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Datasheet for the decision of 28 June 2012

Case Number: T 2295/10 - 3.2.08

Application Number: 06110630.8

Publication Number: 1662162

IPC: F16D 21/06

Language of the proceedings: EN

Title of invention:
A clutch and flywheel assembly for a motor-vehicle

Applicant:
C.R.F. Società Consortile per Azioni

Headword:
-

Relevant legal provisions (EPC 1973):
EPC Art. 76(1)

Keyword:
"Added subject-matter (yes)"

Decisions cited:
-

Catchword:
-

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Case Number: T 2295/10 - 3.2.08

D E C I S I O N
of the Technical Board of Appeal 3.2.08
of 28 June 2012

Appellant: (Applicant)
C.R.F. Società Consortile per Azioni
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Representative:
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Decision under appeal:
Decision of the Examining Division of the European Patent Office posted 12 July 2010 refusing European patent application No. 06110630.8 pursuant to Article 97(2) EPC.

Composition of the Board:

Chairman: T. Kriner
Members: M. Alvazzi Delfrate
U. Tronser

Summary of Facts and Submissions

I. By decision posted on 12 July 2010 the examining division refused European patent application No. 06 110 630.8, filed as a divisional application of earlier European patent application No.03 010 242.0, on the grounds of Articles 123(2) EPC and 76(1) EPC (1973).

II. The appellant lodged an appeal against this decision on 6 August 2010, paying the appeal fee on the same day. The statement setting out the grounds of appeal was filed on 9 November 2010.

III. The appellant requested that the appealed decision be set aside and that a patent be granted on the basis of the main request or, in the alternative, of the first to fourth auxiliary request, all filed with letter dated 9 November 2010.

IV. With notification dated 11 November 2011 the board of appeal summoned the appellant to oral proceedings to be held on 28 June 2012. In the annex to the summons it raised a number of further objections, inter alia under Article 76 EPC (1973), in addition to those put forward by the examining division in the decision under appeal.

V. With letter dated 8 June 2012 the appellant informed the board that it would not be attending the oral proceedings.

VI. Claim 1 of the main request reads as follows:

"1. A motor-vehicle transmission having

- a gearbox with at least one input shaft (11, 111; 111; 11), and
- a clutch unit (12) and a flywheel assembly which are mounted between the gearbox and a crankshaft (14) of the motor-vehicle,

wherein the clutch unit (12) comprises at least one dry clutch (13, 113; 113; 13) including a driven portion (48, 50, 148, 150; 148, 150; 48, 50) and a driving portion (41, 52, 54, 141, 152, 154; 141, 152, 154; 41, 52, 54), the driven portion (48, 50, 148, 150; 148, 150; 48, 50) being fast for rotation with the at least one input shaft (11, 111; 111; 11);

wherein the flywheel assembly is a two-mass flywheel (30) comprising a first engine-side mass (31), and a second gearbox-side mass (32) comprising the driving portion (41, 52, 54, 141, 152, 154; 141, 152, 154; 41, 52, 54)of the at least one clutch (13, 113; 113; 13);

wherein an element (34) of the first engine-side mass (31) is connected to the second gearbox-side mass (32) through a torsional damper (40); and

wherein the second gearbox-side mass (32) is supported for rotation by a bearing (44);

characterized in that the bearing (44) is mounted on the at least one input shaft (11, 111; 111; 11) in such a manner that its outer race is clamped axially between two elements (41, 141) of the second gearbox-side mass (32) and that its inner race is mounted in axial abutment on one side with a portion (45) formed on the outer cylindrical surface of the at least one input shaft (11, 111; 111; 11) and is clamped axially on the opposite side, whereby axial forces resulting from actuation of the at least one clutch (13, 113; 113; 13) are transmitted to the at least one input shaft (11, 111; 111; 11)."

Claim 1 of the first auxiliary request differs from claim 1 of the main request by the addition of the feature according to which

"the second gearbox-side mass (32) is supported for rotation by a radial ball bearing (44)" (emphasis added).

