

Title (en)  
HYDRAULIC SPRING

Title (de)  
HYDROFEDER

Title (fr)  
RESSORT HYDRAULIQUE

Publication  
**EP 1346167 A1 20030924 (DE)**

Application  
**EP 01990414 A 20011115**

Priority  
• DE 10064769 A 20001222  
• EP 0113208 W 20011115

Abstract (en)  
[origin: WO02052167A1] The hydraulic volume (4a, 4b) of a hydraulic spring is shut off on one side by a spring element (6) that has been vulcanised into an external ring (8) and is delimited on the other side by a compensation membrane (10). The aim of the invention is to improve the impermeability between the compensation membrane (10) and the external ring (8). To achieve this, the compensation membrane (10) is clamped in a fixed manner between the external ring (8) and the cover (12). The opposing sealing surfaces (14, 16) of the external ring (8) and the cover (12) are preferably configured to be planar. The external edge (18) of the compensation membrane (10) can have a thickening (22), which fills a ring-shaped groove (24) of the same radius in the external ring (8). The hydraulic spring can be used in particular as a primary suspension for use in rail vehicles.

IPC 1-7  
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IPC 8 full level  
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**F16F 9/36** (2013.01 - EP US); **F16F 13/10** (2013.01 - KR); **F16F 13/103** (2013.01 - EP US)

Citation (examination)  
• JP S62242149 A 19871022 - HONDA MOTOR CO LTD  
• US 4809959 A 19890307 - HURLIER FRANCOIS [FR]  
• US 4733758 A 19880329 - DUCLOS THEODORE G [US], et al  
• JP S5831736 A 19830224 - BRIDGESTONE TIRE CO LTD  
• JP S6113042 A 19860121 - TOYOTA MOTOR CO LTD  
• See also references of WO 02052167A1

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