	Y
OPTILINER 133	13300	13310	1700	2300	3640	12000	1620	920	2030	8000	4000	14030	4040	1480	1460	530	390	12000	2040	560	42,8°	9233
OPTILINER 124	12420	12430	1500	2400	2970	11320	1530	880	1900	7450	3870	13220	4030	1430	1390	490	320	11830	2020	470	45,9°	9233
OPTILINER 114	11390	11410	950	2400	2970	10850	1100	830	1530	7450	3400	12190	4000	1430	1400	510	370	10980	1530	530	44,7°	8233
OPTILINER 106	10590	10610	950	2400	2450	10040	820	820	1360	6930	3110	11410	3990	1420	1380	530	390	10140	1530	560	42,2°	7233
OPTILINER 95	9490	9510	950	2400	1620	8950	650	730	1350	6100	2850	10290	3990	1420	1380	560	380	9910	1530	560	47,3°	7233



	PTC	R	QVT	R	QVT	PM	Vol *
OPTILINER 133	34T	112T	228T	7450 kg	792 m3		
OPTILINER 124	34T	107T	233T	7450 kg	740 m3		
OPTILINER 114	34T	106T	234T	6700 kg	678 m3		
OPTILINER 106	34T	109T	231T	6460 kg	631 m3		
OPTILINER 95	34T	108T	232T	5970 kg	566 m3		

