

Internal distribution code:

- (A) [-] Publication in OJ
- (B) [-] To Chairmen and Members
- (C) [-] To Chairmen
- (D) [X] No distribution

**Datasheet for the decision
of 19 December 2024**

Case Number: T 0992/23 - 3.2.01

Application Number: 14700620.9

Publication Number: 2969610

IPC: B60G17/0165

Language of the proceedings: EN

Title of invention:

RIDE HEIGHT CONTROL SYSTEM OF A VEHICLE AND METHOD

Patent Proprietor:

Jaguar Land Rover Limited

Opponents:

AUDI AG
Manske, Jörg

Headword:

Relevant legal provisions:

EPC Art. 123(2), 56
RPBA 2020 Art. 12(6)

Keyword:

Amendments - auxiliary request 1 - extension beyond the content of the application as filed (yes) - auxiliary request 2 - extension beyond the content of the application as filed (no)

Late-filed request - should have been submitted in first-instance proceedings (no) - circumstances of appeal case justify admittance (yes)

Inventive step - auxiliary request 2 - (yes)

Decisions cited:

G 0002/10, T 0437/17

Catchword:



Beschwerdekammern
Boards of Appeal
Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0

Case Number: T 0992/23 - 3.2.01

D E C I S I O N
of Technical Board of Appeal 3.2.01
of 19 December 2024

Respondent: Jaguar Land Rover Limited
(Patent Proprietor) Abbey Road
Whitley
Coventry, Warwickshire CV3 4LF (GB)

Representative: Jaguar Land Rover Patents Department
Patents Department W/1/073
Abbey Road, Whitley
Coventry CV3 4LF (GB)

Appellant: AUDI AG
(Opponent 1) Auto-Union-Str. 1
85045 Ingolstadt (DE)

Representative: Liebl, Thomas
Neubauer - Liebl - Bierschneider - Massinger
Münchener Straße 49
85051 Ingolstadt (DE)

Appellant: Manske, Jörg
(Opponent 2) Schwester-Aicharda-Str. 41
59755 Arnsberg (DE)

Representative: Manske, Jörg
Fritz Patent- und Rechtsanwälte
Partnerschaft mbB
Postfach 1580
59705 Arnsberg (DE)

Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
31 March 2023 concerning maintenance of the
European Patent No. 2969610 in amended form.**

Composition of the Board:

Chairman G. Pricolo
Members: J. J. de Acha González
 M. Millet

Summary of Facts and Submissions

I. The appeals of the opponents lie against the interlocutory decision of the Opposition Division, which found that the contested patent, as amended in accordance with the auxiliary request 2 filed during the oral proceedings, complied with the requirements of the EPC.

The patent proprietor initially also filed an appeal against the decision of the Opposition Division which they subsequently withdrew during the oral proceedings before the Board.

II. The following documents are relevant for the present decision:

- D1:** "Der neue Audi Q7" in ATZ, Volume 107, Issue 11/2005, published on 1 November 2005;
- D3:** "DYNAMISCH IN JEDER FAHRSITUATION" in ATZ extra, Volume 17, Issue 07/2012, published on 1 November 2012; and
- D4:** US 5593176 A.

III. The Opposition Division found among others that the subject-matter of system claim 1 as well as that of method claim 9 of auxiliary request 2 did not extend beyond the content of the application as originally filed and involved an inventive step in view of the following combinations of prior art:

- D4 with D1;
- D1 with D4; and
- D3 with common general knowledge or D4.

IV. Oral proceedings before the Board were held on 19 December 2024 as a videoconference.

The appellants (opponents) requested that the decision of the Opposition Division be set aside and that the patent be revoked.

The respondent (patent proprietor) requested that the the patent be maintained in amended form in accordance with the auxiliary request 1 filed as auxiliary requests 3 with their statement of grounds of appeal (i.e. that the appeal of the opponents be dismissed) or, in the alternative, according to the auxiliary 2 filed as auxiliary request 3B with the reply.

