

Title (en)

Apparatus for and method controlling engine RPM in hydraulic construction equipment

Title (de)

Verfahren und Vorrichtung zum Regeln der Motordrehzahl einer hydraulischen Baumaschine

Title (fr)

Dispositif pour régler la vitesse de rotation du moteur d'un engin de terrassement hydraulique.

Publication

EP 0774546 A1 19970521 (EN)

Application

EP 95630120 A 19951123

Priority

EP 95630120 A 19951123

Abstract (en)

An apparatus for and a method of controlling the engine RMP in hydraulic construction equipment, being capable of detecting a neutral valve position corresponding to the idle state of the construction equipment and controlling the engine to drive at a low RPM while the construction equipment is in its idle state, thereby achieving a reduced noise generation and reduced fuel consumption. The apparatus includes an engine RPM detecting unit (19) for detecting the RPM of the engine, an engine RPM control unit (21) for controlling the engine RPM, a pressure detecting unit (17) for detecting the pressure in a fluid line (13) connected between a hydraulic pump driven by the engine (15) and main valves (7a-7f) for actuating actuators, and a control unit (23) for determining whether every main valve is in its neutral position, through a functional computation for a pressure value detected by the pressure detecting unit (17) with a predetermined reference value, and controlling the engine RPM controlling unit (21) to decrease the engine RPM when every main valve (7a-7f) is determined as being in its neutral position. <IMAGE>

IPC 1-7

E02F 9/22

IPC 8 full level

E02F 9/22 (2006.01)

CPC (source: EP)

E02F 9/2246 (2013.01)

Citation (search report)

- [XA] EP 0546239 A1 19930616 - CATERPILLAR MITSUBISHI LTD [JP]
- [Y] US 4838755 A 19890613 - JOHNSON STEVEN H [US], et al
- [Y] US 4989567 A 19910205 - FUJIOKA JUN [JP]
- [A] EP 0159835 A1 19851030 - KOMATSU MFG CO LTD [JP]
- [A] EP 0558765 A1 19930908 - KOMATSU MFG CO LTD [JP]
- [A] EP 0037838 A1 19811021 - HITACHI CONSTRUCTION MACHINERY [JP]
- [A] PATENT ABSTRACTS OF JAPAN vol. 014, no. 424 (M - 1024) 12 September 1990 (1990-09-12)

Cited by

FR2799776A1; GB2394075A; GB2394075B; US7165530B2

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

EP 0774546 A1 19970521; EP 0774546 B1 20000209; DE 69515040 D1 20000316; DE 69515040 T2 20000629

DOCDB simple family (application)

EP 95630120 A 19951123; DE 69515040 T 19951123