Matière : -

Masse : -

Dessiné par : jbeydant Date : 06/05/2009

Vérifié par : jbeydant Date : 12/05/2009

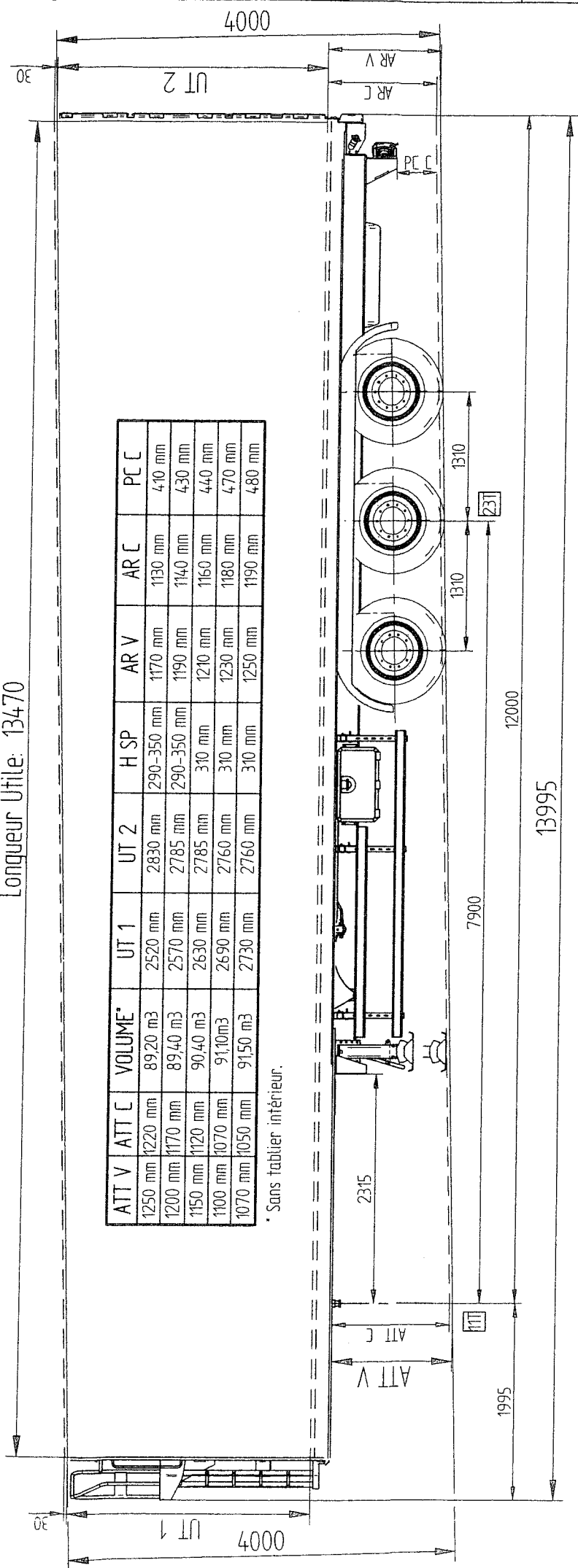
Titre : OPTILINER 3 ESSIEUX H2400 P2VDF

N° : D050594-00

Rev. : A

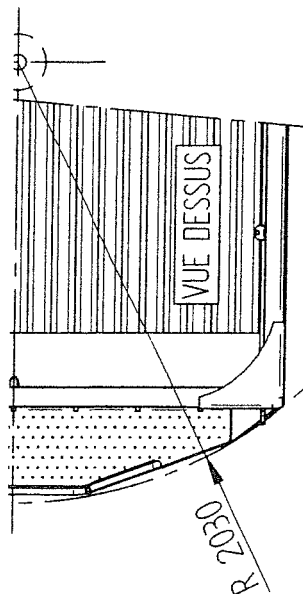
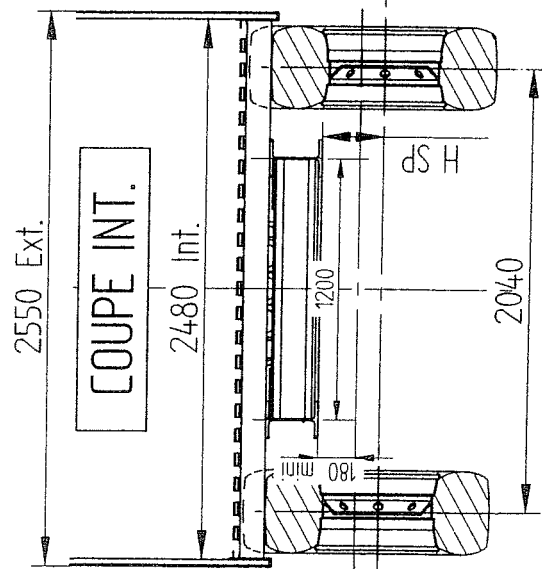
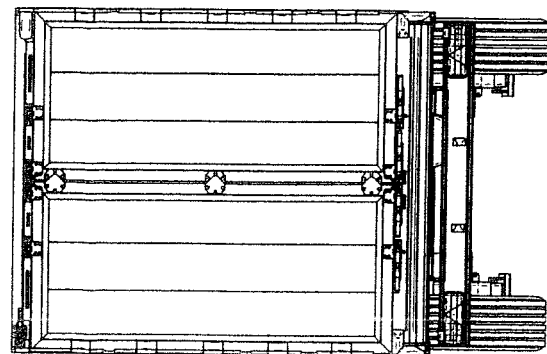
Nous nous réservons à tout moment le droit d'apporter des modifications
tous dessins et informations contenus dans ce plan ne peuvent être
reproduits ou utilisés sans autorisations préalable.

Longueur Utile: 13470



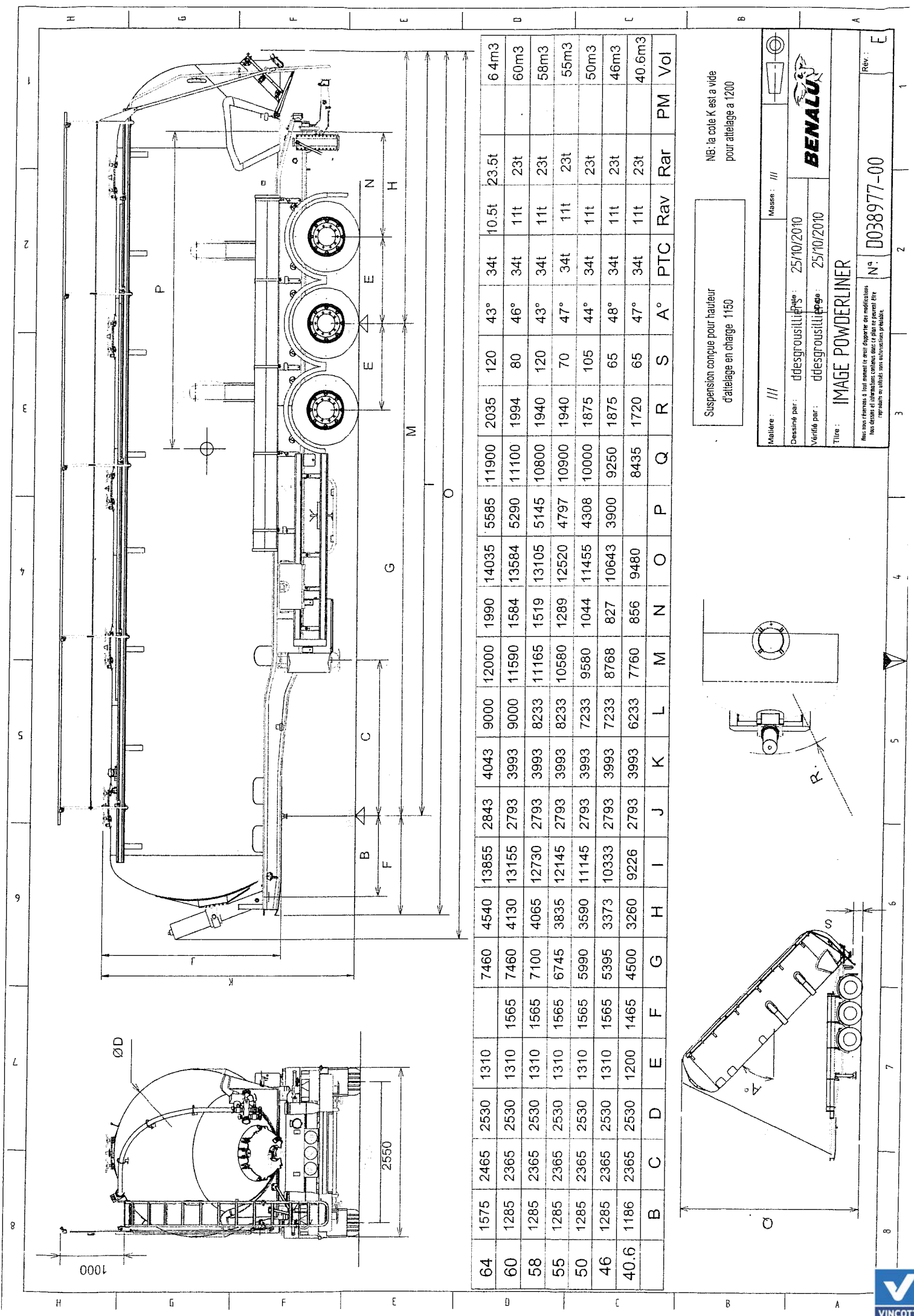
ATT V	ATT C	VOLUME*	UT 1	UT 2	H SP	AR V	AR C	PC C
1250 mm	1220 mm	89,20 m ³	2520 mm	2830 mm	290-350 mm	1170 mm	1130 mm	410 mm
1200 mm	1170 mm	89,40 m ³	2570 mm	2785 mm	290-350 mm	1190 mm	1140 mm	430 mm
1150 mm	1120 mm	90,40 m ³	2630 mm	2785 mm	310 mm	1210 mm	1160 mm	440 mm
1100 mm	1070 mm	91,10 m ³	2690 mm	2760 mm	310 mm	1230 mm	1180 mm	470 mm
1070 mm	1050 mm	91,50 m ³	2730 mm	2760 mm	310 mm	1250 mm	1190 mm	480 mm

