Title (en)

DAMPING DEVICE FOR AN OSCILLATING COMPONENT

Title (de)

DÄMPFUNGSEINRICHTUNG FÜR EINEN OSZILLIERENDEN BAUTEIL

Title (fr)

DISPOSITIF D'AMORTISSEMENT POUR UN COMPOSANT OSCILLANT

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Application

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Abstract (en)

[origin: WO2007143770A3] The invention relates to a damping device (7, 7a) for an oscillating component, in particular a valve (1), which is preferably an injection valve (2), of an internal combustion engine, said component being able to be hydraulically actuated by means of an actuation piston (3), wherein the actuation piston (3), preferably loaded with a restoring force (F), borders a pressure chamber (5) which can be charged with pressure by means of a pressure line (6) which carries a working medium, wherein the damping device (7, 7a) is arranged in the pressure line (6). In order to extend the service life while maintaining high opening and closing speeds, it is proposed that the damping device (7, 7a) has a damping piston (9, 9a) which can be longitudinally displaced in a cylinder (8, 8a) between two end positions, wherein at least one damping channel (11, 11a) is arranged in the damping piston (9, 9a), extending essentially in the longitudinal direction of the damping piston (9, 9a), which propvides a fluid connection between two opposing face sides (12, 13) of the damping piston (9, 9a) and wherein a one-way-restrictor (14, 14a) is arranged in the damping channel (11, 11a), the choke effect of which depends on the direction of flow.

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