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D E C I S I O N
of 11 October 2006

Case Number: T 0409/04 - 3.2.01

Application Number: 00122693.5

Publication Number: 1094250

IPC: F16H 59/02

Language of the proceedings: EN

Title of invention:

Manual operation control of automatic transmission

Applicant:

NISSAN MOTOR CO., LTD.

Opponent:

-

Headword:

-

Relevant legal provisions:

EPC Art. 54

Keyword:

"Novelty - yes"

"Remittal to the first instance for examining the question of inventive step"

Decisions cited:

-

Catchword:

-



Case Number: T 0409/04 - 3.2.01

DECISION
of the Technical Board of Appeal 3.2.01
of 11 October 2006

Appellant: NISSAN MOTOR CO., LTD.
No.2 Takara-cho, Kanagawa-ku
Yokohama city, Kanagawa (JP)

Representative: Grünecker, Kinkeldey,
Stockmair & Schwanhäusser
Anwaltssozietät
Maximilianstrasse 58
D-80538 München (DE)

Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 15 October 2003
refusing European application No. 00122693.5
pursuant to Article 97(1) EPC.

Composition of the Board:

Chairman: J. Osborne
Members: Y. Lemblé
S. Hoffmann

Summary of Facts and Submissions

I. European patent application No. 00 122 693.5 was refused by a decision of the Examining Division posted 15 October 2003. The reason given for the decision was that amended claim 1 was not new in view of the prior art document:

D1: EP-A-0 519 528

The following documents were also cited in the search report:

D2: Patent Abstracts of Japan, vol. 1999, no. 09,
30 July 1999 & JP-A-11 099840, abstract

D3: Patent Abstracts of Japan, vol. 1999, no. 03,
31 March 1999 & JP-A-10 329568, abstract

D4: Patent Abstracts of Japan, vol. 1998, no. 09,
31 July 1998 & JP-A-10 100723, abstract &
US-A-6 067 492

D5: EP-A-1 043 521

D6: DE-A-43 11 886

D7: US-A-5 823 052

II. On 19 December 2003 the appellant (applicant) lodged an appeal against this decision and paid the prescribed appeal fee at the same time. The statement of grounds of appeal was filed on 24 February 2004.

III. Following a communication of the Board dated 31 January 2006, the appellant requested that the decision under

appeal be set aside and that the case be remitted to the first instance for further prosecution after establishing the novelty of the subject-matter of the claims 1 to 8 filed with letter dated 8 June 2006.

IV. Claims 1 and 8 according to this request read as follows:

"1. A manual operation control device for an automatic transmission (10) for a vehicle, comprising:
a first switch (2) which can select a manual mode;
a second switch (5, 6) which can specify one of an upshift or a downshift; the second switch (5,6) is attached to a steering wheel, and
a microprocessor (1) programmed to:
change a speed ratio of the automatic transmission (10) according to a specification of the second switch (5, 6) when the first switch (2) has first selected the manual mode, and the second switch (5, 6) subsequently specifies one of the upshift and the downshift (S20, S21, S33, S40, S41, S34, S36, S37, S53, S54, S55);
characterized in that
the first switch (2) is attached to the shift lever, a third switch (3,4) attached to the shift lever which can specify one of the upshift and the downshift, said microprocessor is further programmed to:
prohibit a variation of the speed ratio of the automatic transmission (10) according to the specification of the second switch (5, 6) when one of the upshift and the downshift is specified by the second switch (5, 6) at a timing not later than a timing at which the manual mode is selected by the first switch (2) (S20, S22, S33, S40, S38, S34, S36, S38, S53, S54, S56),

and allow the variation of the speed ratio of the automatic transmission (10) when the third switch (3,4) has specified one of the upshift and the downshift even when a change of speed ratio of the automatic transmission according to the specification of the second switch (5,6) is prohibited (S19,S21)."

"8. A manual operation control method for an automatic transmission (10) for a vehicle wherein the transmission (10) is provided with a first switch (2) which can select a manual mode and a second switch (5, 6) which can specify one of an upshift or a downshift, and the method comprising:

changing a speed ratio of the automatic transmission (10) according to a specification of the second switch (5, 6) when the first switch (2) has first selected the manual mode, and the second switch (5, 6) subsequently specifies one of the upshift and the downshift (S20, S21, S33, S40, S41, S34, S36, S37, S53, S54, S55);

characterized by

a third switch (3,4) which can specify one of the upshift and the downshift, prohibiting a variation of the speed ratio of the automatic transmission (10) according to the specification of the second switch (5, 6) when one of the upshift and the downshift is specified by the second switch (5, 6) at a timing not later than a timing at which the manual mode is selected by the first switch (2) (S20, S22, S33, S40, S38, S34, S36, S38, S53, S54, S56), allowing the variation of the speed ratio of the automatic transmission (10) when the third switch (3,4) has specified one of the upshift and the downshift even when a change of speed ratio of the automatic

transmission according to the specification of the second switch (5,6) is prohibited (S19,S21)."

Claims 2 to 7 define features additional to those specified in claim 1.

Reasons for the Decision

1. The appeal meets the requirements of Articles 106 to 108 and Rule 64 EPC and is therefore admissible.
2. There are no formal objections under Article 123(2) EPC to the amendments made to the claims, since these are adequately supported by the original disclosure.

More particularly, starting from claim 1 as filed, the following features have been added to form present claim 1:

- (a) the second switch (5,6) is attached to a steering wheel and the first switch (2) is attached to the shift lever,
- (b) a third switch (3,4) is attached to the shift lever which can specify one of the upshift and the downshift and said microprocessor is programmed to allow the variation of the speed ratio of the automatic transmission (10) when the third switch (3,4) has specified one of the upshift and the downshift even when a change of speed ratio of the automatic transmission according to the specification of the second switch (5,6) is prohibited (S19,S21).