* Sans tablier intérieur.



Pneumatiques
385/65 R22.5

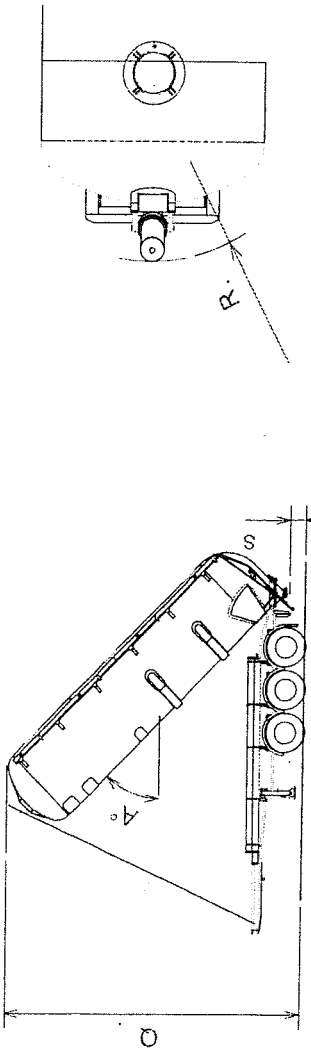
Matière : -	Masse :		
Dessiné par : jbeyaert	Date : 24/03/2009		
Vérifié par : jbeyaert	Date : 24/03/2009		
Titre : EPURES FFM 385/65 R22.5 H4.03			
Nous nous réservons à tout moment le droit d'apporter des modifications tous dessins et informations contenus dans ce plan ne peuvent être reproduits ou utilisés sans autorisations préalable.			
N° : 0048540-00		Rév. : []	



	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	A°	PTC	Rav	Rar	PM	Vol
64	1575	2465	2530	1310		7460	4540	13855	2843	4043	9000	12000	1990	14035	5585	11900	2035	120	43°	34t	10.5t	23.5t		64m3
60	1285	2365	2530	1310	1565	7460	4130	13155	2793	3993	9000	11590	1584	13584	5290	11100	1994	80	46°	34t	11t	23t		60m3
58	1285	2365	2530	1310	1565	7100	4065	12730	2793	3993	8233	11165	1519	13105	5145	10800	1940	120	43°	34t	11t	23t		58m3
55	1285	2365	2530	1310	1565	6745	3835	12145	2793	3993	8233	10580	1289	12520	4797	10900	1940	70	47°	34t	11t	23t		55m3
50	1285	2365	2530	1310	1565	5990	3590	11145	2793	3993	7233	9580	1044	11455	4308	10000	1875	105	44°	34t	11t	23t		50m3
46	1285	2365	2530	1310	1565	5395	3373	10333	2793	3993	7233	8768	827	10643	3900	9250	1875	65	48°	34t	11t	23t		46m3
40.6	1186	2365	2530	1200	1465	4500	3260	9226	2793	3993	6233	7760	856	9480		8435	1720	65	47°	34t	11t	23t		40.6m3

NB: la colle K est a vide pour attelage a 1200

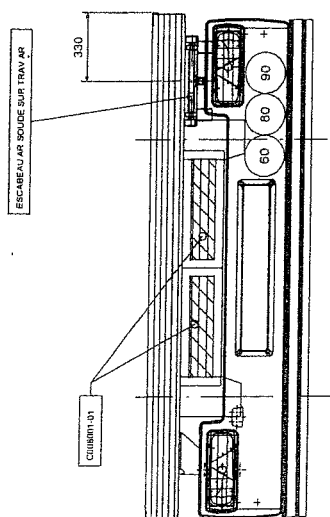
Suspension conçue pour hauteur d'attelage en charge 1150



