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**EVALUATION OF SYNTHETIC DIESELS FOR US NAVY SHIPBOARD  
APPLICATIONS**

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Recently there have been heavy activities in developing alternative fuels from renewable and non-petroleum based feedstock. Progress has already been made in the conversion of agricultural oil and fat to hydrocarbon fuels, and some initial progress has been reported for waste-to-fuel efforts. The US Navy evaluated several synthetic diesels for potential shipboard propulsion applications. The synthetic diesels have been tested against the requirements of the F-76 specifications (MIL-PRF-16884L), non-specification areas of concern such as storage stability, lubricity, etc. and Petroleum Quality Information System (PQIS) data from the Defense Energy Support Center (DESC). The synthetic diesels evaluated were all hydrocarbon fuels from the various sources such as coal, soy bean oil and agriculture waste. The major processes involved for the production of fuels are Fischer-Tropsch (FT) process, hydrogenation, and thermal conversion process, etc. This study will benefit the US Navy in preparation for approval processes for alternative fuels.