

**TRANSLATION**

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>FP2010-021WO</b>	<b>FOR FURTHER ACTION</b>	See Form PCT/IPEA/416
International application No. <b>PCT/JP2010/065824</b>	International filing date ( <i>day/month/year</i> ) <b>14.09.2010</b>	Priority date ( <i>day/month/year</i> ) <b>28.09.2009</b>
International Patent Classification (IPC) or national classification and IPC <b>F02D41/22, F02D41/04, F02D41/16, F02D45/00</b>		
Applicant <b>Keihin Corporation</b>		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a.  (sent to the applicant and to the International Bureau) a total of 11 sheets, as follows:

- sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
- sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b.  (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) \_\_\_\_\_, containing a sequence listing, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see paragraph 3bis of Annex C of the Administrative Instructions).

4. This report contains indications relating to the following items:

- Box No. I Basis of the report
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2010/065824

Box No. I	Basis of the report
1.	<p>With regard to the <b>language</b>, this report is based on:</p> <p><input checked="" type="checkbox"/> the international application in the language in which it was filed</p> <p><input type="checkbox"/> a translation of the international application into _____, which is the language of a translation furnished for the purposes of:</p> <p><input type="checkbox"/> international search (Rules 12.3(a) and 23.1(b))</p> <p><input type="checkbox"/> publication of the international application (Rule 12.4(a))</p> <p><input type="checkbox"/> international preliminary examination (Rule 55.2(a) and/or 55.3(a))</p> <p>2. With regard to the <b>elements</b> of the international application, this report is based on (<i>replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report</i>):</p> <p><input type="checkbox"/> the international application as originally filed/furnished</p> <p><input checked="" type="checkbox"/> the description:</p> <p>pages <u>1-2, 5-14, 16</u> as originally filed/furnished</p> <p>pages* <u>3, 3/1, 4, 4/1, 15, 15/1</u> received by this Authority on <u>28.01.2011</u></p> <p>pages* _____ received by this Authority on _____</p> <p><input checked="" type="checkbox"/> the claims:</p> <p>nos. _____ as originally filed/furnished</p> <p>nos.* _____ as amended (together with any statement) under Article 19</p> <p>nos.* <u>1-5</u> received by this Authority on <u>28.01.2011</u></p> <p>nos.* _____ received by this Authority on _____</p> <p><input checked="" type="checkbox"/> the drawings:</p> <p>sheets <u>figures 1-8</u> as originally filed/furnished</p> <p>sheets* _____ received by this Authority on _____</p> <p>sheets* _____ received by this Authority on _____</p> <p><input type="checkbox"/> a sequence listing – see Supplemental Box Relating to Sequence Listing.</p>
3.	<p>The amendments have resulted in the cancellation of:</p> <p><input type="checkbox"/> the description, pages _____</p> <p><input type="checkbox"/> the claims, nos. _____</p> <p><input type="checkbox"/> the drawings, sheets/figs _____</p> <p><input type="checkbox"/> the sequence listing (<i>specify</i>): _____</p>
4.	<p>This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).</p> <p><input type="checkbox"/> the description, pages _____</p> <p><input type="checkbox"/> the claims, nos. _____</p> <p><input type="checkbox"/> the drawings, sheets/figs _____</p> <p><input type="checkbox"/> the sequence listing (<i>specify</i>): _____</p>
5.	<p>This report has been established taking into account the <b>rectification of an obvious mistake</b> authorized by or notified to this Authority under Rule 91 (Rule 70.2(e)).</p>
6.	<p>Supplementary international search report(s) from Authority(ies) _____ have been received and taken into account in drawing up this report (Rule 45bis.8(b) and (c)).</p>
<p>* <i>If item 4 applies, some or all of those sheets may be marked "superseded."</i></p>	

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2010/065824

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1.	Statement		
	Novelty (N)	Claims <u>1-5</u>	YES
		Claims _____	NO
	Inventive step (IS)	Claims _____	YES
		Claims <u>1-5</u>	NO
	Industrial applicability (IA)	Claims <u>1-5</u>	YES
		Claims _____	NO
2.	Citations and explanations (Rule 70.7)		
<p>Document 1: JP 62-150048 A (Toyota Motor Corp.), 4 July 1987, page 4, upper left column, line 12 to upper right column, line 2; page 6, lower right column, line 16 to page 7, upper right column, line 18 (Family: none)</p> <p>The invention as set forth in claims 1-5 does not involve an inventive step in the light of document 1 cited in the international search report.</p> <p>Document 1 discloses an internal combustion engine control device comprising a throttle valve, a bypass passage, a valve for opening and closing the bypass passage, a stepper motor for controlling the throttle valve, and a micro-computer, wherein when a state in which the current flowing to the stepper motor is at an abnormal value has continued for a given length of time, an abnormality signal is output, and drive control of the stepper motor is halted.</p> <p>The use of a stepper motor to operate a valve for a bypass passage is so well known as to not require documentary evidence, and a person skilled in the art</p>			

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
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could readily apply measures for dealing with abnormality in the stepper motor disclosed in document 1 to the bypass passage valve.

Further, defining the state in which the current is at an abnormal value to one in which the current is at or below a specific predetermined threshold value is also a task which could be readily accomplished by a person skilled in the art.

Meanwhile, setting the length of delay time in a delay circuit for preventing false detection in the invention disclosed in document 1 is a matter which could be appropriately determined by a person skilled in the art taking into consideration the need to achieve a balance between the consequences of falsely detecting an abnormality and the consequences of missing an abnormality, and a person skilled in the art could easily conceive of setting said delay time to the step drive time of the stepper motor. Furthermore, setting the delay time to the step drive time is not found to have any exceptional technical significance.

A person skilled in the art could easily arrive at the setting of a predetermined length of time, the setting of an abnormality start time, the noise removal, and the circuit arrangement which are stipulated in claims 2-4.

**Supplemental Box**

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

In addition to the sheets indicated in item 3 of the cover sheet, the letter pertaining to the amending replacement sheets serving as the basis of this report has also been annexed hereto.