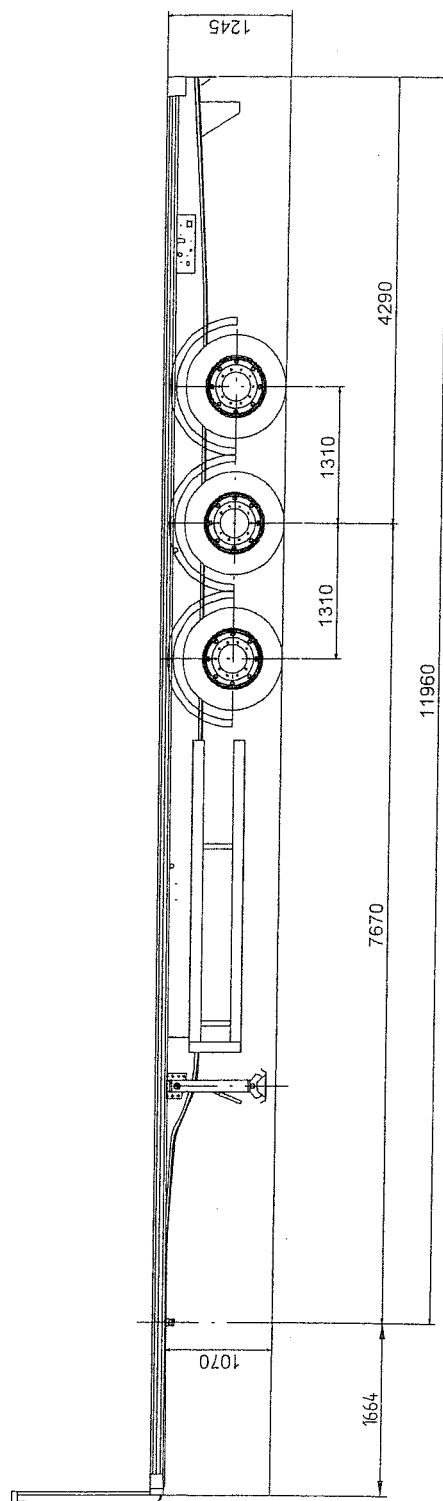
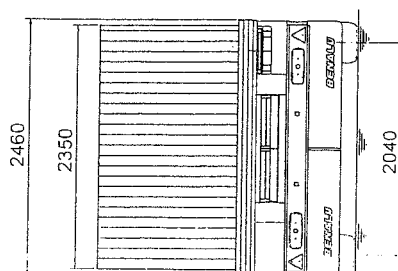
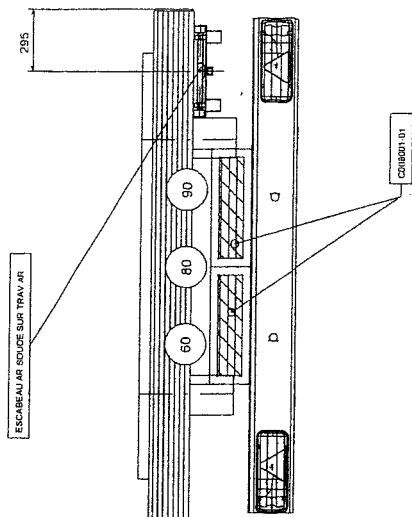
Matière : III	Masses : III	
Conçu par : ddesgrouillat	Date : 25/10/2010	BENALU
Vérifié par : ddesgrouillat	Date : 25/10/2010	
Titre : IMAGE POWDERLINER		
Pour tous renseignements à tout moment le client dispose de modifications des données et informations contenues dans ce plan ne pouvant être reproduites ou utilisées sans autorisation préalable.		
N°	Rev. :	
0038977-00	E	

[illegible]

Montage sur plateau plate forme





Montage sur plateau



127

27T

Matrícula	Modelo	Marca	Elemento	12/15	 
Denominación	LABELODA F	Destino de uso	Destino de uso	12.10.2009	
Valor de mat.		Valor de mat.	Valor de mat.		
Valor de res.		Valor de res.	Valor de res.		
Designación: IMAGE PLATEAU PLATE FORME					
				N° D 04 558 00 18	

Annexe II

Masses et Dimensions des véhicules carrossés (mm)

