Title (en)

Improvements to advance arrangement

Title (de)

Verbesserungen für Einspritzverstelleinrichtung

Title (fr)

Amélioration pour dispositif d'avance d'injection

Publication

EP 1772609 A1 20070411 (EN)

Application

EP 05256222 A 20051005

Priority

EP 05256222 A 20051005

Abstract (en)

An advance arrangement for use in controlling timing of fuel delivery by a fuel pump for use in an engine comprises an advance piston (12) which is slidable within a first bore (14) and which cooperates, in use, with a cam arrangement of a fuel pump to adjust the timing of fuel delivery by the pump. A surface associated with the advance piston (12) is exposed to fuel pressure within a first control chamber (38). The pressure of fuel within the first control chamber (38) is controlled by means of a servo piston (24) which is slidable within a further bore (22) provided in the advance piston (12). The servo piston (24) is responsive to speed dependent fuel pressure variations within a servo control chamber (37), thereby to permit adjustment of the timing in response to engine speed. A light load piston (26) is moveable relative to the advance piston (12) against the action of a light load control spring (28) in response to load dependent fuel pressure variations within a light load control chamber (60), thereby to adjust the timing under light load conditions.

IPC 8 full level

F02D 1/18 (2006.01); **F02M 41/14** (2006.01)

CPC (source: EP)

F02D 1/183 (2013.01); **F02M 41/1416** (2013.01)

Citation (applicant)

- EP 1356196 A1 20031029 - DELPHI TECH INC [US]
- EP 1035311 A2 20000913 - DELPHI TECH INC [US]

Citation (search report)

- [AD] EP 1356196 A1 20031029 - DELPHI TECH INC [US]
- [A] US 4408591 A 19831011 - NAKAMURA HISASHI [JP]

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK YU

DOCDB simple family (publication)

EP 1772609 A1 20070411; **EP 1772609 B1 20100804**; AT E476592 T1 20100815; DE 602005022723 D1 20100916; JP 2007100703 A 20070419

DOCDB simple family (application)

EP 05256222 A 20051005; AT 05256222 T 20051005; DE 602005022723 T 20051005; JP 2006273701 A 20061005