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**COMMERCIAL MARINE DIESEL FUEL FOR MILITARY APPLICATIONS – RISKS
AND RECOMMENDATIONS FOR THE USE OF BIODIESEL AND ULTRA-LOW
SULFUR DIESEL FUEL IN TACTICAL EQUIPMENT**

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The military marine distillate fuel specification, MIL-DTL-16884L (F76), provides physical, chemical and performance characteristics of a diesel fuel that can successfully operate engines used in military equipment in marine environments. The US Government procures and stores F76 in deep water terminals either operated by or contracted out by the military. In cases where F76 is not available, commercial marine diesel fuel, refined and blended to commercial specifications, may be purchased from commercial vendors as a substitute. A major chemical property difference between F76 and commercial marine diesel fuel is the requirement for storage stability, essential for F76 but not measured for commercial marine diesel fuel. Commercial automotive diesel fuel could be supplied as marine diesel if the flash point is 60°C or above and meets the remaining commercial marine fuel specification requirements. The Navy could potentially buy this automotive diesel fuel when receiving propulsion fuel at commercial locations through the military bunkers program. Automotive diesel fuels could contain up to 5% B100 Biodiesel with Ultra-Low Sulfur Diesel (ULSD) used as the 95% blending component. This paper provides a literature review of Biodiesel and low sulfur fuels in marine applications and examines their effects on the F76 specification. Recommendations for future study are discussed.