

Title (en)
Hydraulic suspension

Title (de)
Hydraulische Federung

Title (fr)
Suspension hydraulique

Publication
EP 1496009 B1 20070905 (DE)

Application
EP 04103115 A 20040701

Priority
• DE 10330344 A 20030705
• DE 10343742 A 20030922

Abstract (en)
[origin: EP1496009A1] Hydraulic spring, especially for a cantilever arm, has at least a hydraulic cylinder (10) with chambers (14, 16), a control valve (22) that is connected to at least one of the chambers via a hydraulic line (18, 20) and provides a connection to a hydraulic oil pump (30) and tank (28). Linking the two chambers is a connection line (40). A control unit (54) monitors and regulates the position of the cylinder piston using a sensor (50) and a pressure limiting unit (44) connected to the connection line.

IPC 8 full level
B66F 9/22 (2006.01); **B66F 9/065** (2006.01); **E02F 9/22** (2006.01); **F15B 11/028** (2006.01); **F15B 13/02** (2006.01); **F15B 21/04** (2006.01)

CPC (source: EP US)
B66F 9/065 (2013.01 - EP US); **B66F 9/22** (2013.01 - EP US); **E02F 9/2207** (2013.01 - EP US); **F15B 11/028** (2013.01 - EP US);
F15B 13/021 (2013.01 - EP US); **F15B 21/008** (2013.01 - EP US); **F15B 2211/30525** (2013.01 - EP US); **F15B 2211/3058** (2013.01 - EP US);
F15B 2211/3116 (2013.01 - EP US); **F15B 2211/3144** (2013.01 - EP US); **F15B 2211/327** (2013.01 - EP US);
F15B 2211/40515 (2013.01 - EP US); **F15B 2211/41536** (2013.01 - EP US); **F15B 2211/41581** (2013.01 - EP US);
F15B 2211/426 (2013.01 - EP US); **F15B 2211/45** (2013.01 - EP US); **F15B 2211/473** (2013.01 - EP US); **F15B 2211/50518** (2013.01 - EP US);
F15B 2211/50545 (2013.01 - EP US); **F15B 2211/5151** (2013.01 - EP US); **F15B 2211/526** (2013.01 - EP US); **F15B 2211/528** (2013.01 - EP US);
F15B 2211/55 (2013.01 - EP US); **F15B 2211/6313** (2013.01 - EP US); **F15B 2211/6336** (2013.01 - EP US); **F15B 2211/6346** (2013.01 - EP US);
F15B 2211/7052 (2013.01 - EP US); **F15B 2211/7053** (2013.01 - EP US); **F15B 2211/765** (2013.01 - EP US)

Cited by
CN113007159A; CN112010166A; CN108328524A; EP4344520A1; CN110319242A; EP1897847A3; EP1762535A3; DE102005039251A1;
EP1754836A3; EP1762535A2; EP1754836A2; US7845896B2

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 PL PT RO SE SI SK TR

DOCDB simple family (publication)
EP 1496009 A1 20050112; EP 1496009 B1 20070905; AT E372296 T1 20070915; DE 502004004847 D1 20071018; ES 2289436 T3 20080201;
US 2005011190 A1 20050120; US 6988363 B2 20060124

DOCDB simple family (application)
EP 04103115 A 20040701; AT 04103115 T 20040701; DE 502004004847 T 20040701; ES 04103115 T 20040701; US 88471604 A 20040702