



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
07.11.2001 Bulletin 2001/45

(51) Int Cl.7: **F02M 35/12**

(43) Date of publication A2:
21.03.2001 Bulletin 2001/12

(21) Application number: **00119166.7**

(22) Date of filing: **05.09.2000**

(84) Designated Contracting States:
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE
 Designated Extension States:
AL LT LV MK RO SI

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(30) Priority: **14.09.1999 US 153722 P**

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(54) **Actively controlled induction noise using a multipole inlet**

(57) An active noise attenuation assembly for an air induction system of an internal combustion engine is located in an air inlet duct leading to the engine. A fairing body is concentrically mounted within the duct and defines an annular space with the duct through which air travels. A loudspeaker is mounted on the fairing body facing outwardly from the duct. A controller generates an electrical signal amplified and phase shifted from a noise field emanating from the engine. The signal is ap-

plied to the loudspeaker for broadcasting a sound field phase shifted from the noise field for attenuating the noise field. A transition housing forms a first plurality of channels and a second plurality of channels. The housing mates to the outlet opening of the inlet duct. The first plurality of channels communicates with the loudspeaker and the second plurality of channels communicates with the annular space. The channels terminate at an end opposite the duct in a checkered pattern.

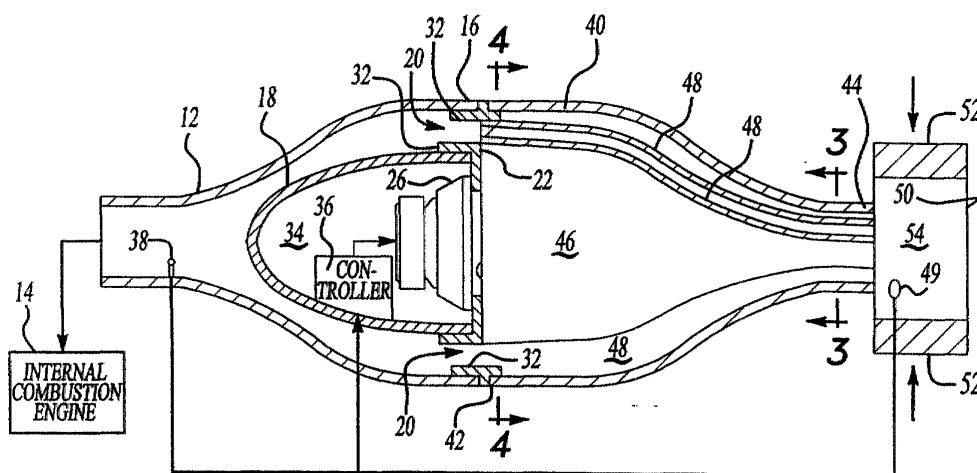


Fig-1



European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 00 11 9166

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A	US 3 936 606 A (WANKE RONALD L) 3 February 1976 (1976-02-03) * abstract * * column 4, line 58 - column 5, line 31; figure 1 *	1,5,7, 11,13, 14,20	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			F02M G10K F16L
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 14 September 2001	Examiner Van Zoest, A
<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 I : document cited for other reasons & : member of the same patent family, corresponding document</p>			

EPC FORM 1603-03-92 (F04001)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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