Tichánek, R.  
**The Dynamic Model of Variable Valve Lift Actuation**  
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The dynamic simulation model for variable valve lift actuation has been developed enabling the simulation of a later closing of the intake valve (EIVC). This function was implemented using two switchable cam contours where the first one enabled standard intake valve opening and the second one provided extended opening of the intake valve. The cam profiles were switched by electro-mechanical actuation incorporating the switching roller finger follower. The simulation model of the dynamics is a multi-body system combining 2D and 3D bodies. The 3D elements are used to simulate the motion transfer from the electric actuator to the follower. All other bodies of the mechanism are modeled by 2D bodies. Most bodies have been modeled as flexible, undergoing rotational or sliding motions in frictional joints where tribological properties are defined. The model was calibrated using experimental data and compared with measured data. This comparison showed good agreement.

**Vlastník**

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