

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

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Application
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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.

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