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[Continued on nextpage]

(54) Title: POSITION SENSING ASSEMBLY FOR USE WITH A VEHICLE HYDRAULIC MASTER CYLINDER OF A VEHICLE BRAKING SYSTEM AND MASTER CYLINDER ASSEMBLY INCLUDING SUCH A POSITION SENSING ASSEMBLY

(57) Abstract: A position sensing assembly adapted for use with a master cylinder to measure travel of a piston of the master cylinder via a magnet operatively coupled to the piston thereof for movement therewith between a zero brake apply position and a full brake apply position. According to one embodiment, the position sensing assembly includes a housing adapted to be attached to a master cylinder housing and a flux concentrator operatively disposed with the position sensing assembly housing. The flux concentrator includes a first end, an intermediate body, and a second end. At least one of the first end and the second end defines a longitudinal plane and at least a portion of the intermediate body is oriented at an angle relative to the longitudinal plane whereby the position sensing assembly is adapted to measure the travel of the piston of the master cylinder via the magnet.

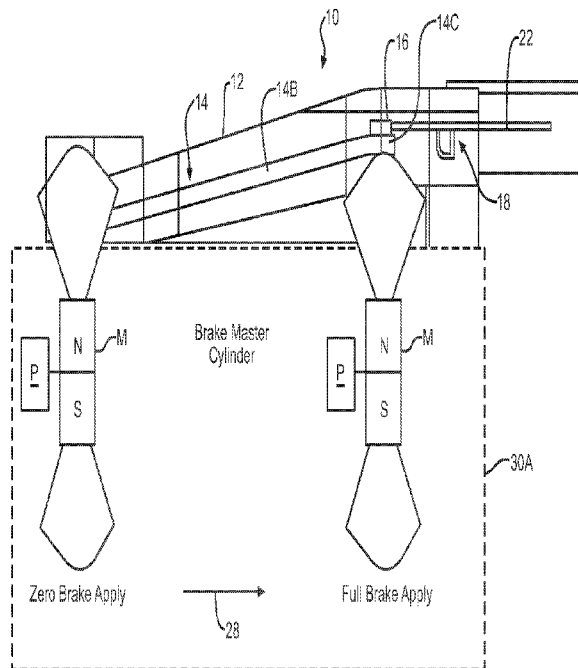


FIG 4

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SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
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B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) B60T 11/16; GOIB 7/14; F01B 25/26		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Korean utility models and applications for utility models Japanese utility models and applications for utility models		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) eKOMPASS(KIPO internal) & Keywords: piston sensor, flux concentrator, hall sensor, magnet		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 7170278 B2 (FTE automotive GmbH) 30 January 2007 See column 7, line 22 - column 13, line 7 and figures 1-9	1-20
Y	US 05231352 A (HUBER; ERICH) 27 July 1993 See column 4, line 62 - column 6, line 45 and figures 1-4	1-20
A	US 6690160 B2 (GRAY; KEITH WAYLAND et al.) 10 February 2004 See all document	1-20
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> 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 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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