Dénomination Commerciale	Au point d'attelage		Par Essieu		Par groupe d'Essieux		Masse en ordre de marche	
	Mini ± 3 %	Maxi ± 3 %	Mini ± 3 %	Maxi ± 3 %	Mini	Maxi	Mini	Maxi
MultiRunner 72 2 MS	9 000	15 000	8 000	10 500	16 000	21 000	4 000	6 000
MultiRunner 72 2 MJ	9 000	15 000	8 000	10 500	16 000	21 000	4 000	6 000
MultiRunner 78 2 MS	9 000	15 000	8 000	10 500	16 000	21 000	4 000	6 000
MultiRunner 78 2 MJ	9 000	15 000	8 000	10 500	16 000	21 000	4 000	6 000
MultiRunner 87 2 MS	9 000	15 000	8 000	10 500	16 000	21 000	4 000	6 000
MultiRunner 87 2 MJ	9 000	15 000	8 000	10 500	16 000	21 000	4 000	6 000
MultiRunner 74 3	8 000	15 000	6 000	9 000	18 000	27 000	4 500	6 500
MultiRunner 78 3	8 000	15 000	6 000	9 000	18 000	27 000	4 500	6 500
MultiRunner 87 3	8 000	15 000	6 000	9 000	18 000	27 000	4 500	6 500
MultiRunner 92 3	8 000	15 000	6 000	9 000	18 000	27 000	5 000	7 000
Sidérale 72 2 MS	8 000	15 000	8 000	10 500	16 000	21 000	4 000	6 000
Sidérale 72 2 MJ	8 000	15 000	8 000	10 500	16 000	21 000	4 000	6 000
Sidérale 78 2 MS	8 000	15 000	8 000	10 500	16 000	21 000	4 000	6 000
Sidérale 78 2 MJ	8 000	15 000	8 000	10 500	16 000	21 000	4 000	6 000
Sidérale 87 2 MS	8 000	15 000	8 000	10 500	16 000	21 000	4 000	6 000
Sidérale 87 2 MJ	8 000	15 000	8 000	10 500	16 000	21 000	4 000	6 000
Sidérale 74 3	8 000	15 000	6 000	9 000	18 000	27 000	4 500	6 500
Sidérale 78 3	8 000	15 000	6 000	9 000	18 000	27 000	4 500	6 500
Sidérale 87 3	8 000	15 000	6 000	9 000	18 000	27 000	4 500	6 500
Sidérale 92 3	8 000	15 000	6 000	9 000	18 000	27 000	5 000	7 000
AstroRunner 72 2 MS	8 000	15 000	8 000	10 500	16 000	21 000	4 000	6 000
AstroRunner 78 2 MS	8 000	15 000	8 000	10 500	16 000	21 000	4 000	6 000
AstroRunner 78 3	8 000	15 000	6 000	9 000	18 000	27 000	4 500	6 500
AstroRunner 87 3	8 000	15 000	6 000	9 000	18 000	27 000	4 500	6 500
AstroRunner 97 3	8 000	15 000	6 000	9 000	18 000	27 000	5 000	7 000
BulkLiner 88	8 000	15 000	6 000	9 000	18 000	27 000	5 000	7 000
BulkLiner VI 95	8 000	15 000	6 000	9 000	18 000	27 000	5 000	7 000
BulkLiner VI 106	8 000	15 000	6 000	9 000	18 000	27 000	5 500	7 500
BulkLiner VI 113	8 000	15 000	6 000	9 000	18 000	27 000	5 500	7 500
BulkLiner VE 95	8 000	15 000	6 000	9 000	18 000	27 000	5 000	7 000
BulkLiner VE 106	8 000	15 000	6 000	9 000	18 000	27 000	5 500	7 500
BulkLiner VE 113	8 000	15 000	6 000	9 000	18 000	27 000	5 500	7 500
BulkLiner Ultra 106	8 000	15 000	6 000	9 000	18 000	27 000	6 000	8 000
BulkLiner Ultra 113	8 000	15 000	6 000	9 000	18 000	27 000	5 500	7 500
BulkLiner Ultra 124	8 000	15 000	6 000	9 000	18 000	27 000	6 000	8 000
OptiLiner 95	8 000	15 000	6 000	9 000	18 000	27 000	5 500	7 500
OptiLiner 106	8 000	15 000	6 000	9 000	18 000	27 000	6 000	8 000
OptiLiner 114	8 000	15 000	6 000	9 000	18 000	27 000	6 000	8 000
OptiLiner 124	8 000	15 000	6 000	9 000	18 000	27 000	6 000	8 000
OptiLiner 133	8 000	15 000	6 000	9 000	18 000	27 000	6 500	8 500
PowderLiner 40.6	8 000	15 000	6 000	9 000	18 000	27 000	6 000	8 000
PowderLiner 46	8 000	15 000	6 000	9 000	18 000	27 000	6 000	8 000
PowderLiner 50	8 000	15 000	6 000	9 000	18 000	27 000	6 000	8 000
PowderLiner 55	8 000	15 000	6 000	9 000	18 000	27 000	6 000	8 000
PowderLiner 58	8 000	15 000	6 000	9 000	18 000	27 000	6 000	8 000
PowderLiner 60	8 000	15 000	6 000	9 000	18 000	27 000	6 000	8 000
PowderLiner 64	8 000	15 000	6 000	9 000	18 000	27 000	6 000	8 000
MultiLoader 13620	8 000	15 000	6 000	9 000	18 000	27 000	3 500	5 000
MultiLiner 20' Basculant	8 000	15 000	6 000	9 000	18 000	27 000	3 500	5 500
MultiLiner 26' Basculant	8 000	15 000	6 000	9 000	18 000	27 000	3 500	5 500
MultiLiner 30' Basculant	8 000	15 000	6 000	9 000	18 000	27 000	4 500	6 000

