

Title (en)

System for increasing the temperature of an air/fuel mixture delivered to an internal combustion engine.

Title (de)

Vorrichtung zur Temperaturerhöhung des einem Verbrennungsmotor gelieferten Luft/Brennstoff-Gemisches.

Title (fr)

Système pour augmenter la température du mélange air/carburant alimentant un moteur à combustion interne.

Publication

EP 0012533 A1 19800625 (EN)

Application

EP 79302663 A 19791122

Priority

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Abstract (en)

A system for utilising heat in the exhaust gas of an internal combustion engine to assist in vapourising the fuel in the air/fuel mixture supplied to the engine. To avoid the problems of overheating and cracking the fuel at large engine loads, the heating is effected by means of a connecting passage (30, 21) through which exhaust gas can be ingested into the intake passage (4). To control the exhaust gas ingestion rate at small loads, a restricted portion (19) can be provided in the connecting passage, in which the exhaust gas reaches sonic velocity, at small throttle openings. A heat exchanger (23) can be provided through which the exhaust gas gives up some of its heat to the air/fuel mixture prior to the ingestion therein. The homogeneity of the air/fuel mixture can be enhanced by the provision of obstructions in various configurations extending across the intake passage. Such obstructions are preferably heated to inhibit formation of pools of liquid fuel thereon. Control means (33) can be provided for controlling the flow of the exhaust gas through the connecting passage at higher engine loads or when the engine is fully warmed up. Such control means can include pressure and temperature sensors (39 and 42) for effecting closure of the connecting passage where the intake manifold vacuum is less than a predetermined value and/or when the intake manifold temperature reaches a predetermined value.

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F02M 25/06

IPC 8 full level

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CPC (source: EP)

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Citation (search report)

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