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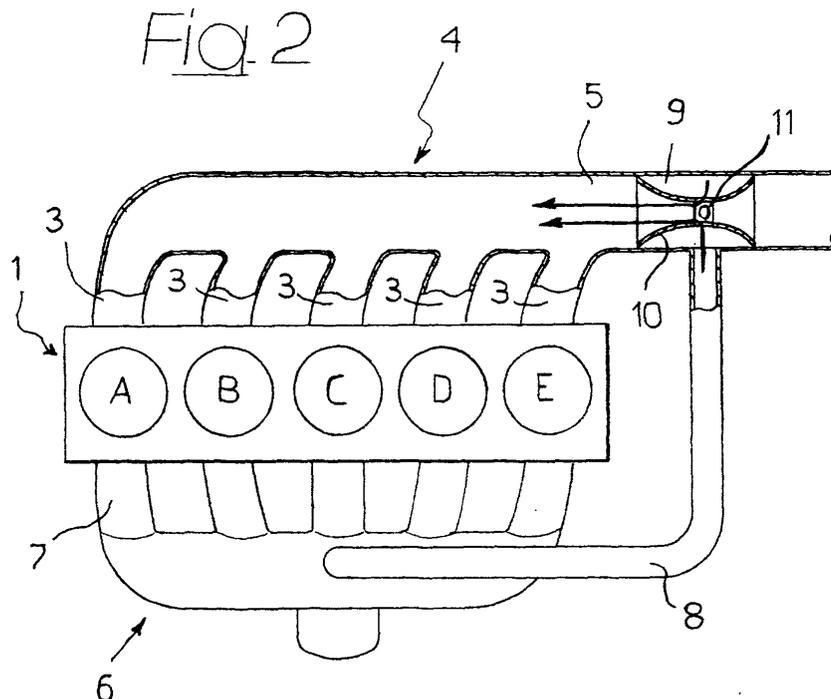
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(54) **Internal combustion diesel engine with exhaust gases re-circulation, provided with a device for mixing the re-circulation gases**

(57) In an internal combustion Diesel engine, a conduit (8) for re-circulation of the exhaust gases into the intake manifold (4) opens on an annular chamber (9) surrounding a portion (10) of the inlet conduit (5) of the

intake manifold (4) which is communicated to the latter through a plurality of apertures (11). Preferably this conduit portion (10) of the intake manifold is in form of a Venturi conduit.





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EUROPEAN SEARCH REPORT

Application Number
EP 98 83 0044

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	DE 44 20 247 A (IAV MOTOR GMBH ;PIERBURG GMBH (DE); VOLKSWAGENWERK AG (DE)) 14 December 1995 * column 1, line 3 - column 1, line 40 * * column 3, line 14 - column 3, line 25; claim 1; figures 1,2 * ---	1-3	F02M25/07
A	EP 0 732 490 A (CUMMINS ENGINE CO INC) 18 September 1996 * page 3, line 46 - page 3, line 55 * * page 4, line 24 - page 5, line 8; claim 1; figures 1,2 * -----	1-3	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			F02M
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
THE HAGUE		17 March 1999	Marsano, F
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons</p> <p>& : member of the same patent family, corresponding document</p>			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 98 83 0044

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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17-03-1999

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 4420247 A	14-12-1995	NONE	
EP 0732490 A	18-09-1996	JP 8270509 A US 5611204 A	15-10-1996 18-03-1997

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82