Claim 1 of the second auxiliary request differs from claim 1 of the main request by the addition of the feature according to which

"the bearing (44) is mounted on the at least one input shaft (11, 111; 111; 11) in such a manner that its outer race is clamped axially between a pair of shoulders provided by two elements (41, 141) of the second gearbox-side mass (32)" (emphasis added).

Claim 1 of the third auxiliary request differs from claim 1 of the main request by the addition of the feature according to which

the inner race of the bearing "is mounted in axial abutment on one side with a portion (45) formed on the outer cylindrical surface of the at least one input shaft (11, 111; 111; 11) and is clamped axially on the opposite side by means of a ring nut (46)" (emphasis added).

Claim 1 of the fourth auxiliary request differs from claim 1 of the main request by the addition of the features according to which

"the second gearbox-side mass (32) is supported for rotation by a radial ball bearing (44)" and

"the bearing (44) is mounted on the at least one input shaft (11, 111; 111; 11) in such a manner that its outer race is clamped axially between a pair of shoulders provided by two elements (41, 141) of the second gearbox-side mass (32) and that its inner race is mounted in axial abutment on one side with a portion (45) formed on the outer cylindrical surface of the at least one input shaft (11, 111; 111; 11) and is clamped axially on the opposite side by means of a ring nut (46), whereby axial forces resulting from actuation of the at least one clutch (13, 113; 113; 13) are transmitted to the at least one input shaft (11, 111; 111; 11)." (emphasis added)

VII. The appellant submitted arguments relating only to the objections put forward by the examining division in the decision under appeal and did not comment on the further objections raised by the board in the annex to the summons to oral proceedings. The appellant's arguments can be summarised as follows:

In the contested decision, the examining division objected to the generalisation of the following features:
a) "bearing" instead of "radial ball bearing";
b) "clamped axially between two elements" instead of "clamped axially between a pair of shoulders provided by the two elements";
c) "abutment on one side with a portion" instead of "abutment on one side with a side of a splined portion"; and

d) "clamped axially on the opposite side" instead of "clamped axially on the opposite side by means of a ring nut".

However, the insertion into a claim of technical features isolated from a disclosed combination with other features was not in principle forbidden by the EPC, as many decisions of the boards of appeal had declared. In the present case neither the description nor the claims of the parent application showed that the omitted features were essential. Moreover, the skilled person would immediately have recognised that the omitted features were not, as such, indispensable for the functioning of the invention in the light of the technical problem it served to solve, i.e. avoiding the transmission to the crankshaft of the axial forces resulting from actuation of the clutch, and that they could be replaced by other equivalent features. The insertion of the omitted feature was thus unnecessary and would have unduly limited the scope of the claim. Therefore, the generalisation objected to by the examining division did not contravene Article 76 EPC (1973).

Reasons for the Decision

1. The appeal is admissible.

2. Main request - Article 76(1) EPC (1973)

2.1 According to claim 1 of the parent application (earlier European patent application No. 03 010 242.0), the clutch or coupling unit is supported for rotation not

only by a bearing mounted on the at least one input shaft but also by another bearing mounted on the gearbox support housing. However, neither said gearbox support housing nor the bearing mounted on it is mentioned in present claim 1. Since it cannot be derived from the parent application as filed that these features can be omitted, claim 1 of the main request comprises subject-matter which extends beyond the content of the parent application.

2.2 In respect of claim 1 of the parent application the feature according to which the at least one clutch is a dry clutch has been added in present claim 1. This feature is comprised in claim 2 of the parent application. However, it is presented only in combination with the feature that the clutch is normally-engaged. By contrast, present claim 1 does not require the clutch to be normally-engaged, although there is no basis in the parent application as filed for omitting the latter feature in the case of a dry clutch. Also for this reason claim 1 comprises subject-matter which extends beyond the content of the parent application.

