



(11)

EP 2 573 372 A8

(12)

CORRECTED EUROPEAN PATENT APPLICATION

published in accordance with Art. 153(4) EPC

(15) Correction information:

Corrected version no 1 (W1 A1)

Corrections, see

Bibliography INID code(s) 71, 72

(51) Int Cl.:

F02D 45/00 (2006.01)

(86) International application number:

PCT/JP2011/055330

(48) Corrigendum issued on:

28.08.2013 Bulletin 2013/35

(87) International publication number:

WO 2012/120632 (13.09.2012 Gazette 2012/37)

(43) Date of publication:

27.03.2013 Bulletin 2013/13

(21) Application number: **11860500.5**

(22) Date of filing: **08.03.2011**

(84) Designated Contracting States:

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO
PL PT RO RS SE SI SK SM TR

(72) Inventor: **MORIYA, Kouki**

**Toyota-shi,
Aichi-ken, 471-8571 (JP)**

(74) Representative: **Kuhnen, Rainer K.**

Kuhnen & Wacker
Patent- und Rechtsanwaltsbüro
Prinz-Ludwig-Strasse 40A
85354 Freising (DE)

(71) Applicant: **TOYOTA JIDOSHA KABUSHIKI**

KAISHA

Toyota-shi, Aichi-ken, 471-8571 (JP)

(54) **CONTROL DEVICE AND CONTROL METHOD FOR ENGINE, ENGINE START DEVICE, AND VEHICLE**

(57) An engine (100) is driven by a starter (200) including a pinion gear (260) that can be engaged with a ring gear (110) coupled to a crankshaft (111); an actuator (232) causing, in a driven state, the pinion gear (260) to be moved to a position where the pinion gear (260) is engaged with the ring gear (110); and a motor (220) caus-

ing the pinion gear (260) to be rotated. The engine (100) is provided with a rotation angle sensor (115) for detecting rotation of the crankshaft (111). ECU (300) detects the crank angle of the crankshaft (111) based on a signal from the rotation angle sensor (115) after the actuator (232) is driven and the motor (220) is driven.

FIG. 1

