

Title (en)
Engine and exhaust pipe attachment

Title (de)
Brennkraftmaschine und Abgasrohrbefestigung

Title (fr)
Moteur à combustion interne et fixation de tuyaux d'échappement

Publication
EP 1039108 A1 20000927 (EN)

Application
EP 00301323 A 20000221

Priority
GB 9905694 A 19990313

Abstract (en)
An internal combustion engine has an exhaust pipe (117) fastened to a cylinder head (111) by a flange (119) secured by studs (127). The end face (126) of the exhaust pipe (117) directly contacts the cylinder head over an area which is no greater than the cross-sectional area of the adjacent pipe end portion (118), thereby reducing the heat conducted from the exhaust pipe to the cylinder head. The flange (119) is secured to the exhaust pipe by three lugs (128) thereby reducing the thermal mass and the heat absorbed immediately following a cold start. In a modification (Figs.10 and 11, not shown) the end of the exhaust pipe is recessed into the cylinder head to reduce the length of the exhaust port and a wear ring of hard material is interposed between the pipe and the base of the counterbore. In this modification the end face of the pipe end portion is chamfered to further reduce the area in contact with the cylinder head. <IMAGE> <IMAGE>

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IPC 8 full level
F01N 7/10 (2006.01); **F01N 7/18** (2006.01); **F01N 13/10** (2010.01); **F01N 13/18** (2010.01)

CPC (source: EP)
F01N 13/10 (2013.01); **F01N 13/1805** (2013.01); **F01N 2450/24** (2013.01)

Citation (search report)
• [A] US 4800719 A 19890131 - CAMPBELL MONTY A [US]
• [A] US 4197704 A 19800415 - DATE TASUKU [JP], et al
• [X] PATENT ABSTRACTS OF JAPAN vol. 018, no. 489 (P - 1799) 12 September 1994 (1994-09-12)

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CN112912597A; WO2004007935A1

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