

Title (en)

Hydraulic unit with automatic regenerative system typically for log splitting machines operated by a single-acting cylinder-piston unit

Title (de)

Hydraulische Einrichtung mit einer Differentialschaltung, zum Beispiel eines durch einen einfach-wirkenden Zylinder betätigten Holzspaltgeräts

Title (fr)

Unité hydraulique avec circuit différentiel, typiquement pour une machine de fendage de bois actionnée par un vérin à simple effet

Publication

EP 1213486 A3 20040107 (EN)

Application

EP 01204395 A 20011116

Priority

IT RE20000125 A 20001205

Abstract (en)

[origin: EP1213486A2] A hydraulic operating system for a tool, typically for a log splitting machine, comprising a single acting hydraulic cylinder-piston unit (9), a motor-driven pump (1) and a hydraulic distributor (5) arranged to selectively connect the piston chamber (90) of said cylinder-piston unit (9) to the pump delivery (4) or to discharge (15), in which the piston rod chamber (91) of the cylinder-piston unit (9) is connected to the piston chamber (90) by a conduit (13) comprising a unidirectional valve (130) which prevents oil transfer towards the piston rod chamber (91), and to the oil reservoir (3) by a discharge conduit (12) closed by a preset overpressure valve (120) sensitive to the pump delivery pressure and by a separate suction conduit (14) provided with a unidirectional valve (140) which prevents oil flow towards the reservoir (3). <IMAGE>

IPC 1-7

F15B 11/024; B27L 7/00

IPC 8 full level

B27L 7/00 (2006.01); **F15B 11/024** (2006.01)

CPC (source: EP)

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Citation (search report)

- [X] FR 2057287 A5 19710521 - LUCHAIRE SA
- [A] US 3759144 A 19730918 - IKEDA H
- [A] US 2800110 A 19570723 - HAARMYER ROBERT C
- [A] WO 9315886 A1 19930819 - JANCZAK JERZY [SE]
- [A] EP 0806271 A2 19971112 - BELL SRL [IT]
- [A] US 3640323 A 19720208 - HELLE GORDON W
- [A] US 3077214 A 19630212 - BRUKNER CLAYTON J

Cited by

US7444808B2; WO2004007974A1; WO2006130120A1; US8752372B2

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