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**Datasheet for the decision  
of 9 January 2013**

**Case Number:** T 2291/10 - 3.2.01  
**Application Number:** 06123730.1  
**Publication Number:** 1785339  
**IPC:** B62D 33/07, B62D 33/067,  
G07C 9/00, B60R 25/00  
**Language of the proceedings:** EN

**Title of invention:**

System for controlling the tilting function of a cab of a motor vehicle preventing unauthorized cab-tilt operations, a motor vehicle comprising such system, a corresponding method of controlling a cab tilting function and a computer program and a computer readable medium therefore

**Applicant:**

Scania CV AB

**Headword:**

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**Relevant legal provisions:**

EPC Art. 56

**Keyword:**

"Inventive step (yes, after amendments)"

**Decisions cited:**

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**Catchword:**

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Case Number: T 2291/10 - 3.2.01

**D E C I S I O N**  
of the Technical Board of Appeal 3.2.01  
of 9 January 2013

**Appellant:** Scania CV AB  
(Applicant) S-151 87 Södertälje (SE)

**Representative:** Thum, Bernhard  
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**Decision under appeal:** Decision of the Examining Division of the  
European Patent Office posted 8 June 2010  
refusing European patent application  
No. 06123730.1 pursuant to Article 97(2) EPC.

**Composition of the Board:**

**Chairman:** G. Pricolo  
**Members:** Y. Lemblé  
D. T. Keeling

## Summary of Facts and Submissions

- I. European patent application No. 06 123 730.1 was refused by a decision of the Examining Division posted 8 June 2010.
- II. The reason given for the decision was that the subject-matter of claim 1 did not involve an inventive step, that dependent claim 6 was not clear and that claim 1 was not in the correct two-part form. The following prior art documents were considered during the examining proceedings:
- D1: KR-A-2003-0 076 798,
  - D2: FR-A-2 584 034,
  - D3: US-A-5 841 363,
  - D4: US-B-6 658 328,
  - D5: EP-A-1 503 555,
  - D6: US-A-3 706 470,
  - D7: US-A-4 440 252,
  - D8: US-A-5 869 908.
- III. On 7 July 2010 the Appellant (Applicant) lodged an appeal against this decision. The statement setting out the grounds of appeal was filed on 12 October 2010.
- IV. In a communication annexed to the summons to oral proceedings pursuant to Art. 15(1) RPBA, the Board additionally introduced the prior art document WO-A-97/30874 (D9) into the proceedings and informed the Appellant that it shared the opinion of the examining division that the subject-matter of independent claim 1 and of independent method claim 8 of the main request, then on file, was not inventive on

the basis of the combination D1/D3 or D1/D4, and further that it was also not inventive on the basis of the combination D1/D9.

V. Oral proceedings were held before the Board on 9 January 2013. The Appellant (Applicant) requested that the decision under appeal be set aside and that a patent be granted on the basis of the following documents:

- claims 1 to 11 as filed during oral proceedings,
- description: pages 1, 2, 2a, 3 to 11 as filed during oral proceedings,
- drawings 1/2-2/2 as originally filed.

VI. Independent claims 1 and 7 according to this request read as follows:

"1. A system for controlling a tilting function in respect of a cab (130) of a motor vehicle (100), the system comprising:

a tilt control means (160) adapted to generate a first control signal ( $C_{\text{tilt}}$ ) for accomplishing a tilting of the cab (130) relative to a frame (120) of the vehicle (100), and

a key verification means (155) adapted to authenticate a key means (170) by testing whether the key means (170) fulfills an acceptance criterion, and if the acceptance criterion is found to be fulfilled, enable the tilt control means (160) to generate the first control signal ( $C_{\text{tilt}}$ ), wherein

the key verification means (155) is adapted to generate a first data message (EC) representing an encrypted challenge,

the key means (170) is adapted to receive the first data message (EC) and in response thereto produce a second data message representing an encrypted response (ER(ID<sub>key</sub>)), and

the key verification means (155) is further adapted to test the acceptance criterion based on the encrypted response (ER(ID<sub>key</sub>)), and in response to a fulfilled acceptance criterion transmit a permit signal (OK<sub>tilt</sub>) to the tilt control means (160), the permit signal (OK<sub>tilt</sub>) enabling the tilt control means (160) to generate the first control signal (C<sub>tilt</sub>), wherein the tilt control means (160) is adapted to:

start a timer in connection with a wake-up procedure in respect of the tilt control means (160),  
investigate whether, at expiry of the timer, no permit signal (OK<sub>tilt</sub>) has been received, and if so  
enable the generation of the first control signal (C<sub>tilt</sub>)".