MultiLiner 40' Basculant		8 000	15 000	6 000	9 000	18 000	27 000	4 500	6 000
MultiLiner 30' Fixe		8 000	15 000	6 000	9 000	18 000	27 000	3 500	5 500
MultiLiner 40' Fixe		8 000	15 000	6 000	9 000	18 000	27 000	3 500	5 500
Berry	106	8 000	15 000	6 000	9 000	18 000	27 000	4 000	8 000
Berry	114	8 000	15 000	6 000	9 000	18 000	27 000	4 000	8 000
Berry	124	8 000	15 000	6 000	9 000	18 000	27 000	4 000	8 000
Berry	133	8 000	15 000	6 000	9 000	18 000	27 000	4 000	8 000
JUMBOLINER	134	8 000	15 000	6 000	9 000	18 000	27 000	4 000	8 000
JUMBOLINER	106	8 000	15 000	6 000	9 000	18 000	27 000	4 000	8 000
JUMBOLINER	95	8 000	15 000	6 000	9 000	18 000	27 000	4 000	8 000
JUMBOTRACK	134	8 000	15 000	6 000	9 000	18 000	27 000	4 000	8 000
JUMBOLINER LAND	95	8 000	15 000	6 000	9 000	18 000	27 000	4 000	8 000
TIMBERLINER		8 000	15 000	6 000	9 000	18 000	27 000	4 000	8 000
AGRILINER	95	8 000	15 000	6 000	9 000	18 000	27 000	4 000	8 000
LANDLINER	95	8 000	15 000	6 000	9 000	18 000	27 000	4 000	8 000
MULTITRACK		8 000	15 000	6 000	9 000	18 000	27 000	4 000	8 000
POLYTRACK		8 000	15 000	6 000	9 000	18 000	27 000	4 000	8 000
PULLTRACK	19 m ³	8 000	15 000	6 000	9 000	18 000	27 000	4 000	8 000
PULLTRACK	21 m ³	8 000	15 000	6 000	9 000	18 000	27 000	4 000	8 000
PULLTRACK	26 m ³	8 000	15 000	6 000	9 000	18 000	27 000	4 000	8 000

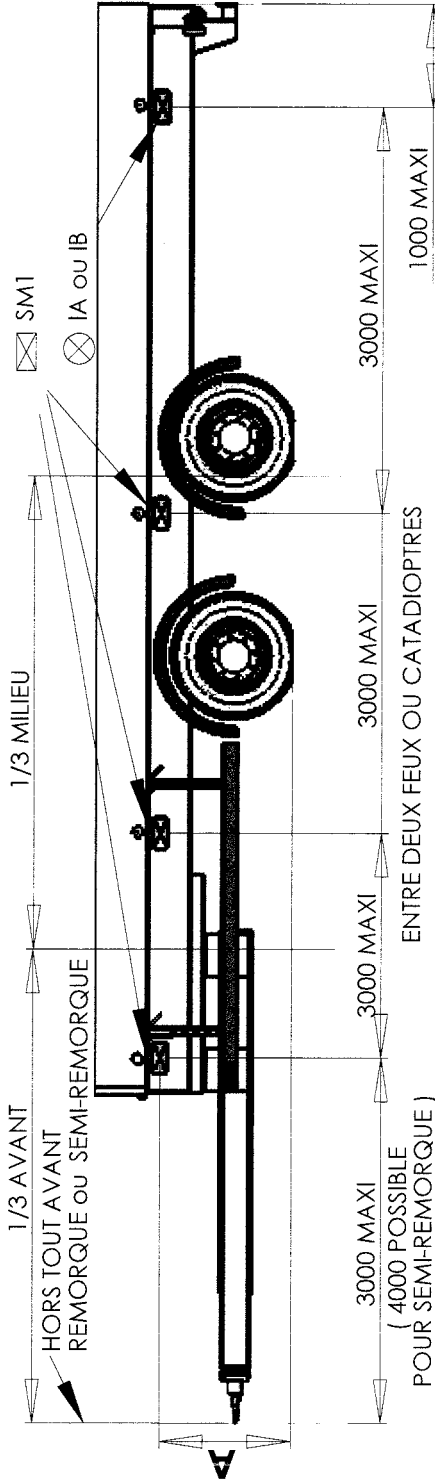
(1) Non compris passerelle de bâchage



ECLAIRAGE LATERAL VEHICULE REMORQUE

III-22- B
01/06/2006
Page : 1/1

PC 103	DATE	NATURE DE LA MODIFICATION	CODE DE LA ROUTE: - R.313-6 et R.313-19
	03/03/2006	Création	ARRETE: - AM 16/07/1954 modifié
	01/06/2006	Mise à jour	REGLEMENT: - R 48 01
			DIRECTIVE: - 76/756/CEE niveau 91/663/CEE



