Hydrogen as a Supplemental Fuel in Diesel Engines

Anil Singh Bika, Luke Franklin, David B. Kittelson

Department of Mechanical Engineering
University of Minnesota
Minneapolis, Minnesota

Poster Location: P-16
Hydrogen as a Supplemental Fuel in Diesel Engines

1. Objective
   - Evaluate engine emissions using diesel and biodiesel with small amounts of hydrogen port fuel injection in a VW TDI

2. Interesting Findings

   a) PM number and mass concentrations decrease with increasing amount of H₂ input

   b) Significant shift in NO₂:NO proportion at all loads with increasing hydrogen

*BP50 is 50 ppm sulfur diesel and B99 is 99% soy methyl ester biodiesel.