V. Claim 1 of the auxiliary request 1 (version found allowable by the Opposition Division) reads as follows (feature numbering in line with that of the contested decision):

- M1** *A control system for controlling a target ride height of a vehicle (1),*
- M2** *the control system being configured, upon receipt of a driving mode signal signalling that an off-road driving mode has been selected,*
- M2.1** *the driving mode signal being an output from a driving mode selector (53)*
- M2.1.1** *which is operable manually by a driver or*
- M2.1.2** *automatically in relation to automatically detected terrain parameters,*
- M3** *automatically to set a target off-road ride height in dependence on one or more vehicle operating parameters,*
- M4** *wherein the vehicle operating parameters comprise a vehicle speed,*
- M5** *wherein the control system is configured to:
define a first target off-road ride height and a second target off-road ride height, wherein said first target*

off-road ride height is higher than said second target off-road ride height;
define a first and second speed threshold, the first speed threshold being less than the second speed threshold;
select either the first or second target off-road ride height in dependence on the vehicle speed;
select the first target off-road ride height when the off-road driving mode is selected and the vehicle speed is below a first speed threshold;
select the second target off-road ride height when the off-road driving mode is selected and the vehicle speed is between the first and second speed thresholds; and
select a target on-road ride height when the vehicle speed increases above the second speed threshold.

Method claim 9 of auxiliary request 1 reads as follows:

A method of controlling a target ride height of a vehicle (1), the method comprising:
receiving a driving mode signal signalling that an off-road driving mode has been selected; the driving mode signal being an output from a driving mode selector (53) which is operable manually by a driver or automatically in relation to automatically detected terrain parameters, and
upon receipt of the driving mode signal, setting a target off-road ride height in dependence on one or more vehicle operating parameters,
wherein the vehicle operating parameters comprise a vehicle speed, wherein the method comprises:
defining a first target off-road ride height and a second target off-road ride height,
wherein said first target off-road ride height is higher than said second target off-road ride height;

defining a first and second speed threshold, the first speed threshold being less than the second speed threshold;
selecting either the first or second target off-road ride height in dependence on the vehicle speed;
selecting the first target off-road ride height when the off-road driving mode is selected and the vehicle speed is below a first speed threshold;
selecting the second target off-road ride height when the off-road driving mode is selected and the vehicle speed is between the first and second speed thresholds;
and
selecting a target on-road ride height when the vehicle speed increases above the second speed threshold.

Claim 1 of the auxiliary request 2 differs from claim 1 of the auxiliary request 1 in that feature M5 reads as follows (differences with respect to M5 of auxiliary request 1 underlined by the Board):

M5 *wherein the control system is configured to:*
define a first target off-road ride height and a second target off-road ride height, wherein said first target off-road ride height is higher than said second target off-road ride height;
define a first and second speed threshold, the first speed threshold being less than the second speed threshold;
calibrate hysteresis into the first and second speed thresholds for selecting the first and second target off-road ride heights and for automatically dropping out of the first and second target off-road ride heights;
automatically *select either the first or second target off-road ride height in dependence on the vehicle speed;*

select the first target off-road ride height when the off-road driving mode is selected and the vehicle speed is below a first speed threshold;
select the second target off-road ride height when the off-road driving mode is selected and the vehicle speed is between the first and second speed thresholds; and
select a target on-road ride height when the vehicle speed increases above the second speed threshold.

Similarly, method claim 9 of the auxiliary request 2 differs from claim 9 of the auxiliary request 1 in that it further includes the following underlined wording:

"define a first and second speed threshold, the first speed threshold being less than the second speed threshold;
calibrating hysteresis into the first and second speed thresholds for selecting the first 30 and second target off-road ride heights and for automatically dropping out of the first and second target off-road ride heights;
automatically selecting either..."

Reasons for the Decision

1. *Auxiliary request 1 - inadmissible extension*
- 1.1 The subject-matter of claim 1 of the auxiliary request 1 extends beyond the content of the application as originally filed (Article 123(2) EPC).
- 1.2 The auxiliary request 1 corresponds to the auxiliary request 2 underlying the contested decision. The Opposition Division found that this request met the

requirements of Article 123(2) EPC (see point 6.1 of the contested decision).

- 1.3 The basis given by the patent proprietor for the amendments to claim 1 is the preferred embodiment disclosed in the patent specification and, in particular, page 8 line 16 to page 9 line 22 (see WO publication of the application as originally filed).
- 1.4 Consequently, it has to be established whether the subject-matter of claim 1 generalizes the disclosure of that preferred embodiment of the invention as originally filed, i.e. if it represents an unallowable intermediate generalisation of that embodiment (see Case Law of the Boards of Appeal of the EPO, 10th edition, 2022, II.E.1.9).
- 1.5 The patent proprietor argued, in line with the conclusions of the Opposition Division in the decision (see point 4.5 of the contested decision), that the hysteresis calibration into the first and second speed thresholds for the selection of ride heights was presented in the description of the embodiment as an optional refinement of the ride height control for the transition from one ride height to another. The fact that the passage of the description on page 8 began with "*In the present embodiment...*" indicated to the skilled person that the subsequent details were to be construed only as relevant to the "present embodiment" and therefore optional and not to be considered as being essential or otherwise mandatory in a broader context.
- 1.6 The opponents are however correct that the subject-matter of claim 1 represents an unallowable intermediate generalisation of that embodiment by

omitting the feature on the hysteresis. The hysteresis calibration is part of to the control strategy of the ride heights disclosed in the embodiment and not formulated as optional. It is therefore disclosed in functional relationship with the other features of the embodiment.

