

Title (en)  
NON-NEWTONIAN FLOW FLUID-LOCKING MECHANISM FOR VEHICLES

Title (de)  
HYDRAULISCHER VERRIEGELUNGSMECHANISMUS MIT EINEM NICHT-NEWTONSCHEN FLUID FÜR FAHRZEUGE

Title (fr)  
MECANISME DE VERROUILLAGE HYDRAULIQUE PAR FLUIDE NON NEWTONIEN POUR VEHICULES

Publication  
**EP 1150875 A1 20011107 (EN)**

Application  
**EP 99965325 A 19991220**

Priority  
• US 9930431 W 19991220  
• US 11308498 P 19981221  
• US 16443899 P 19991109

Abstract (en)  
[origin: WO0037298A1] An assembly is provided for fixing the position of an adjustable component (22) of a vehicle, comprising in combination a fixed reference frame (20) within the vehicle such as a dash or a firewall, an adjustable component (22) also disposed in the vehicle such as an adjustable steering column (10), pedals, or a seat. Interconnecting the fixed reference frame (20) and the adjustable component (22) is a fluid locking mechanism (50) which permits selective positioning of the adjustable component relative to the fixed reference frame (20) and holds the adjustable component (22) in position. The fluid locking mechanism (50) is preferably a non-Newtonian flow fluid locking mechanism which uses a magneto-rheological fluid (97) to fix the position of the adjustable component (22) in place once the desired position is selected. To provide additional safety for the vehicle occupants, the fluid locking mechanism may be controlled by an electrical microprocessor (556) or circuit which adjusts the locking strength of the fluid locking mechanism (50) based upon user inputs and dynamic events.

IPC 1-7  
**B62D 1/18**; **F16F 15/03**

IPC 8 full level  
**B60N 2/16** (2006.01); **A47C 1/024** (2006.01); **B60N 2/22** (2006.01); **B60R 25/01** (2013.01); **B60R 25/0215** (2013.01); **B62D 1/18** (2006.01); **B62D 1/184** (2006.01); **B62D 1/19** (2006.01); **F16F 7/00** (2006.01); **F16F 9/53** (2006.01); **F16F 15/027** (2006.01)

CPC (source: EP)  
**B60N 2/08** (2013.01); **B60N 2/1685** (2013.01); **B60N 2/22** (2013.01); **B60N 2/42736** (2013.01); **B60N 2/42745** (2013.01); **B62D 1/184** (2013.01); **B62D 1/195** (2013.01); **F16F 9/535** (2013.01); **F16F 15/0275** (2013.01); **F16F 2224/045** (2013.01); **F16F 2230/0041** (2013.01)

Citation (search report)  
See references of WO 0037298A1

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)  
**WO 0037298 A1 20000629**; CA 2345719 A1 20000629; EP 1150875 A1 20011107; JP 2002538031 A 20021112

DOCDB simple family (application)  
**US 9930431 W 19991220**; CA 2345719 A 19991220; EP 99965325 A 19991220; JP 2000589388 A 19991220