

Title (en)

Vibration suppressing device for a wheeled construction equipment.

Title (de)

Vorrichtung zur Unterdrückung von Vibrationen für Baumaschinen auf Rädern.

Title (fr)

Dispositif pour supprimer les oscillations dans les engins de terrassement munis de roues.

Publication

EP 0381788 A1 19900816 (EN)

Application

EP 89102041 A 19890206

Priority

EP 89102041 A 19890206

Abstract (en)

A vibration suppressing device for a wheeled earth-moving machine having a wheeled chassis (2), a working device (3) operatively supported on the wheeled chassis, and a hydraulic circuit including hydraulic actuators for operating the working device for up-and-down motion. The vibration suppressing device comprises an accumulator (19) filled with a pressurized gas for suppressing vibrations, and a mode changeover valve for connecting the accumulator to the load bearing pressure chambers of the hydraulic actuators in a running mode in which the wheeled construction equipment operates for running, and for disconnecting the accumulator from the load bearing pressure chambers of the hydraulic actuators in a working mode in which the wheeled construction equipment operates for work. When the working device is held at a height in the range of zero to a minimum limit height from the road, the vibration suppressing device meets conditions: $PG \times VA^{<n>} \leq PH \times VF^{<n>}$ and $PG \leq PH$, where PG is the pressure of the gas initially sealed in the accumulator, VA is the capacity of the accumulator, PH is static holding pressure maintained in the load bearing pressure chambers of the hydraulic actuators in the running mode, VF is volume variation in the load bearing pressure chambers of the hydraulic actuators, and n is a coefficient of adiabatic change.

IPC 1-7

E02F 3/815; E02F 9/00; E02F 9/20; E02F 9/24

IPC 8 full level

E02F 9/22 (2006.01)

CPC (source: EP)

E02F 9/2207 (2013.01); **E02F 9/2217** (2013.01)

Citation (search report)

- [A] BE 656756 A 19650401
- [A] FR 2485136 A1 19811224 - LEDUC & FILS RENE [FR]
- [A] GB 883161 A 19611122 - VOLVO AB
- [A] US 4120364 A 19781017 - WOOLDRIDGE DARREL M
- [A] FR 1383763 A 19650104 - APPLIC MACH MOTRICES
- [A] PATENT ABSTRACTS OF JAPAN, vol. 10, no. 204 (M-499)[2260], 17th July 1986; & JP-A-61 46 702 (TOYOTA MOTOR CORP.) 07-03-1986

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Designated contracting state (EPC)

DE ES FR GB IT NL

DOCDB simple family (publication)

EP 0381788 A1 19900816; EP 0381788 B1 19941019; DE 68918930 D1 19941124; DE 68918930 T2 19950323

DOCDB simple family (application)

EP 89102041 A 19890206; DE 68918930 T 19890206