

Title (en)
HYDRAULIC CONTROL SYSTEM USING LOAD-SENSING TECHNOLOGY

Title (de)
HYDRAULISCHE STEUERANORDNUNG IN LOAD-SENSING TECHNIK

Title (fr)
SYSTEME DE COMMANDE HYDRAULIQUE FAISANT APPEL AU PRINCIPE DE LA SENSIBILITE DE CHARGE

Publication
EP 1497559 B1 20051221 (DE)

Application
EP 03724956 A 20030404

Priority
• DE 10216119 A 20020412
• EP 0303537 W 20030404

Abstract (en)
[origin: WO03087585A1] The invention relates to a hydraulic control system using in load-sensing technology. Said system comprises: a first directional control valve, which is used to supply hydraulic fluid to a first hydraulic consumer; at least one additional directional control valve, which is used to supply hydraulic fluid to an additional hydraulic consumer and which is preferably combined with the first directional control valve to form a valve block; a load signalling line, which is used to impinge a control pressure that is dependent on the highest load pressure of the actuated hydraulic consumer on a control side of a load-sensing control valve and which has a first line section nearest to the control valve carrying the control pressure and at least one additional line section, whereby each respective line section can be connected to the following line section or to an individual signalling channel of a directional control valve by means of a shuttle valve; and a pilot valve assembly, which restricts the control pressure to a threshold pressure. The aim of the invention is to cost-effectively restrict the load pressure on the additional hydraulic consumer to a lower value than that on the first hydraulic consumer. To achieve this, the pilot valve assembly can be adjusted at a specific pressure prevailing in an additional line section of the load signalling line from a high, first threshold pressure to a lower, second threshold pressure and the individual signalling channels, viewed from the first line section of the load signalling line, can be connected to the successive line sections of the load signalling line, once the maximum load pressure of the hydraulic consumer has fallen.

IPC 1-7
F15B 11/16

IPC 8 full level
F15B 11/16 (2006.01)

CPC (source: EP US)
F15B 11/165 (2013.01 - EP US); **F15B 2211/20538** (2013.01 - EP US); **F15B 2211/50536** (2013.01 - EP US); **F15B 2211/513** (2013.01 - EP US); **F15B 2211/5157** (2013.01 - EP US); **F15B 2211/528** (2013.01 - EP US); **F15B 2211/56** (2013.01 - EP US); **F15B 2211/6054** (2013.01 - EP US); **F15B 2211/6055** (2013.01 - EP US); **F15B 2211/654** (2013.01 - EP US)

Cited by
DE102013220750A1; US9874884B2

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)
WO 03087585 A1 20031023; AT E313715 T1 20060115; DE 10216119 A1 20031023; DE 50302004 D1 20060126; EP 1497559 A1 20050119; EP 1497559 B1 20051221; JP 2006505746 A 20060216; US 2005178116 A1 20050818

DOCDB simple family (application)
EP 0303537 W 20030404; AT 03724956 T 20030404; DE 10216119 A 20020412; DE 50302004 T 20030404; EP 03724956 A 20030404; JP 2003584505 A 20030404; US 50999105 A 20050411