FEUX LATéraux: SM1

- OBLIGATOIRES: O3 et O4 longueur > 6000
- AUTORISES: sur autres véhicules et longueur < 6000

CATADIOPTRÉS LATéraux: IA ou IB

- OBLIGATOIRES: tous véhicules long. > 6000
- AUTORISES: tous véhicules long. < 6000

Symbole	HAUTEUR A (en mm)	mini	MAXI
SM1	FEU LATERAL ORANGE	3 50	1500 (2100 si impossibilité)
IA ou IB	CATADIOPTRE LATERAL ORANGE	3 50	900 (1500 si impossibilité)

NOTA : - POSSIBILITE DE GROUPEL LES DEUX FONCTIONS DANS LE FEU LATERAL

- AU MOINS UN DISPOSITIF DANS LE TIERS AVANT (flèche ou protubérance avant comprise)
- AU MOINS UN DISPOSITIF DANS LE TIERS MILIEU
- UN DISPOSITIF A 1000 MAXI DE L'ARRIERE:
 - LE CATADIOPTRE ET LE FEU LATERAL LE PLUS EN ARRIERE PEUVENT ETRE ROUGES SI GROUPEES AVEC AUTRES FEUX.
 - LE FEU LATERAL LE PLUS EN ARRIERE DOIT ETRE ORANGE S'IL CLIGNOTE AVEC LE FEU INDICATEUR DE DIRECTION ARRIERE.

EXEMPLE DU SENS DE MONTAGE ET DU MARQUAGE

FEU LATERAL: SM1
 00XXXX


 Sigle indiquant une hauteur inférieure à 750mm.

CATADIOPTRE: IA
 02XXXX

Si présence TOP, doit être lu horizontalement.



- POUR PTR > 3.5T: SIGNALISATION COMPLEMENTAIRE BLANCHE OU JAUNE SELON REGLEMENT N°104 AUTORISE (LIGNE OU CONTOUR)

	ECLAIRAGE ARRIERE VEHICULE REMORQUE			III-21- A
	DATE	NATURE DE LA MODIFICATION	CODE DE LA ROUTE: - R.313-1/5/7/9/10/12/14/15/18/24/26	
	23/02/2006	Création	Page : 1/1	
			ARRETE: - AM 16/07/1954 modifié	
			REGLEMENT: - R 48 01	
			DIRECTIVE: 76/756/CEE niveau 91/663/CEE	

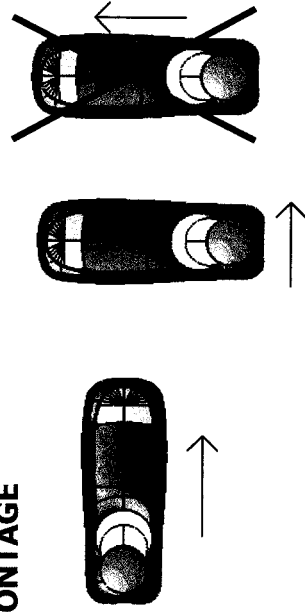
COTES SUIVANT ARRETE MINISTERIEL DU 16/07/1954 modifié (exprimées en mètre sur véhicule à vide en ordre de marche)					
Symbole	Qté.		A	B	C D
R 2a ou 2b	2	Feu de position rouge Feu indicateur de direction orange Feu de brouillard rouge Feu de stop rouge Feu de marche arrière blanc Catadioptrite rouge triangulaire	>=0.35 >=0.35	<=1.50** <=1.50**	>=0.30 >=0.30
F S1 ou S2 AR	1 ou 2 2 ou 3 1 ou 2		>=0.25 >=0.35 >=0.25	<=1.00 <=1.50 <=1.20	>=0.30
III A ou III B	2		>=0.35	<=0.90	>=0.30
					<=0.40
R	2		Feu d'encombrement (gabarit) rouge: - le plus haut possible - le plus près possible de la largeur HT (* distance entre les plages éclairantes du feu rouge et du feu d'encombrement: E>=0.20, dans le cas de montage en partie basse)		

- ** : SI IMPOSSIBILITE <= 2.10 TOLERE

EXEMPLE DU SENS DE MONTAGE

(Feux asymétriques) :