The question whether the hysteresis calibration directly and unambiguously disclosed in the preferred embodiment is essential or not is not decisive for the examination of the requirements under Article 123(2) EPC (e.g. T 0437/17, point 3.3.5). The criterion is the *Gold Standard* (see G2/10 points 4.3 and 4.5.1).

- 1.7 For the sake of completeness, and in view of the reasons for the auxiliary request 2 below, the opponents also argued that the omission of the control unit disclosed in combination on page 8 also led to a violation of Article 123(2) EPC as regards the unallowable intermediate generalisation of this preferred embodiment. In addition, the original description disclosed on page 7, lines 29 to 32, only that the terms "control unit", "electronic control unit" or "ECU" were to be understood as equivalent terms which could refer to a single control unit or to a plurality of control units. The inclusion of the term "control system", which would have been possible in that passage, was deliberately omitted because the control unit was a specific component or specific components which, as explained above, had to fulfil or exhibit certain further features within the example of the invention and therefore could not or should not be equated with the general term "control system" which represented the totality of the features.

Opponent 1 also maintained the objection to feature M2.1.2, which referred to terrain parameters (plural) instead of a terrain parameter (singular) as disclosed in the third paragraph on page 4 of the description as originally filed. However, the sentence in lines 14 to 16 of the same paragraph, on which the Opposition Division based its conclusion (see point 4.6 of the contested decision), did not refer to the driving mode signal, but to the configuration of the control system in connection with the selection of a predefined target off-road ride height depending on one or more detected terrain parameters (plural). Accordingly, this passage of the disclosure could not form a basis for feature M2.1.2 in conjunction with features M2.1 and M2.1.1.

1.8 These two arguments do not hold water for the following reasons.

It follows from the wording of claim 1 that the control system receives the driving mode signal and automatically sets the target off-road ride heights as a function of the vehicle speed according to feature M5. Consequently, the control system necessitates an electronic controller to perform the claimed control loop for automatically selecting the different target ride heights as a function of the vehicle speed. According to the description of the application as originally filed, in particular the last paragraph on page 5 and the second paragraph on page 7, the latter within the disclosure of the preferred embodiment, this controller can be any of a single control unit, a plurality of control units, an ECU... in other words, any electronic controller and not limited to a control unit as recited on page 8. Consequently, the omission of the control unit does not infringe Article 123(2)

EPC, since no further technical information has been added in this respect with the amendments made.

On the question of the terrain parameter(s) on the basis of which a driving mode selector automatically outputs a driving mode signal, the patent proprietor is correct in that the basis given (third paragraph on page 4 of the description as originally filed) refers indistinguishably to a terrain parameter (singular) or terrain parameters (plural) when selecting the driving mode signal or the predefined heights as a function of the terrain.

It should also be noted that features M2.1 to M2.1.2 do not limit the scope of claim 1 because the driving mode selector is not part of the claimed system. According to claim 1, the system receives a driving mode signal signalling that an off-road driving mode has been selected and, in response to said signal, sets a target off-road ride height as claimed. The source of said signal does not limit the scope of the claim.

2. *Auxiliary request 2*

2.1 *Admissibility*

2.1.1 The Board, exercising its discretion under Article 12(6) RPBA, admitted auxiliary request 2 in the appeal proceedings.

2.1.2 The patent proprietor filed the auxiliary request 2 for the first time as auxiliary request 3B with the reply to the opponents' statements of grounds of appeal. The request was filed in order to address the objection under Article 123(2) EPC relating to the omission of the hysteresis calibration (see underlined features in feature M5 above).