2.3 According to present claim 1 the at least one dry clutch includes a driven portion and a driving portion, the driven portion being fast for rotation with the at least one input shaft. Although the latter feature is disclosed in paragraphs [0019] and [0025] of the parent application, these paragraphs present it only in combination with the features that also the driving portion is fast for rotation with the crankshaft 14 (via the flywheel 30), and that the driven and driving portions can be coupled torsionally with each other to

permit the transmission of torque between the shafts 11 and 14. These features are not comprised in present claim 1. However, no basis can be found in the parent application for isolating the features introduced in claim 1 from the further features mentioned above. This is a further reason why claim 1 comprises subject-matter which extends beyond the content of the parent application.

2.4 Claim 1 comprises the features that the flywheel assembly is a two-mass flywheel comprising a first engine-side mass and a second gearbox-side mass, and that an element of the first engine-side mass is connected to the second gearbox-side mass through a torsional damper. These features are to be found in claim 12 of the parent application. However, the latter claim depends on claim 5 (two-clutch embodiment) or claim 6 (one-clutch embodiment), comprising the further features according to which the clutch comprises an abutment member (41, 141) connected to the flywheel and supported for rotation by the bearing (44) mounted on the gearbox input shaft. Hence, the features introduced in present claim 1 were exclusively disclosed in combination with said further features. Here again, no basis can be found in the parent application for isolating the features introduced in claim 1 from said further features. Therefore, for that reason too claim 1 comprises subject-matter which extends beyond the content of the parent application.

2.5 Moreover, claim 1 of the main request comprises the features that a bearing is mounted on the at least one input shaft in such a manner that its outer race is clamped axially between two elements of the second

gearbox-side mass, and that its inner race is mounted in axial abutment on one side with a portion formed on the outer cylindrical surface of the at least one input shaft and is clamped axially on the opposite side. These features are disclosed in paragraph [0017] of the parent application. However, according to this paragraph

(a) the bearing is a radial bearing,

(b) the outer race is clamped axially between two shoulders provided by elements 41 and 141,

(c) the inner race is mounted in axial abutment on one side with a side of a splined a portion formed on the outer cylindrical surface of the at least one input shaft and

(d) the inner race is clamped axially on the opposite side by means of a ring nut.

Hence, some of the features disclosed in combination in paragraph [0017] have been isolated and introduced into claim 1, omitting some other features which were also disclosed in said paragraph.

It is true that the insertion into a claim of technical features isolated from a disclosed combination with other features is not in principle forbidden by the EPC. However, under Article 76(1) EPC (1973), such an intermediate generalisation is admissible only if the skilled person can recognise without any doubt from the earlier application as filed that those isolated technical features are not closely related to the other

features of the disclosed combination and apply directly and unambiguously to the more general context. In other terms, in order to be acceptable, this intermediate generalisation must be the result of unambiguous information that a skilled person would draw from the content of the earlier application as filed.

In the present case the parent application does not make any distinction among the features exhibited by the arrangement described in paragraph [0017]. As a consequence, it does not present the omitted features as non-essential for the function of said arrangement. Moreover, the arrangement in accordance with present claim 1 allows the use of a bearing different from a radial bearing, whose outer and inner races are clamped and mounted in a different way that disclosed in paragraph [0017] of the parent application. Such an arrangement would require a modification of the remaining components. Accordingly, the skilled person cannot recognise without any doubt from the parent application as filed that the isolated technical features added to present claim 1 are not closely related to the features of the arrangement described in paragraph [0017] which have been omitted. Therefore, as pointed out in the decision under appeal, this generalisation also results in subject-matter which extends beyond the content of the parent application as originally filed.

2.6 In view of the objections above, the main request does not meet the requirements of Article 76(1) EPC (1973) and is therefore not allowable.

3. Auxiliary requests

At least the objections under points 2.1 to 2.4 above apply unamended also to the auxiliary requests. Hence, the auxiliary requests are also not allowable.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

V. Commare T. Kriner