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[Continued on next page]

(54) Title: WHEEL END CONDITION DETECTION

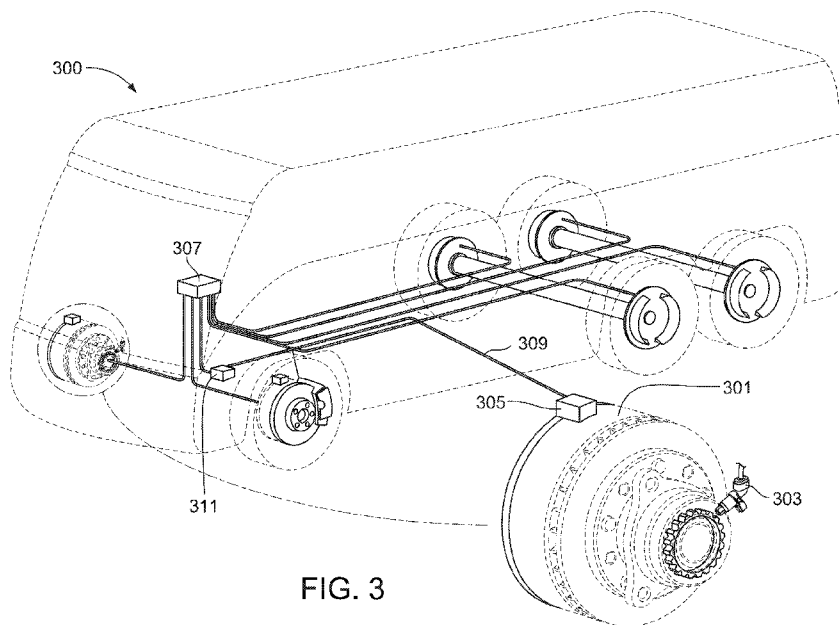
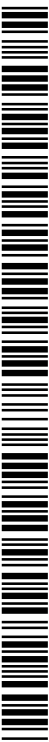


FIG. 3

(57) Abstract: An enhanced wheel data processing unit may analyze tire air temperature data from a tire pressure monitoring system (TPMS) and antilock brake system (ABS) wheel speed sensor fault codes from an ABS controller within a vehicle. When the enhanced wheel data processing unit determines that the tire air temperature is above a predetermined threshold for a given tire and that an ABS wheel speed sensor fault code exists for the wheel end corresponding to the same tire, the enhanced wheel data processing unit may initiate a vehicle shutdown or derate procedure. The vehicle shutdown or derate procedure may include instructions to give an operator of the vehicle a warning indicator for a predetermined time period before shutting down or derating the engine power to the vehicle.





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INTERNATIONAL SEARCH REPORT

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<p>A. CLASSIFICATION OF SUBJECT MATTER IPC: B60W 30/00 (2006.01) , B60C 23/20 (2006.01) , B60W 50/00 (2006.01) According to International Patent Classification (IPC) or to both national classification and IPC</p>																				
<p>B. FIELDS SEARCHED</p> <p>Minimum documentation searched (classification system followed by classification symbols) IPC: B60W 30/00 , B60C 23/20 , B60W 50/00</p> <p>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched</p> <p>Electronic database(s) consulted during the international search (name of database(s) and, where practicable, search terms used) Epodoc using Epoque and Canadian Patents Database using Intellect. Search terms: tire, air, temperature, TPMS, ABS, fault, code, derate, anti, lock, brakes, wheel, speed, sensor.</p>																				
<p>C. DOCUMENTS CONSIDERED TO BE RELEVANT</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:10%;">Category*</th> <th style="width:60%;">Citation of document, with indication, where appropriate, of the relevant passages</th> <th style="width:30%;">Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td align="center">A</td> <td>US2010/0292898A1 (STOEHR) 18 November 2010 (18-11-2010) *description*</td> <td align="center">1-20</td> </tr> <tr> <td align="center">A</td> <td>WO2004/007235A2 (GRONEAU et al.) 22 January 2004 (22-01-2004) *Fig 1 , abstract*</td> <td align="center">1-20</td> </tr> <tr> <td align="center">A</td> <td>US7391308B2 (IWAZUMI) 24 June 2008 (24-06-2008) *abstract*</td> <td align="center">1-20</td> </tr> <tr> <td align="center">A</td> <td>US2007/0100531A1 (KIM) 3 May 2007 (03-05-2007) *Fig 1*</td> <td align="center">1-20</td> </tr> <tr> <td align="center">A</td> <td>US7202777B2 (TSUJI et al.) 10 April 2007 (10-04-2007) *description*</td> <td align="center">1-20</td> </tr> </tbody> </table>			Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	A	US2010/0292898A1 (STOEHR) 18 November 2010 (18-11-2010) *description*	1-20	A	WO2004/007235A2 (GRONEAU et al.) 22 January 2004 (22-01-2004) *Fig 1 , abstract*	1-20	A	US7391308B2 (IWAZUMI) 24 June 2008 (24-06-2008) *abstract*	1-20	A	US2007/0100531A1 (KIM) 3 May 2007 (03-05-2007) *Fig 1*	1-20	A	US7202777B2 (TSUJI et al.) 10 April 2007 (10-04-2007) *description*	1-20
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<p><input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; vertical-align: top;"> * 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 </td> <td style="width:50%; vertical-align: top;"> "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 </td> </tr> </table>			* 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																
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Information on patent family members

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Patent Document Cited in Search Report	Publication Date	Patent Family Member(s)	Publication Date
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