"7. A method of controlling a cab-tilting mechanism for tilting a cab (130) relative to a frame (120) of a motor vehicle (100), the method comprising:

testing whether a key means (170) fulfills an acceptance criterion, and if so  
enabling generation of a first control signal (C<sub>tilt</sub>) adapted to accomplish the tilting, characterized by  
generating a first data message (EC) representing an encrypted challenge,  
receiving the first data message (EC) in the key means (170),  
generating, in the key means (170), a second data message in response to the first data message (EC), the second data message representing an encrypted response (ER(ID<sub>key</sub>)),

testing the acceptance criterion based on the encrypted response ( $ER(ID_{key})$ ), and if the acceptance criterion is fulfilled

transmitting a permit signal ( $OK_{tilt}$ ) to the tilt control means (160), the permit signal ( $OK_{tilt}$ ) enabling the tilt control means (160) to generate the first control signal ( $C_{tilt}$ ),

starting a timer in connection with a wake-up procedure, investigating whether, at expiry of the timer, no permit signal ( $OK_{tilt}$ ) has been received, and if so

enabling the generation of the first control signal ( $C_{tilt}$ )."

VII. The Appellant's submissions made in writing and at the oral proceedings, insofar as they are relevant to the present decision, can be summarised as follows:

All the previously filed requests were withdrawn and replaced by a sole request in which the independent claim 1 was formed by the combination of the originally filed claims 1 and 6 and the independent method claim 7 was formed by the combination of the originally filed claims 8 and 11. The subject-matter of these claims was novel and inventive over the cited prior art documents. Contrary to the opinion of the Examining Division, the features which were added to the independent claims and were issued from the originally filed claims 6 and 11 did not contradict the other features of the respective claim. The purpose of the added features was also clear: the wake-up procedure was an override to authorise tilting of the cab in case of a defect.

## Reasons for the Decision

1. The appeal is admissible.
2. Admissibility of the amendments under Article 123(2) EPC

There are no formal objections under Article 123(2) EPC to the amendments made to the claims and the description.

Claim 1 is drafted in the one-part form and combines the features of claim 1 as originally filed with those of claim 6 as originally filed. In the same way, method claim 7 combines the features of claim 7 as originally filed with those of claim 11 as originally filed.

Dependent claims 2 to 5 as originally filed remain unchanged. Dependent claim 7 as originally filed is now dependent claim 6. Dependent claims 9 and 10 as originally filed are now dependent claims 8 et 9. Dependent claims 12 and 13 as originally filed are now dependent claims 10 and 11.

The description has been brought into conformity with the amendments made in the claims and acknowledges the documents D1 and D9 as relevant prior art in a new page 2a.

3. Novelty and inventive step
  - 3.1 The subject-matter of the claims is novel over the prior art. Since novelty has not been an issue in the

first instance proceedings there is no necessity to justify this in detail.

3.2 In independent claim 1, the addition of the feature that the tilt control means is adapted to:

start a timer in connection with a wake-up procedure in respect of the tilt control means (160), investigate whether, at expiry of the timer, no permit signal ( $OK_{\text{tilt}}$ ) has been received, and if so enable the generation of the first control signal ( $C_{\text{tilt}}$ )

overcomes the objection of the Examining Division, that the subject-matter of independent claim 1 and of independent method claim 8 as originally filed (main request then on file) was not inventive in view of the combination of the documents D1/D3 or D1/D4, an objection which was shared by the Board.

The technical problem solved by this additional feature is to minimize the risk that an authorized person is prevented from accessing the vehicle's most sensitive units in case the system controlling this access is defective. This problem is mentioned in paragraph [0007] of the original European application EP-A-1 785 339 (hereafter called D0).

