

Title (en)  
CONTROLLING AN ELECTRIC PROPORTIONAL VALVE

Title (de)  
STEUERUNG EINES ELEKTRISCHEN PROPORTIONALVENTILS

Title (fr)  
COMMANDE D'UNE SOUPAPE PROPORTIONNELLE ÉLECTRIQUE

Publication  
**EP 3243965 A1 20171115 (EN)**

Application  
**EP 16169558 A 20160513**

Priority  
EP 16169558 A 20160513

Abstract (en)  
A method for controlling an electric proportional valve (42) of a hydraulic excavator attachment (28) is disclosed. The electric proportional valve (42) is controllable based on an electric input to the electric proportional valve (42). The electric proportional valve (42) is connected to a hydraulic actuator (34) for actuating the hydraulic excavator attachment (28) and to a hydraulic pump (36) for providing a flow of hydraulic fluid to the electric proportional valve (42). The method comprises operating the hydraulic pump (36) at a desired flow rate depending on the hydraulic excavator attachment (28); setting a desired pressure differential (#p) over the electric proportional valve (42); determining an actual pressure differential (#p') over the electric proportional valve (42); determining a pressure deviation (#p - #p') between the desired pressure differential (#p) and the actual pressure differential (#p'); and operating the electric proportional valve (42) such that the actual pressure differential (#p') approaches the desired pressure differential (#p).

IPC 8 full level  
**E02F 9/22** (2006.01); **F15B 11/08** (2006.01)

CPC (source: EP)  
**E02F 9/2228** (2013.01); **E02F 9/2235** (2013.01); **E02F 9/2296** (2013.01); **F15B 11/05** (2013.01); **F15B 11/08** (2013.01); **F15B 2211/20546** (2013.01); **F15B 2211/30525** (2013.01); **F15B 2211/3144** (2013.01); **F15B 2211/327** (2013.01); **F15B 2211/351** (2013.01); **F15B 2211/353** (2013.01); **F15B 2211/6309** (2013.01); **F15B 2211/6313** (2013.01); **F15B 2211/665** (2013.01); **F15B 2211/6652** (2013.01); **F15B 2211/6654** (2013.01); **F15B 2211/7051** (2013.01)

Citation (search report)  
• [A] US 2003115866 A1 20030626 - PRICE ROBERT J [US]  
• [A] US 2003125840 A1 20030703 - LUNZMAN STEPHEN V [US]  
• [A] US 2007044650 A1 20070301 - KUEHN JEFFREY L [US], et al

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 3243965 A1 20171115; EP 3243965 B1 20190102**

DOCDB simple family (application)  
**EP 16169558 A 20160513**