ABSTRACT  In this article is presented a detailed analysis of FSI (Fuel stratified injection) gasoline direct injection system used in the Volkswagen Group cars. In the paper are also presented characteristic elements of the construction with a description of their impact on the operation such a type of engine. Next are presented results of research like engine power, torque, exhaust emissions and fuel consumption, carried out on the VW Passat 2.0 FSI and compared with test results in the indirect injection equivalent – VW Passat 2.0 MPI.

Keywords: electronic engine control, FSI, fuel direct injection, gasoline engine, homogeneous mixture, stratified mixture