

Title (en)  
DEVICE FOR DELIVERING FUEL

Title (de)  
VORRICHTUNG ZUM FÖRDERN VON KRAFTSTOFF

Title (fr)  
DISPOSITIF DE TRANSPORT DE CARBURANT

Publication  
**EP 2494181 B1 20140813 (DE)**

Application  
**EP 10754718 A 20100909**

Priority  
• DE 102009046112 A 20091028  
• EP 2010063232 W 20100909

Abstract (en)  
[origin: WO2011051039A1] Devices for conveying fuel are known having a conveying assembly and a pump holder holding the conveying assembly which has a receptacle for the conveying assembly and a holder connected to the receptacle via three damping elements. The damping elements damp the structure-born noise transmission from the conveying assembly to the adjacent components. The damping elements each have a cantilever section which projects starting from the receptacle into the region of the holder and runs in the radial direction and circumferential direction. The cantilever sections are designed as elastic spring arms, the axial deflection thereof in respect of a pump axis being able to exceed a maximum allowable value by means of external acceleration forces. The mechanical stresses occurring in the spring arms can lead to damage to the spring arms. In the device according to the invention, the damping elements have a strongly progressive spring characteristic curve in respect of an axial deflection such that a progressively increasing spring force in the damping element occurs with increasing spring travel of the pump holder. The axial deflection of the pump holder is consequently reduced over that of the prior art. According to the invention, an elastic spring section (15) connects on the cantilever section (12) which runs with the longitudinal extension thereof in the axial direction and in the circumferential direction in respect of a pump axis (2.1) and is connected to the holder (11).

IPC 8 full level  
**F02M 37/10** (2006.01)

CPC (source: EP US)  
**F02M 37/103** (2013.01 - EP US); **F02M 37/106** (2013.01 - EP); **Y10T 137/85978** (2015.04 - EP US); **Y10T 137/86091** (2015.04 - EP US)

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)  
**WO 2011051039 A1 20110505**; CN 102597483 A 20120718; CN 102597483 B 20141029; DE 102009046112 A1 20110512; EP 2494181 A1 20120905; EP 2494181 B1 20140813; JP 2013508614 A 20130307; JP 5340489 B2 20131113; US 2012199223 A1 20120809; US 8800598 B2 20140812

DOCDB simple family (application)  
**EP 2010063232 W 20100909**; CN 101080048664 A 20100909; DE 102009046112 A 20091028; EP 10754718 A 20100909; JP 2012535707 A 20100909; US 201013498508 A 20100909