

Title (en)

DEVICE FOR CONTROLLING A GAS SHUTTLE VALVE FOR INTERNAL COMBUSTION ENGINES

Title (de)

VORRICHTUNG ZUR STEUERUNG EINES GASWECHSELVENTILS FÜR BRENNKRAFTMASCHINEN

Title (fr)

DISPOSITIF DE COMMANDE D'UNE VALVE D'ECHANGE GAZEUX DESTINE A DES MOTEURS A COMBUSTION INTERNE

Publication

EP 1029158 B1 20031112 (DE)

Application

EP 99916743 A 19990216

Priority

- DE 9900427 W 19990216
- DE 19826047 A 19980612

Abstract (en)

[origin: DE19826047A1] A device for controlling a gas shuttle valve for internal combustion engines, comprising an axially displaceable valve member (5) with a sealing surface (7) that enables it to co-operate with a valve seat (8) fixed to the housing. The valve member has a piston (9) on the end that is far from the combustion chamber. Two hydraulic working areas are axially separated by the piston. A lower working area (11) close to the combustion chamber acts upon the valve member (5) in the direction of closing and an upper working area far from combustion chamber (15) acts upon it in the direction of opening. The lower working area (11) is permanently connected to a high pressure source and the upper working area can be alternately filled with high pressure and discharged by means of a high pressure feed line (23) containing an electric control valve (27) and a discharge line (33) containing an electric control valve (35). The electric control valve (35) closes the high pressure feed line (23) into the upper working area (15) at zero current, while the control valve (35) in the discharge line (33) is opened at zero current.

IPC 1-7

F01L 9/02

IPC 8 full level

F01L 9/02 (2006.01); **F01L 9/10** (2021.01)

CPC (source: EP US)

F01L 9/10 (2021.01 - EP US)

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

DE 19826047 A1 19991216; DE 59907710 D1 20031218; EP 1029158 A1 20000823; EP 1029158 B1 20031112; JP 2002518626 A 20020625; KR 100589297 B1 20060614; KR 20010022808 A 20010326; US 6321703 B1 20011127; WO 9966179 A1 19991223

DOCDB simple family (application)

DE 19826047 A 19980612; DE 59907710 T 19990216; DE 9900427 W 19990216; EP 99916743 A 19990216; JP 2000554970 A 19990216; KR 20007001409 A 20000211; US 48554300 A 20000214