



## Engines Using Supercritical Syngas

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### The Invention

A first engine fuel, for example diesel fuel, is reformed (preferably via steam reforming) to produce syngas for use as a second engine fuel, with the fuels then both being used in an internal combustion engine to perform Reactivity Controlled Compression Ignition (RCCI). The syngas is produced and supplied to the engine as a supercritical fluid, thereby avoiding the pumping losses that would occur if syngas was pressurized for supply/injection. The reforming is done by a reformer which is provided as a unit with the engine (e.g., both the engine and reformer are onboard a vehicle), thereby effectively allowing use of a single fuel for RCCI engine operation.

### Additional Information

#### For More Information About the Inventors

- [Sage Kokjohn](#)

#### Tech Fields

- [Engineering : Engine technologies](#)

For current licensing status, please contact Michael Carey at [mcarey@warf.org](mailto:mcarey@warf.org) or 608-960-9867