Title (en)

Method of determining abnormality in high-pressure fuel injection device

Title (de)

Verfahren zur Feststellung von Abnormitäten in einer Hochdruckbrennstoffeinspritzvorrichtung

Title (fr)

Méthode de détermination des anormalités dans un système d'injection de combustible à haute pression

Publication

EP 1036923 B1 20030917 (EN)

Application

EP 00104931 A 20000308

Priority

JP 7225899 A 19990317

Abstract (en)

[origin: EP1036923A2] The present invention provides a method of determining abnormality, which is capable of specifying a fuel force-feed system subject to an abnormality without causing fluctuations of a fuel pressure in an accumulator line. A fuel pump (30) is provided with a first supply pump (50a) and a second supply pump (50b), and these supply pumps (50a, 50b) alternately force-feed fuel to a common rail (20). Respective fuel injection valves (12) carry out fuel injection based on a fuel pressure (rail pressure) in the common rail (20). An ECU (60) detects a rail pressure rise amount during a fuel force-feed period and calculates an estimated value of rail pressure rise amount based on a force-feed command value for the fuel pump (30). The ECU (60) determines which one of the supply pumps (50a, 50b) is in the process of force-feeding fuel in a certain fuel force-feed period, and determines individually the occurrence of an abnormality in the respective supply pumps (50a, 50b) based on the detected value and the estimated value of rail pressure rise amount. <IMAGE>

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Citation (examination)

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