- 2.1.3 Both opponents argued that the Board should exercise its discretion under Article 12(6) RPBA not to admit the new auxiliary request 2 into the proceedings. In particular, the objection to the omission of the hysteresis calibration had already been raised during the opposition proceedings (see point 6.3 of the minutes of the oral proceedings before the Opposition Division). The patent proprietor should therefore have filed the request together with their grounds of appeal.
- 2.1.4 Under Article 12(6) RPBA the Board shall not admit requests, facts, objections or evidence which should have been submitted, or which were no longer maintained, in the proceedings leading to the decision under appeal, unless the circumstances of the appeal case justify their admittance.
- 2.1.5 In the present case, it is true that the objection relating to the omission of the hysteresis feature was already raised during the opposition proceedings. However, the Opposition Division found that the objection was unfounded (see point 6.11 of the minutes and point 4.5 of the decision under appeal). Accordingly, the patent proprietor had no reason to make any submissions at all on this objection in their grounds of appeal addressing that objection, since the Opposition Division's opinion during the oral proceedings and its decision were positive on this point. Accordingly, the patent proprietor could have filed such a request in their statement of grounds of appeal, but they certainly should not have done so because there was no need to do so. For the same reasons, there was also no need to file such a request during the oral proceedings before the

Opposition Division after the Opposition Division had announced its opinion that the objection was not persuasive.

Once the opponents have raised that objection in their statements of grounds of appeal, the filing of such a request, together with the reply to those grounds, constitutes a justified, legitimate and timely response to the objection during the appeal proceedings.

2.2 *Inadmissible extension*

2.2.1 In this respect, the opponents referred only to the objections raised in their statements of grounds of appeal in respect of the version found allowable by the Opposition Division in its decision (i.e. auxiliary request 1 above).

2.2.2 Since claim 1 of the auxiliary request 2 includes the omitted feature of the hysteresis calibration, the subject-matter of claim 1 does not extend beyond the content of the application as originally filed for the same reasons as set out above under point 1 (Article 123(2) EPC).

It should be noted that opponent 1's objection to the omission of the word "*automatically*" in claim 1 (see point I.1 of its statement of grounds of appeal) is moot, since the wording has been added to claim 1.

2.3 *Inventive step*

2.3.1 The subject-matter of claim 1 is not rendered obvious by the following combinations of prior art irrespective of the contribution of the added feature on the hysteresis calibration (Article 56 EPC):

- D1 with common general knowledge or D4;

- D3 with common general knowledge or D4; or
- D4 with D1.

The decision of the Opposition Division is confirmed in this respect as explained below (see point 8 of the contested decision).

2.3.2 Opponent 1 followed two lines of argumentation when starting from D1.

In the first, D1 (see in particular figure 9) disclosed a first target off-road ride height (Hoch 2) higher than a second target off-road ride height (Hoch 1) and a first (40 km/h) and second (100 km/h) speed thresholds. If the off-road mode was set at a vehicle speed below 100 km/h, the ride height was set to Hoch 1. If the vehicle increased its speed above 100 km/h in the off-road mode, the ride height was set to normal (on-road ride height; see arrow pointing downwards) and if the speed dropped below 100 km/h again, the ride height was set to Hoch 1 again (see arrow pointing upwards). In addition, at speeds below 40 km/h in the lift mode, which was also an off-road mode that could only be selected at speeds below 50 km/h, the ride height was set to Hoch 2. D1 disclosed feature M5, but not the hysteresis calibration, because the disclosure on page 966 of D1 could only be interpreted as meaning that, as already indicated in the caption "Air suspension control strategy" of figure 9 of D1, different ride heights were set depending on the vehicle speed at certain pre-defined speed thresholds (at 100 km/h and at 40 km/h).

In the second line, opponent 1 considered that D1 differed from the subject-matter of claim 1 in that, although it already provided two different vehicle

heights in off-road mode, it did not automatically select one of several predetermined and adjustable vehicle heights depending on the current vehicle speed when an "off-road mode" was selected.

Such automation of the system was obvious to the skilled person or was taught by D4 (see figure 2).

2.3.3 Opponent 1's arguments starting from D1 cannot succeed because the control system of D1 does not disclose a driving mode in which a first ride height, higher than a second ride height, is selected when the vehicle speed is below a first speed threshold, lower than a second speed threshold, the second ride height is selected when the vehicle speed is between the first and second speed thresholds and, a third ride height is selected when the vehicle speed is above the second speed threshold. The Opposition Division is correct in that D1 does not disclose a driving mode with two speed thresholds for three different ride heights. Furthermore, in figure 9 of D1, two different ride heights coexist between the speed thresholds 40 km/h and 100 km/h, so that the ride height Hoch 1 is not always selected between the speed thresholds of 40 km/h and 100 km/h. The same applies to the selection of the ride height below 40 km/h, where Hoch 1 and Hoch 2 coexist and not only Hoch 2 is selected. Consequently, even if the skilled person were to automate the system of D1 between modes, as suggested in the second line of argument, feature M5 would still not be achieved.

