

## Title (en)

Exhaust manifold for an internal combustion engine

## Title (de)

Abgaskrümmer einer Brennkraftmaschine

## Title (fr)

Collecteur d'échappement pour moteur à combustion interne

## Publication

**EP 1433934 A3 20050706 (EN)**

## Application

**EP 03029239 A 20031218**

## Priority

JP 2002372510 A 20021224

## Abstract (en)

[origin: EP1433934A2] An exhaust manifold for a four-cylinder internal combustion engine, including four branches (5,6,7,8), a downstream exhaust pipe (9) connected with the four branches, and a partition wall (10,110) dividing an exhaust path in the downstream exhaust pipe (9) into first and second passages (11,12) each having a semicircular section. Each of the first and second passages (11,12) is connected with two of the branches (5,6,7,8) which are connected with two of the four engine cylinders (#1,#2,#3,#4) having non-continuous order of ignition and communicated with first and second quarter-circular regions (A,B,C,D) in the semicircular section of the passages (11,12), respectively. An air-fuel ratio sensor (16) mounted to the downstream exhaust pipe (9) projects into both of the passages (11,12) through a cutout (18) formed on one side of the partition wall (10,110) in a width direction perpendicular to an axial direction of the downstream exhaust pipe (9). A communication portion (21,22,23,24) formed in the partition wall (10,110) fluidly communicates the passages (11,12) with each other. <IMAGE> <IMAGE>

## IPC 1-7

**F01N 7/10**; **F01N 7/08**; **F01N 7/00**; **F01N 3/28**

## IPC 8 full level

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## Citation (search report)

- [A] FR 2586753 A1 19870306 - PEUGEOT CYCLES [FR]
- [DA] US 6012315 A 20000111 - SEKIDO YUTAKA [JP], et al
- [DA] PATENT ABSTRACTS OF JAPAN vol. 2000, no. 20 10 July 2001 (2001-07-10)

## Cited by

FR2902826A1; AT501797B1; CN103244250A; US7945377B1; US8200414B2; US8341936B2; US9121328B2

## Designated contracting state (EPC)

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## DOCDB simple family (application)

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