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(81) Designated States (unless otherwise indicated, for every
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AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ,
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HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP,
KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME,
MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ,
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EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV,
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(54) Title: SYSTEM AND METHOD FOR REPORTING ON VEHICLE CHARACTERISTICS DETERMINED BY TRANSMISSION CONTROL CIRCUIT

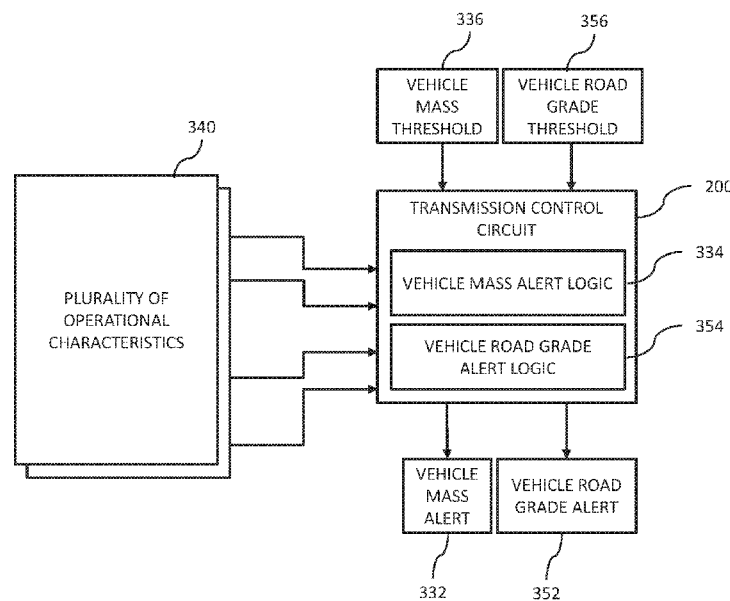


FIG. 4

(57) Abstract: Systems and methods for reporting on vehicle characteristics determined by the control system of a multi-speed automatic transmission of a vehicle are provided. The control system may output a vehicle mass alert (332) based on a relationship between a vehicle mass threshold (336) and a determined vehicle mass satisfying a condition. The control system may output a vehicle road grade alert (352) based on a relationship between a vehicle road grade threshold (356) and a determined vehicle road grade satisfying a condition.



TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

Published:

- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2017/064242

A. CLASSIFICATION OF SUBJECT MATTER
 INV. B60W40/13 B60W40/076 B60K28/08 B60W50/14
 ADD.
 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)
 B60W B60K
 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	US 2010/305822 A1 (KRESSE JOHN [US] ET AL) 2 December 2010 (2010-12-02) cited in the application	1,2, 10-12
Y	paragraphs [0001], [0004], [0024], [0027], [0032], [0038] - [0045], [0050] - [0052] the whole document	1-7, 10-12
Y	DE 10 2011 002957 A1 (BOSCH GMBH ROBERT [DE]) 26 July 2012 (2012-07-26) paragraphs [0009] - [0020], [0022]	1-7, 10-12
Y	DE 10 2013 000874 A1 (WABCO GMBH [DE]) 24 July 2014 (2014-07-24) paragraphs [0008], [0009], [0013], [0019] - [0022], [0035] the whole document	3-7

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	"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
"E" earlier application or patent but published on or after the international filing date	"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
"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)	"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
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search 28 March 2018	Date of mailing of the international search report 27/06/2018
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Plenk, Rupert
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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2017/064242

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-7, 10-12

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-7, 10-12

motive system and method outputting a vehicle mass alert

2. claims: 8, 9

motive system comprising a lift axle

3. claims: 13-21

motive system and method outputting a vehicle road grade alert

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2017/064242

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2010305822 A1	02-12-2010	CA 2764036 A1	09-12-2010
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