

Title (en)

A circuit for the piloting of inductive loads, particularly for operating the electro-injectors of a diesel-cycle internal combustion engine.

Title (de)

Schaltung zum Ansteuern von induktiven Lasten, insbesondere zum Antreiben von Elektro-Einspritzventilen eines Dieselmotors.

Title (fr)

Circuit de commande de charges inductives, en particulier pour actionner des injecteurs électriques d'un moteur diesel.

Publication

**EP 0305344 A1 19890301 (EN)**

Application

**EP 88830336 A 19880802**

Priority

IT 6773087 A 19870825

Abstract (en)

The circuit comprises: - an input (1) for connection to a low-tension supply (VS), - a storage coil (L1) for storing energy delivered by the supply (VB), and - electronic switching devices (SW1, SW2, SWi) for controlling the connection between the input (1), the storage coil (L1) and each of the loads (Li) in a predetermined manner to achieve a rapid transfer of current to each of the loads selectively, - a capacitor (C) situated in parallel with the branch circuits containing the loads (L1) and connected to the coil (L1) and the electronic switching devices (SW1, SW2, SWi), and - an electronic control unit (ECU) for piloting the electronic switching devices (SW1, SW2, SWi) according to a first operative mode in which, to transfer current to one of the loads (Li), the switching devices cause in succession, after the connection of the storage coil (L1) to the supply (VB): the connection of the storage coil (L1) to the capacitor (C) so as to form a resonant circuit, and then the discharge of the resonant circuit (L1, C) into the load (Li).

IPC 1-7

**F02D 41/20; H03K 17/04**

IPC 8 full level

**F02D 41/20** (2006.01); **H02M 3/155** (2006.01); **H03K 17/04** (2006.01); **H03K 17/64** (2006.01); **F02B 1/04** (2006.01); **F02B 3/06** (2006.01)

CPC (source: EP)

**F02D 41/20** (2013.01); **F02B 1/04** (2013.01); **F02B 3/06** (2013.01); **F02D 2041/2006** (2013.01); **F02D 2041/201** (2013.01);  
**F02D 2041/2051** (2013.01)

Citation (search report)

- [X] FR 2533263 A1 19840323 - RENAULT [FR]
- [AD] GB 2182815 A 19870520 - IVECO FIAT
- [A] EP 0034076 A2 19810819 - BENDIX CORP [US]
- [A] FR 2538942 A1 19840706 - RENAULT [FR]
- [A] EP 0106743 A2 19840425 - BENDIX CORP [US]
- [A] US 3896346 A 19750722 - ULE LOUIS A
- [A] DE 3324937 A1 19850131 - MAGNET MOTOR GMBH [DE]

Cited by

FR2778785A1; EP1286034A1; EP0985814A3; FR2766005A1; FR2777042A1; EP0464443A1; US5204576A; FR2795771A1; GB2305561A;  
GB2305561B; US5907466A; US6973920B2; WO0161175A1; WO2009133399A3; WO9902834A1; WO9514162A1; EP1473453B1

Designated contracting state (EPC)

AT BE CH DE ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)

**EP 0305344 A1 19890301; EP 0305344 B1 19920102**; AT E71186 T1 19920115; BR 8804357 A 19890321; DE 3867384 D1 19920213;  
ES 2027420 T3 19920601; GR 3003510 T3 19930316; IT 1217171 B 19900314; IT 8767730 A0 19870825; JP 2831359 B2 19981202;  
JP S6474064 A 19890320; PT 88331 A 19890630; PT 88331 B 19931231

DOCDB simple family (application)

**EP 88830336 A 19880802**; AT 88830336 T 19880802; BR 8804357 A 19880823; DE 3867384 T 19880802; ES 88830336 T 19880802;  
GR 910402091 T 19920103; IT 6773087 A 19870825; JP 21350988 A 19880824; PT 8833188 A 19880824