The LORD magneto-rheological (MR) water-based fluid demonstration device is designed to convey a basic understanding of how LORD MR fluid works. Remove the magnet and push the plungers back and forth as illustrated in the pictures at right. The LORD MR fluid is forced back and forth through the coupling (Illustrations A and B). Bring the magnet (Caution: supplied magnet is very strong and any magnetically sensitive items, such as credit cards, should not be brought into close proximity) in contact with the flow channel that couples the plungers (Illustration C).

The flow of the LORD MR fluid is retarded or stopped. The force is proportionate to the magnetic fields. This device illustrates the basic principle of a LORD MR fluid damper. A 12-volt electromagnet may be substituted for the permanent magnet to enable a continuous regulation of force from full on-state to off-state. This particular demonstration device has an on-state to off-state ratio of approximately 10 to 1.

The device contains a water-based fluid formulation. This device is not hermetically sealed. Some evaporation of the carrier fluid is to be expected over time and use. As a result, the fluid will thicken over time. This behavior is to be expected and is not considered a material defect.
LORD provides valuable expertise in adhesives and coatings, vibration and motion control, and magnetically responsive technologies. Our people work in collaboration with our customers to help them increase the value of their products. Innovative and responsive in an ever-changing marketplace, we are focused on providing solutions for our customers worldwide . . . Ask Us How.

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