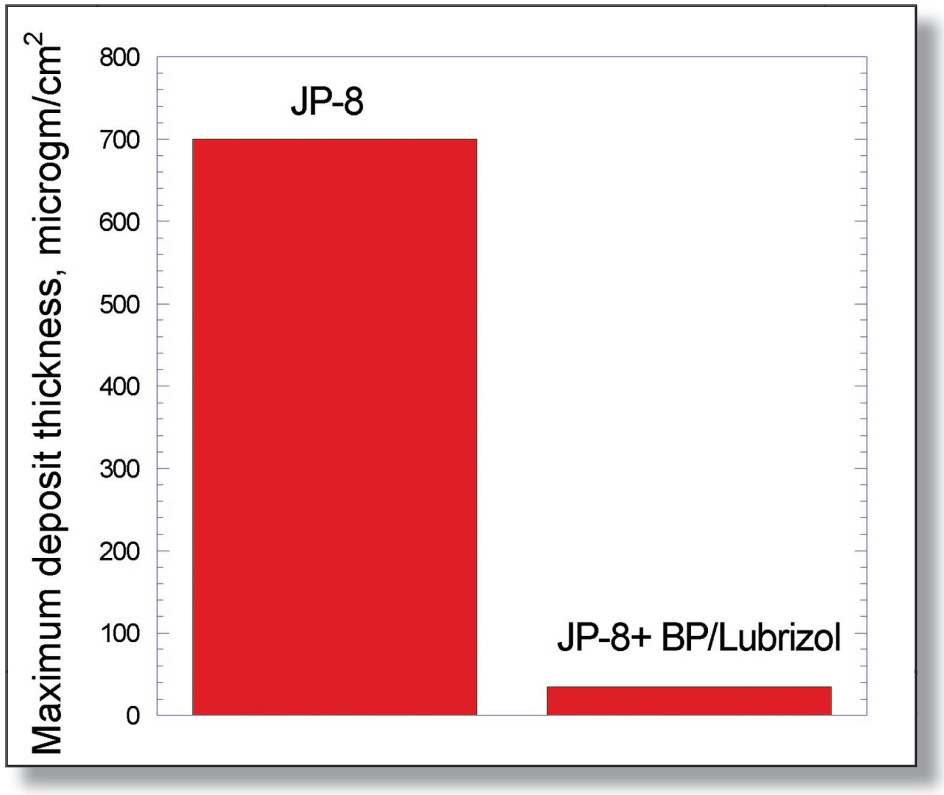
Air Force Research Laboratory|AFRL

Science and Technology for Tomorrow's Air and Space Force

Success Story

NEW +100 ADDITIVE PASSES THE TEST



A second source for a newly formulated JP-8 thermal stability fuel additive successfully completed a rigorous thermal stability test regimen laid out by the Propulsion Directorate's Fuels Branch. This is a major milestone for fielding the additive in JP-8 fuel—the primary fuel for many US military aircraft and commercial systems—and is an important step in creating competition that should reduce the cost of the additive to the Air Force and other North Atlantic Treaty Organization countries.

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Accomplishment

The directorate developed the +100 additive to minimize maintenance associated with fuel degradation in aircraft engines and fuel systems and increase the heat sink of the fuel. The BP/Lubrizol team developed the formulation and successfully completed its rigorous thermal stability test regimen.

Background

In order to gain approval, an additive must pass a series of thermal stability tests. Directorate scientists and engineers verified that the BP/Lubrizol additive successfully completed the required thermal stability testing. The additive will now go to the original equipment manufacturers for engine testing and to the Materials and Manufacturing (ML) Directorate for materials compatibility testing. The engine manufacturers and ML agreed to create a cooperative process to field the additive.

The fielding of the original +100 additive manufactured by BetzDearborn has been a major success; it significantly reduced fuel-related maintenance costs for a wide range of military and commercial systems. The Danish and Canadian military have adopted the +100 additive.

Propulsion
Emerging Technologies

Additional information

To receive more information about this or other activities in the Air Force Research Laboratory, contact TECH CONNECT, AFRL/XPTC, (800) 203-6451 and you will be directed to the appropriate laboratory expert. (03-PR-07)