

Title (en)  
ENGINE WITH THROTTLE DEVICE, AND ENGINE-DRIVEN VEHICLE

Title (de)  
VERBRENNUNGSMOTOR MIT DROSSELVORRICHTUNG UND MOTORGETRIEBENES FAHRZEUG DAMIT

Title (fr)  
MOTEUR AVEC DISPOSITIF D'ÉTRANGLEMENT, ET VÉHICULE DE TYPE ENTRAÎNÉ PAR UN MOTEUR

Publication  
**EP 2949905 B1 20170906 (EN)**

Application  
**EP 14742815 A 20140122**

Priority  
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Abstract (en)  
[origin: EP2949905A1] An engine with a throttle device includes a throttle valve (24) provided in an intake passage (31) of the engine. The engine includes a throttle shaft (27) that rotates integrally with a valve element (28) of the throttle valve (24), a spring member that biases the valve element (28) in a direction to close, and a throttle valve driving motor (26) connected to the throttle shaft (27) via a gear mechanism (25). The engine includes a sensor (42) that detects the rotation angle of a rotating shaft (43) different from the throttle shaft (27) in the gear mechanism (25), and a throttle angle calculation unit that obtains the rotation angle  $\theta_2$  of the throttle shaft (27) using the detection value of the sensor (42). The throttle angle calculation unit calculates the rotation angle  $\theta_2$  of the throttle shaft (27) by subtracting a backlash angle  $\pm$  from the detection angle of the sensor (42). It is possible to provide an engine with a throttle device capable of accurately detecting the rotation angle of the throttle shaft while employing an arrangement that causes the sensor to detect the rotation angle of the rotating shaft different from the throttle shaft.

IPC 8 full level  
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