

Title (en)

Internal combustion engine resonance start detection system and method and internal combustion engine controller

Title (de)

System und Verfahren zur Detektion der Verbrennungsmotorresonanz beim Start und Verbrennungsmotorsteuerung

Title (fr)

Système et procédé de détection de démarrage de la résonance de moteur à combustion interne, et contrôleur de moteur à combustion interne

Publication

**EP 2230393 A2 20100922 (EN)**

Application

**EP 10250502 A 20100318**

Priority

JP 2009068230 A 20090319

Abstract (en)

A crankshaft rotation speed variation  $\dot{E}$  is compared with variation determination thresholds A1, A2, and A3 to suppress the magnitude of resonance of a dual mass flywheel (DMF). The variation determination thresholds A1 to A3 are set based on an operation state that reflects the intention of the vehicle's driver to accelerate or decelerate, which is, for example, a brake pedal depression operation (S102 to S108). Appropriate variation determination thresholds A1 to A3 are set regardless of whether the vehicle's driver is actually performing a braking operation or is not performing a braking operation. Thus, it is possible to appropriately detect the start of resonance of the DMF accurately based on the information on the intention of the vehicle's driver including whether or not a braking operation is being performed. Thus, it is possible to reduce or eliminate the variation of output generated by an engine, at an appropriate timing.

IPC 8 full level

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Citation (applicant)

- EP 2031223 A2 20090304 - TOYOTA MOTOR CO LTD [JP]
- DE 3705278 A1 19880511 - BOSCH GMBH ROBERT [DE]

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CN108350816A; CN116086831A; CN113586270A; WO2018193179A1; US11203345B2; US9250157B2; US9366217B2; EP2766590B1

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