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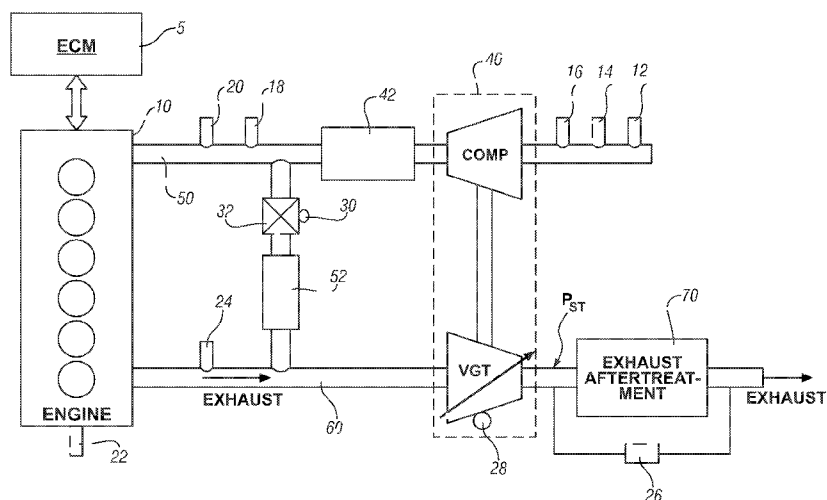
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(54) **Title:** METHOD AND APPARATUS FOR ESTIMATING EXHAUST PRESSURE OF AN INTERNAL COMBUSTION ENGINE



(57) **Abstract:** A method and apparatus are provided, comprising an internal combustion engine equipped with a variable geometry intake air compressing device and a control module operative to estimate exhaust gas pressure during ongoing engine operation. The control module is adapted to monitor sensing devices of the internal combustion engine, and is adapted to execute algorithms. The method comprises monitoring signal inputs from the sensing devices, and determining operating parameters for exhaust flow and an exhaust pressure of the intake air compressing device. An exhaust pressure ratio is determined based upon the parameters for exhaust flow and the exhaust pressure of the intake air compressing device. An exhaust pressure is determined based upon the exhaust pressure ratio.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC. **F02B** 33/00(2006.01)
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USPC: 123/559. 1,559 2,568. 11;70 1/1 0 1, 102, 103, 104;73/1 18. 1, 118.2

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)

U.S : 123/559. 1,559.2,568. 11;701/I 0 1, 102, 103, 104;73/I 18. 1, 118.2

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 7,139,655 B2 (Nakazawa et al) 21 November 2006 (21.11.2006), Figs 1-7	
A	US 6,980,902 B2 (Nakazawa) 27 December 2005 (27.12.2005), Figs. 1-10	
A	US 6,845,753 B2 (Kotwicki) 25 January 2005 (25.01.2005), Figs. 1-4	
A	US 6,354,084 B1 (McKinley et al) 12 March 2002 (12.03.2002), Figs. 1-3	
A	US 6,039,025 (Iwano et al) 21 March 2000 (21.03.2000), Figs 1-10	

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

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"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		

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