Hydraulic shock absorber

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Function

The hydraulic shock absorber mostly comprises of a cylinder filled with hydraulic oil and a piston, which moves with every vertical movement of the wheel. This piston glides up and down when the spring is compressed and extended during the journey.

Process - Compression

During compression (pressure stage), the oil beneath the piston must flow through a narrow valve opening. This process generates friction that converts the kinetic energy from the oil into heat, brakes the movement of the piston and therefore damps the vibration in the car body.

The compressed oil flows to a reserve pipe via valves in the base. The damping resistance varies depending on the speed at which the piston is moving, the volume of oil and the number and size of valves. In general, the faster the piston rod moves, the higher the force acting on the piston and more resistance is created.

Process - Extended spring

When the spring is extended (pull phase), the oil flows through an even narrower valve back down through the piston, achieving a stronger damping that when the spring is compressed. This is required so that the spring can relax in a controlled way and so that the wheels do not lose contact with the ground.

Bilder

Hersteller

Monroe

TRW KFZ Ausrüstung GmbH_EN

Sachs_EN

KYB UK

Herth+Buss

DRiV

Magneti Marelli_EN

GVA_EN

Quelle:
http://www.my-cardictionary.comhttps://www.my-cardictionary.com/cardictionary/electric/products/hydraulic-shock-absorber.html