

Title (en)

Control diagnostic apparatus for an internal combustion engine

Title (de)

Kontrolldiagnosevorrichtung für einen Verbrennungsmotor

Title (fr)

Appareil de diagnostic de contrôle pour un moteur à combustion interne

Publication

**EP 2354502 B1 20191218 (EN)**

Application

**EP 11151591 A 20110120**

Priority

JP 2010011557 A 20100122

Abstract (en)

[origin: EP2354502A1] To prevent the deterioration of exhaust emissions of an internal combustion engine due to air-fuel ratio variation among multiple cylinders, and to identify an abnormal cylinder during an abnormality of cylinder air-fuel ratio variation. An control apparatus 108 of an internal combustion engine comprising upstream air-fuel ratio detection means 101 for detecting upstream air-fuel ratio of the catalyst 107 that purifies exhaust emissions discharged from multiple cylinders, and configured to control air-fuel ratio of the multiple cylinders based on the upstream air-fuel ratio, wherein the air-fuel ratio variation among the multiple cylinders is increased and the upstream air-fuel ratio is controlled to become rich. Further, an abnormality of the air-fuel ratio variation among the multiple cylinders and an abnormal cylinder are identified based on an output of an air-fuel ratio sensor 102 in downstream of the catalyst 107 when the air-fuel ratio variation is increased, or an estimated value of an air-fuel ratio (central air-fuel ratio) at which the purification efficiency of the catalyst 107 becomes optimal.

IPC 8 full level

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CPC (source: EP US)

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