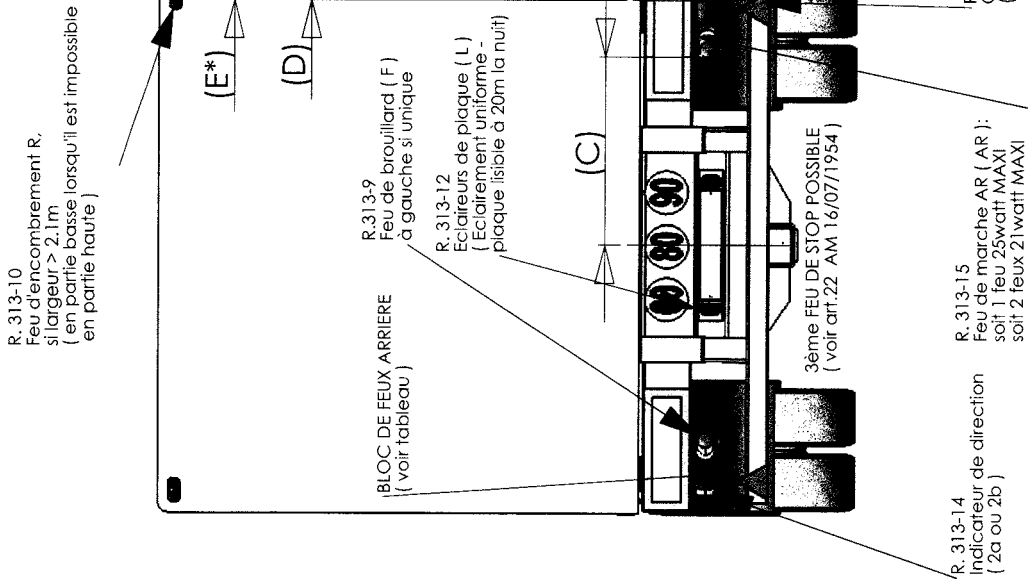
SI PRESENCE: FLECHE ORIENTEE
VERS L'EXTERIEUR DU VEHICULE.
(exemple côté droit)



NOTA: - POSITION + STOP + DIRECTION: DOUBLEMENT POSSIBLE AVEC FEUX IDENTIQUES POUR + 3.5T (voir article 18bis AM 16/07/1954)

- DANS LE CAS DE MONTAGE D'UNE GRILLE DE PROTECTION DES FEUX AR, NE MONTER QUE DES ENSEMBLES FEUX + GRILLES HOMOLOGUES.

- PTC > 3.5T: SIGNALISATION COMPLEMENTAIRE BLANCHE OU JAUNE SELON LE REGLEMENT 104 AUTORISEE (LIGNE OU CONTOUR)



Liste des feux

Marque	Homologation	Fonction
FABRILCAR	A 02 A13 1787	encombrement avant
FABRILCAR	R 02 E13 1787	encombrement arrière
FABRILCAR	00 SM1 E13 1787	position latéral
FABRILCAR	RS1 E9 02 5266	Position / Stop
FABRILCAR	IIIA E9 02 5266	Catadioptré
FABRILCAR	L E9 00 5266	Eclaireur plaque
FABRILCAR	2a E9 02 5266	Clignotant
FABRILCAR	R E9 01 5266	Position
FABRILCAR	AR E9 00 5266	Recul
FABRILCAR	F E9 00 5266	Brouillard
FABRILCAR	RS1 E9 02 5497	Position / Stop
FABRILCAR	IIIA E9 02 5497	Catadioptré
FABRILCAR	L E9 00 5497	Eclaireur plaque
FABRILCAR	2a E9 02 5497	Clignotant
FABRILCAR	R E9 01 5497	Position
FABRILCAR	AR E9 00 5497	Recul
FABRILCAR	F E9 00 5497	Brouillard
FABRILCAR	IIIA E9 02 5497	Catadioptré
FABRILCAR	SM1 E9 00 5497	position latéral
FABRILCAR	IA E9 02 5497	Catadioptré
FABRILCAR	IA E9 02 5499	Catadioptré
FABRILCAR	R E9 02 5499	Position
FABRILCAR	A E9 02 1469	gabarit
FABRILCAR	R E9 02 1469	gabarit
FABRILCAR	SM1 E9 00 1469	Position
Rubbolite	L E11 00 0419	Eclaireur plaque
Rubbolite	E11 02 A 1903	Encombrement
Rubbolite	E11 02 R 1904	Position
Rubbolite	E11 00 SM1 0051	Position latéral
Truck Lite	SM1 E11 00 0052	Position
Truck Lite	E11 02 0636	catadioptré
Truck Lite	F 00 E13 2102	Brouillard
Truck Lite	R S1 02 E13 2103	Position / Stop
Truck Lite	2a 01 E13 0827	Clignoteur
Vignal	IA E2 0205021	Catadioptré
Vignal	IA E2 028040	Catadioptré
Vignal	IA E2 028005	Catadioptré
Vignal	L E2 008005	Eclaireur plaque
Vignal	2a E2 018005	Clignoteur
Vignal	R-S1 E2 028005	Position/ Stop
Vignal	AR E2 008005	Recul
Vignal	F E2 008005	Brouillard
Vignal	IA E2 022040	Catadioptré
Vignal	IIIA E2 022040	Catadioptré
Vignal	L E2 002069	Eclaireur plaque
Vignal	2a E2 012040	Clignoteur
Vignal	R-S1 E2 022040	Position / Stop
Vignal	AR E2 002040	Recul
Vignal	F E2 002040	Brouillard
Vignal	SM1 E2 002040	Position
Vignal	IIIA E2 029056	Catadioptré
Vignal	2a E2 019056	Clignoteur
Vignal	R-S1 E2 029056	Position / Stop
Vignal	AR E2 009056	Recul
Vignal	F E2 009056	Brouillard
Vignal	L E2 007001	Eclaireur plaque