

# Hydrogen Assisted Diesel Combustion in a Common Rail Turbodiesel Engine

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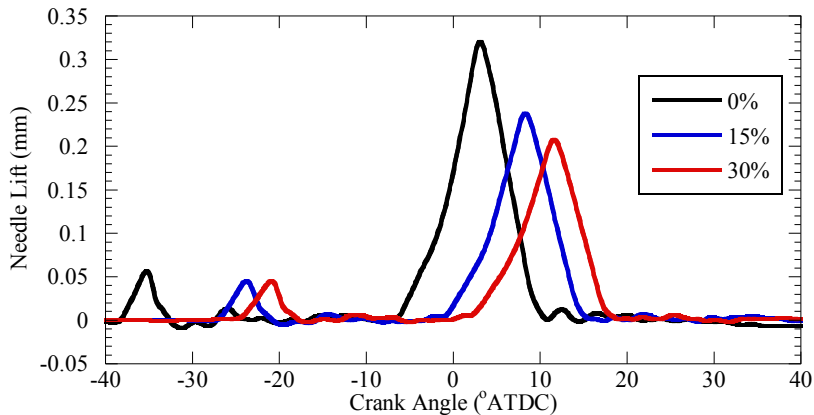
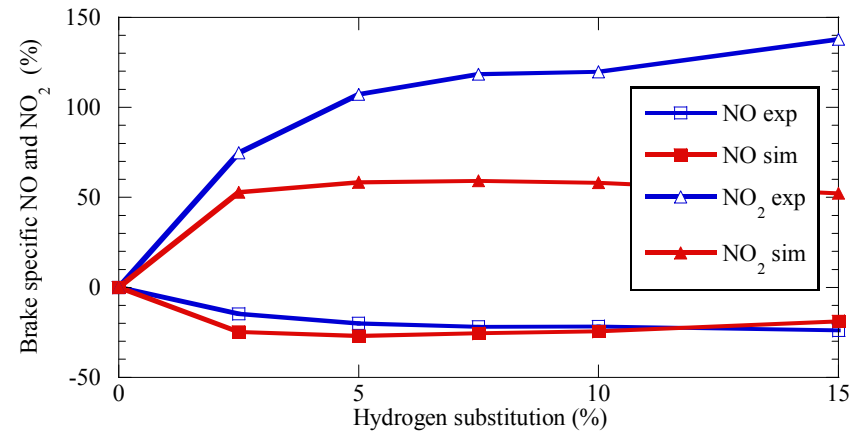
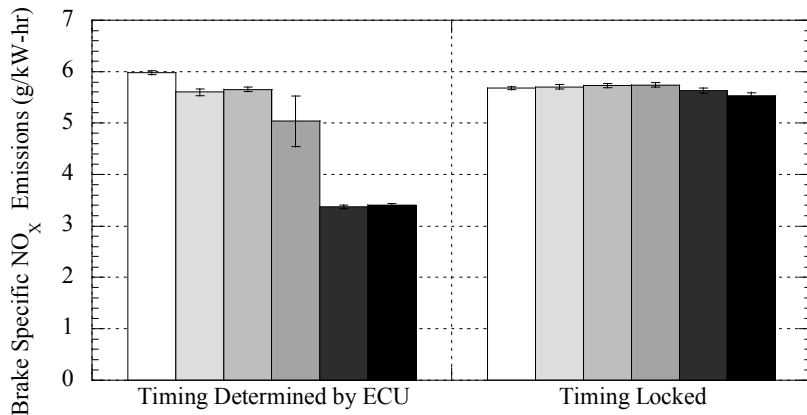
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## OBJECTIVES

- Determine the impact of hydrogen fumigation of the intake air of a diesel engine on performance and emissions
- Determine the efficacy of substituting hydrogen for diesel fuel
- Resolve some of the claims of dramatic emissions improvements that have been made in the literature and by various commercial entities
- Understand the role of hydrogen in the autoignition process

# Hydrogen Assisted Diesel Combustion

## Effects of Hydrogen Substitution on NOx Emissions



**Shift in NO / NO<sub>2</sub> ratio - Computational fluid dynamics (CFD) captured trend and reproduce the experimentally observed trends for some operating conditions.**