

Title (en)

Electronic position sensor assembly and control system.

Title (de)

Elektronischer Winkelgeber mit Steuerungssystem.

Title (fr)

Capteur électronique de position associé à un système de commande.

Publication

EP 0682180 A3 19960124 (EN)

Application

EP 95110314 A 19890420

Priority

- EP 89107080 A 19890420
- US 19423788 A 19880516

Abstract (en)

[origin: EP0342376A2] An electronic position sensor assembly and engine control system (10) in which two sensing elements (13, 14) in a dual sensor (12) provide separate, independent position signals (A, B) related to multi-cylinder engine cycle position by sensing the angular position of a engine-rotated slotted wheel (11). The sensing elements provide identical sensing signals shifted from each other by a predetermined angular amount (d). In response to the simultaneous providing of a pulse by both sensing elements, a first reference signal (at 22) identifying a reference cylinder is provided for controlling electronic distribution of spark timing and/or fuel injection signals to engine cylinders (17-20). In response to a selected one of the sensing elements producing a pulse which has a predetermined longer duration than a preceding produced pulse, a second reference signal (after 50) is produced indicative of top-dead center engine cylinder cycle position for one of the cylinders. In response to detecting a fault in the position signal produced by the one selected sensing element, a switch (27) selects the other of the sensing elements for utilization in producing the second reference signal, and a substitute reference signal circuit (40) provides a substitute first reference signal. A less expensive and more reliable engine position sensor assembly and engine control system is provided since proper system operation is maintained despite a fault in one of the position signals.

IPC 1-7

F02P 7/077; **F02P 15/00**; **F02P 11/06**

IPC 8 full level

F02D 41/34 (2006.01); **F02P 7/073** (2006.01); **F02P 7/077** (2006.01); **F02P 15/00** (2006.01)

CPC (source: EP)

F02D 41/009 (2013.01); **F02P 7/073** (2013.01); **F02P 7/0775** (2013.01); **F02P 15/008** (2013.01)

Citation (search report)

- [A] EP 0240858 A1 19871014 - HITACHI LTD [JP]
- [A] US 4145608 A 19790320 - SHIRASAKI SHINJI, et al
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- [A] FR 2374528 A1 19780713 - CII [FR]
- [A] WO 8202927 A1 19820902 - MOTOROLA INC [US]
- [A] DE 2458946 A1 19760616 - SIEMENS AG

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

EP 0342376 A2 19891123; **EP 0342376 A3 19910403**; **EP 0342376 B1 19960214**; AT E134251 T1 19960215; DE 68925658 D1 19960328; DE 68925658 T2 19960919; DE 68929420 D1 20020905; DE 68929420 T2 20021205; EP 0682180 A2 19951115; EP 0682180 A3 19960124; EP 0879956 A1 19981125; EP 0879956 B1 20020731

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