

Title (en)  
VIBRATION DAMPING UNIT

Title (de)  
SCHWINGUNGSDÄMPFEREINHEIT

Title (fr)  
UNITÉ D'AMORTISSEMENT DE VIBRATIONS

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**EP 3137787 A1 20170308 (DE)**

Application  
**EP 15712641 A 20150330**

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Abstract (en)  
[origin: WO2015165672A1] The invention relates to a vibration damping unit (1, 90), for example for a powertrain of a motor vehicle, comprising a torsional damper (3) that has at least one primary side (5) and at least one secondary side (7), between which at least one spring element (9) is coupled such that a torque is transmitted from the primary side (5) to the secondary side (7) via the at least one spring element (9). The at least one spring element (9) is arranged in a spring region (11) which comprises a lubricant during the operation of the vibration damping unit (1, 90). The vibration damping unit (1, 90) further comprises a tuned mass damper (13, 92) which comprises at least one absorber mass (15, 94) and at least one guide structure (17, 98). The guide structure (17, 98) is designed to movably guide the at least one absorber mass (15, 94) in order to damp a vibration component of a rotational movement. The vibration damping unit (1, 90) also has a sealing membrane (19, 102) which at least partly separates the spring region (11) from the at least one absorber mass (15, 94) in order to reduce a penetration of the lubricant into the at least one absorber mass (15, 94). The sealing membrane (19, 102) is supported against the guide structure (17, 98) and a cover component (21) of the vibration damping unit (1, 90).

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