Advantages of Analyzing Fire-Resistant Aviation Hydraulic Fluids with XRF

Challenge

Variations in fire-resistant aviation hydraulic fluids make them difficult to analyze. These fluids can be synthetic, vegetable oil-based, or even aqueous and can contain high levels of phosphorus. Analyzing the varying matrices with traditional methods like ICP or UVF often requires time-consuming sample preparation, which negatively impacts a lab's efficiency and bottom line.

Solution

X-ray fluorescence (XRF) analysis offers a compelling solution for the characterization of fire-resistant aviation fluids across various matrices.

Advantage

As a non-destructive analytical technique, XRF enables rapid and accurate determination of elemental composition while bypassing extensive sample preparation. This allows for timely decision-making and streamlined quality control.

Advancing Safety and Compliance: Analysis Made Easy with XRF

Fire-resistant aviation hydraulic liquids play a crucial role in maintaining the safety and reliability of aircraft hydraulic systems. These fluids are specially formulated to withstand high temperatures and prevent ignition or combustion in the event of a fire. Accurate analysis of these liquids is vital to ensure compliance with stringent regulatory standards and to guarantee optimal performance in critical aviation applications.

Unlike ICP, UVF, or alternative analytical techniques that may involve hazardous chemicals, XRF analysis is a safe and user-friendly method. It eliminates the risk of exposure to harmful substances and simplifies the analysis process, making it accessible to operators with minimal training.

XRF analysis covers a broad range of elements, including both major and trace elements, enabling a comprehensive understanding of the fluid's elemental composition. This is essential for identifying impurities, monitoring additives, and ensuring the fluid's performance meets specifications.

By using XRF analysis for testing fire-resistant aviation hydraulic liquids, manufacturers, QC laboratories, regulatory bodies, and operators can enhance safety, ensure compliance with standards, and maintain the performance and reliability of hydraulic systems in aviation applications.

Contact us for a solution that suits your testing needs and experience the power of our advanced XRF systems.

Consult an Expert

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