2.3.4 Starting from D3, opponent 1 argued in the same way as during the opposition proceedings. In their view, D3 only failed to disclose an automatic selection of the two different off-road ride heights (40 mm and 75 mm) within the off-road mode because the system only made a

recommendation to the driver, which he could confirm manually.

Such automation of the system was again obvious to the skilled person or was taught by D4 (see figure 2).

2.3.5 This line of argument was duly considered by the Opposition Division in its decision and the Board considers the Opposition Division's reasoning in this regard to be correct and adopts it as its own (see points 8.2.2 and 8.2.3 of the contested decision). In particular, this line of attack cannot succeed because, similarly to the attack starting from D1, it is based on the incorrect assumption that D3 discloses a driving mode with two different speed thresholds defining three different intervals for the vehicle speed, in each of which a different ride height is selected (three different ride heights in total). D3 discloses that both the 75 mm and the 40 mm ride heights can be selected in the off-road modus at vehicle speeds below 50 km/h. Accordingly, a mere automation of the system in D3 is not sufficient to arrive at the subject-matter of claim 1, since opponent 1 does not argue why the skilled person would only select the ride height of 40 mm below the speed threshold of 50 km/h. It could well be that the selection of one of the two different off-road ride heights below this threshold speed is made by taking into account other vehicle operating parameters and not only the vehicle speed, so that both heights can still coexist within the off-road mode below a vehicle speed of 50 km/h.

2.3.6 Opponent 2, taking D4 as the closest prior art, argued that the subject-matter of claim 1 differed from the system of D4 in that the system was further configured to select a target on-road ride height when the vehicle speed increased above a second speed threshold higher

than the first speed threshold of 30 miles per hour (mph) in the four wheel drive low (4WL) off-road mode. The automatic selection of a target on-road height when the second speed threshold was exceeded improved driving behaviour at higher driving speeds by avoiding instability that could occur due to the high ride height (HRH) setting.

The skilled person would find in D1 corresponding indications and suggestions for implementing the mentioned differentiating feature of claim 1 in an obvious manner in the control system already known from D4. In particular, D1 taught that in an off-road driving mode a normal, i.e. on-road, ride height was selected when the vehicle speed exceeded 100 km/h (62 mph; see figure 9). Accordingly, the skilled person would adjust the ride height strategy in D4 in the 4WL off-road mode to add an on-road ride height above a second, higher vehicle speed threshold.

- 2.3.7 This line of attack was also duly considered by the Opposition Division in its decision (see points 8.1.1 and 8.1.2). In its reasoning, the Opposition Division took the view that an off-road mode in which the transfer case is set to low four wheel drive does not allow the vehicle to be driven at the high driving speed of 62 mph. A 4WL transfer case setting is a low gear speed setting in the vehicle's four wheel drive mode which provides a higher torque for rough off-road conditions. Accordingly, the Opposition Division is correct that the skilled person would not be confronted with instabilities at high speeds in a 4WL mode because the vehicle would not be driven at such speeds in that mode and, consequently, the implementation of an on-road ride height above 62 mph speeds as in D4 for the 4WL mode would not make any technical sense.

Furthermore, as the patent proprietor pointed out, the opponent 2 does not explain in their statement of grounds of appeal why this reasoning of the Opposition Division is incorrect. Since the Board agrees with the Opposition Division's conclusions in this respect, there is no reason to deviate from them.

- 2.4 It follows from the foregoing that the question of the enabling disclosures of D1 and D3, as well as the question on the admissibility of the attacks on the subject-matter of claim 1 of the auxiliary request 2 raised by the patent proprietor, can be left aside because they are not persuasive on the merits.
- 2.5 The reasons given above for the subject-matter of claim 1 of the auxiliary request 2 apply *mutatis mutandis* to the subject-matter of the method claim 9.
- 2.6 The description and figures are the same as those of the version found allowable by the Opposition Division in its decision. The opponents did not object to the description.
3. Consequently, the documents according to the auxiliary request 2 constitute a suitable basis for maintaining the patent in amended form, since they comply with 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 Opposition Division with the order to maintain the patent in amended form on the basis of the following documents:

- claims 1 to 9 of the auxiliary request 2 filed as auxiliary request 3B with the reply, and
- the description and figures underlying the interlocutory decision of the Opposition Division.

The Registrar:

The Chairman:



M. Schalow

G. Pricolo

Decision electronically authenticated