Feature (a) was the subject-matter of dependent claim 5 as filed and feature (b) was the subject-matter of claim 6 as filed. The addition of these features has therefore a clear basis in the application as originally filed.

Starting from independent method claim 11 as filed, the following features have been added to form present method claim 8:

- (c) a third switch (3,4) which can specify one of the upshift and the downshift, and allowing the variation of the speed ratio of the automatic transmission (10) when the third switch (3,4) has specified one of the upshift and the downshift even when a change of speed ratio of the automatic transmission according to the specification of the second switch (5,6) is prohibited (S19,S21).

The subject-matter of feature (c) corresponds to the apparatus features of claim 6 as filed except for the mention that the third switch is attached to the shift lever, which has been omitted. This omission, however, does not extend beyond the content of the application as filed, since it is implicit to the skilled person that the method of operation is independent of the location of the switches. Indeed, the original independent method claim 11 omits to stipulate the location of the second switch and the fourth paragraph of page 6 of the description as filed clearly mentions that the attachment of the second switch 5,6 to the steering wheel is only an option and, thus, does not represent an essential aspect of the invention.

Dependent claims 2 to 7 correspond to original dependent claims 2 to 4, 7, 8 and 9 respectively.

3. *Novelty*

- 3.1 D1 discloses a manual operation control device for an automatic transmission for a vehicle, comprising:
a first switch 18 which can select a manual mode;
a second switch 20,22 which can specify one of an upshift or a downshift, the second switch 20,22 being attached to the steering wheel, and a microprocessor 14,30 programmed to:
change a speed ratio of the automatic transmission according to a specification of the second switch 20,22, when the first switch 18 has first selected the manual mode, and the second switch subsequently specifies one of the upshift and the downshift, and
prohibit a variation of the speed ratio of the automatic transmission according to the specification of the second switch 20,22 when one of the upshift and the downshift is specified by the second switch at a timing not later than a timing at which the manual mode is selected by the first switch 18.

According to the passage of column 7, lines 6-28 of D1, the upshift and downshift routines are only enabled, if the appropriate upshift or downshift switch 20,22 is depressed within a predetermined time after the depression of the enabling first switch 18 which selects the manual mode. Inadvertent depression of the second shifting switches 20,22, without depressing the first manual switch 18 beforehand, does not produce a gear change. Accordingly, when one of the upshift and the downshift is specified by the second switch 20,22

at a timing before (not later than) a timing at which the manual mode is selected by depressing the first enabling switch 18, a variation of the speed ratio of the automatic transmission according to the specification of the second switch 20,22 is not enabled (prohibited) by the microprocessor 30.

The features that:

- the first switch is attached to the shift lever,
 - a third switch is attached to the shift lever which can specify one of the upshift and the downshift, and
 - said microprocessor is programmed to allow the variation of the speed ratio of the automatic transmission when the third switch has specified one of the upshift and the downshift even when a change of speed ratio of the automatic transmission according to the specification of the second switch is prohibited,
- are not known from D1.

The subject-matter of claim 1 is therefore novel over that of document D1.

- 3.2 D1 discloses a manual operation control method for an automatic transmission for a vehicle wherein the transmission is provided with a first switch 18 which can select a manual mode and a second switch 20,22 which can specify one of an upshift or a downshift, and the method comprising:
- changing a speed ratio of the automatic transmission according to a specification of the second switch 20,22 when the first switch 18 has first selected the manual mode, and the second switch 20,22 subsequently specifies one of the upshift and the downshift;

prohibiting a variation of the speed ratio of the automatic transmission according to the specification of the second switch 20,22 when one of the upshift and the downshift is specified by the second switch at a timing not later than a timing at which the manual mode is selected by the first switch 18.

The features:

- that a third switch which can specify one of the upshift and the downshift is provided,
- that the control method comprises allowing the variation of the speed ratio of the automatic transmission when the third switch has specified one of the upshift and the downshift even when a change of speed ratio of the automatic transmission according to the specification of the second switch is prohibited, are not known from D1.

The subject-matter of method claim 8 is therefore novel over that of document D1.

- 3.3 Document D2 discloses a control device for an automatic transmission comprising a first switch 30 which can select a manual mode, a second switch 42,44 which can specify one of an upshift or a downshift, and a third switch 32,34 which can specify one of an upshift or a downshift. This device is only able to detect an abnormality through a steering switch abnormality checking means 48, for example in case of a malfunction of the switches 42,44. There is, however, no provision for prohibiting a variation of the speed ratio of the automatic transmission according to the specification of the second switch 42,44 when one of the upshift and the downshift is specified by the second switch at a

timing not later than a timing at which the manual mode is selected by the first switch 30.

Documents D3, D4, D5, D6 and D7 disclose a control device for an automatic transmission comprising a first switch which can select a manual mode and a second switch which can specify one of an upshift or a downshift. There is, however, no mention in these documents of an additional third switch which can specify one of an upshift or a downshift.

Accordingly, the device and the method of independent claims 1 and 8 are therefore also novel with respect to the remainder of the cited prior art. Since the subject-matter of dependent claims 2 to 7 contains all the features of claim 1 this conclusion applies equally to those claims.

4. The novelty of the subject-matter of the claims has now been established. The question of inventive step has, however, not been addressed by the first instance. The Board therefore considers it appropriate to make use of its discretion in accordance with Article 111 (1) EPC to remit the case to the first instance for further prosecution.

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 the first instance for further prosecution

The Registrar

The Chairman

A. Vottner

J. Osborne