

Title (en)  
HYDRAULIC CONTROL DEVICE

Title (de)  
HYDRAULISCHE STEUEREINRICHTUNG

Title (fr)  
DISPOSITIF DE COMMANDE HYDRAULIQUE

Publication  
**EP 0656100 B1 19970528 (DE)**

Application  
**EP 93917748 A 19930805**

Priority  
• DE 4227564 A 19920820  
• DE 4231399 A 19920919  
• EP 9302082 W 19930805

Abstract (en)  
[origin: DE4231399A1] The invention is based on a hydraulic control device with a directional valve (13) by means of which the direction of movement and the speed of a hydraulic consumer (12), especially a mobile working device (10), can be modified. A prior art hydraulic control device also has a hydraulic pre-control device (15) by means of which a control pressure can be applied to a first control chamber (17) via a first control line (16) and to a second control chamber (19) via a second control line (18), and a valve arrangement (20, 21) in a first control line (16) by which a largely free flow of control fluid is admitted to the first control chamber (17) and by means of which the movement of the control slide of the directional valve (13) can be damped by restricting the control fluid outflow. In order to achieve effective damping but also to avoid delaying the beginning or end of the movement of the working implement a mobile working device (19), according to the invention, damping of the movement of the control slide (9) can be controlled dependently upon the control pressure in a first control chamber (17) and/or that in a second control chamber (19).

IPC 1-7  
**F15B 13/042**; E02F 9/22

IPC 8 full level  
**E02F 9/22** (2006.01); **F15B 11/00** (2006.01); **F15B 13/042** (2006.01); **F16K 11/00** (2006.01)

CPC (source: EP US)  
**E02F 9/2207** (2013.01 - EP US); **E02F 9/2285** (2013.01 - EP US); **F15B 13/0422** (2013.01 - EP US)

Designated contracting state (EPC)  
FR GB IT SE

DOCDB simple family (publication)  
**DE 4231399 A1 19940224**; EP 0656100 A1 19950607; EP 0656100 B1 19970528; JP H08500418 A 19960116; US 5640892 A 19970624; WO 9404829 A1 19940303

DOCDB simple family (application)  
**DE 4231399 A 19920919**; EP 9302082 W 19930805; EP 93917748 A 19930805; JP 50584194 A 19930805; US 38789895 A 19950216