

Title (en)

Apparatus and method for driving a valve with a stepping motor

Title (de)

Vorrichtung und Verfahren zum Antrieb eines Ventils mittels eines Schrittmotors

Title (fr)

Dispositif et méthode pour entraîner une soupape à l'aide d'un moteur pas à pas

Publication

EP 0952318 A2 19991027 (EN)

Application

EP 99107547 A 19990415

Priority

JP 10664698 A 19980416

Abstract (en)

An apparatus for driving a throttle valve (4) with a stepping motor (40) in a diesel engine (1). The apparatus includes a fully open detection switch (39) that is shifted between ON/OFF states by motion of the valve (4) when the valve (39) moves near a fully open position. An ECU (19) initializes a relationship between the driven step number of the stepping motor (40) and the angular position of the throttle valve (4) by setting a reference angle of the stepping motor (40) only when the fully open switch (39) shifts from an OFF state to an ON state, not vice versa. Thus, the reference rotational angle of the stepping motor (40), which corresponds to the fully open position of the throttle valve (4), is located accurately regardless of hysteresis errors that occur when the fully open switch (39) shifts between ON/OFF states. Accordingly, the angular position of the throttle valve (4) is controlled more precisely. <IMAGE>

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Citation (applicant)

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