In order to allow physical access to the space under the cab in case the key means and/or the key verification means of the system is defective, for example because the exchange of the first and second data messages mentioned in claim 1 cannot be completed, the tilt control means is adapted to start a timer in connection with a wake-up procedure in respect of the tilt control means as mentioned in this additional



feature of claim 1. At expiry of the timer (preferably after a relatively long time period of several hours, see paragraph [0014] of D0), the tilt control means is adapted to investigate whether a permit signal has been received. If it is found that no such signal has been received, the tilt control means enables the generation of the first control signal  $C_{\text{tilt}}$  in response to a user-generated tilt command (i.e. even if no permit signal  $OK_{\text{tilt}}$  has been received). Hence, after expiry of the timer, a cab tilt is made possible and the space under the cab can ultimately be accessed also in case the key means or the above-mentioned key verification means is defective (see paragraphs [0014] and [0029] of D0).

None of the documents D1 to D9 discloses this feature or suggests that this feature be included in a system for controlling a tilting function of a cab of a motor vehicle.

3.3 In the same way, in independent method claim 7, the addition of the method step comprising:

starting a timer in connection with a wake-up procedure, investigating whether, at expiry of the timer, no permit signal ( $OK_{\text{tilt}}$ ) has been received, and if so

enabling the generation of the first control signal ( $C_{\text{tilt}}$ )

solves the same problem as previously mentioned (see paragraph [0007] of D0). This feature relies on the same inventive concept as mentioned in point 3.2 above and is neither known nor suggested by the documents D1 to D9.

3.4 The Board concludes from the above considerations that the subject-matter of the independent claims 1 and 7 involves an inventive step.

4. Clarity

In point 3.2.2 of its decision, the Examining Division was of the opinion that the feature added to claim 1 (feature of claim 6 as originally filed) was not clear because it did not define when and why the wake-up is issued.

This point of view is not shared by the Board.

Paragraphs [0014] and [0029] of the application D0 clearly disclose that the wake-up procedure has the purpose of overriding the unauthorized tilting of the cab, but only after expiry of the timer, which typically -for reasons of security- would take a relatively long time (several hours). Paragraph [0029] also mentions that the wake-up procedure is "typically initiated by a supply voltage being fed to the tilt control means as the result of a key being inserted into the key reception aperture". The word "typically" suggests that the insertion of the key into the key reception aperture may only be one possibility for the initialisation of the timer. The person skilled in the art recognises here that other obvious possibilities may be contemplated to obtain the start of the timer. In the context of the wording of claim 1, it is clear for the skilled reader that the wake-up procedure provides for an override of the procedure for authenticating a key means, in which the first control signal is generated by the tilt control means on reception of a permit signal from the key verification

means. The procedure for authenticating a key means is automatic and clearly needs a very short time only. In contrast thereto, the wake-up procedure necessarily requires a longer time because the first control signal is only generated at the expiry of a timer and if no permit signal has been received. Accordingly, the skilled reader would readily understand that the wake-up procedure is provided for the case in which a permit signal should have been issued when authenticating a key means but was not issued for some reason such as a defective component. Furthermore, it is clear for the skilled reader, and this is supported by the description as explained above, that it is not fundamental when the wake-up procedure is started, since the override of the procedure for authenticating a key means does not have to take place at a specified point in time, but only at a point in time sufficiently distant (e.g. some hours in order to provide for sufficient security, but possibly less depending on circumstances) from the instant at which the procedure for authenticating a key means would normally be terminated. The questions of when and why the wake-up procedure is issued, can therefore be clearly answered in the context of the present invention and are not an obstacle to the clarity of the claims.

5. Dependent claims 2 to 5 and 8 to 9 define additional features to those specified in the independent claim 1 or 7 to which they respectively refer and, by virtue of their dependency, contain all of the features of the respective independent claim.  
Claim 6 refers to a motor vehicle comprising the system according to any one of the claims 1 to 5.

Claim 10 and claim 11 define a computer program or a computer readable medium having a program recorded thereon which implement the method steps of independent method claim 7, when they are run on a computer.

The above conclusions regarding novelty and inventive step therefore equally apply to those dependent claims, which likewise meet the requirements of the EPC.

## **Order**

### **For these reasons it is decided that:**

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance with the order to grant a patent on the basis of the following documents:
  - claims 1 to 11 as filed during oral proceedings before the Board of Appeal,
  - description: pages 1, 2, 2a, 3 to 11 as filed during oral proceedings before the Board of Appeal,
  - drawings as originally filed.

The Registrar

The Chairman

A. Counillon

G. Pricolo