

INTERNATIONAL SEARCH REPORT

International application No.

PCT/EP2019/082943

A. CLASSIFICATION OF SUBJECT MATTER**F02B 39/10**(2006.01)i; **F04D 29/08**(2006.01)i; **F04D 25/06**(2006.01)i; **F02B 33/40**(2006.01)i

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

F02B; F04D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	FR 3045722 A1 (VALEO SYSTEMES DE CONTROLE MOTEUR [FR]) 23 June 2017 (2017-06-23) page 5, line 7 - page 6, line 29; figures 1-4	1-8
X	EP 2952748 A1 (BORGWARNER INC [US]) 09 December 2015 (2015-12-09) paragraphs [0032], [0033], [0052] - [0054]; figures 1, 4	1-8

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

27 January 2020

Date of mailing of the international search report

04 February 2020

Name and mailing address of the ISA/EP

European Patent Office
p.b. 5818, Patentlaan 2, 2280 HV Rijswijk
Netherlands

Telephone No. (+31-70)340-2040

Facsimile No. (+31-70)340-3016

Authorized officer

Karstens, Thede

Telephone No.

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/EP2019/082943

Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)			Publication date (day/month/year)
FR	3045722	A1	23 June 2017	NONE			
EP	2952748	A1	09 December 2015	CN	106536890	A	22 March 2017
				EP	2952748	A1	09 December 2015
				EP	3152443	A2	12 April 2017
				EP	3444481	A1	20 February 2019
				EP	3447311	A1	27 February 2019
				EP	3447312	A1	27 February 2019
				EP	3456983	A1	20 March 2019
				JP	2017516950	A	22 June 2017
				KR	20170016879	A	14 February 2017
				US	2017152792	A1	01 June 2017
				WO	2015188028	A2	10 December 2015