

GREAT NEW GREASE, BUT CAN I USE IT?

GUIDELINES FOR QUALIFICATION OF NEW FLUID LUBRICANTS

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ABSTRACT

Space mechanism engineers often rely on oils and greases selected from a limited set of very long-established products. Today's evolving technical and environmental demands are driving interest in alternatives, but concerns about heritage, risk, and insufficient product data may hinder both adoption and approval of new oils and greases for space use. This paper presents updated, industry-reviewed, and now formally adopted guidelines that define ESA's recommendations on the minimum verification and validation test data required to justify the adoption of new fluid lubricants. The guidelines remove doubt concerning the prerequisites for new lubricant implementation in mechanism qualification programmes overseen by ESA.

Link to full paper will be become available during ESMATS 2025....