
**Lubricants, industrial oils and
related products (Class L) — Family D
(Compressors) —**

Part 2:

**Specifications of categories DAG, DAH
and DAJ (Lubricants for flooded rotary
air compressors)**

*Lubrifiants, huiles industrielles et produits connexes (Classe L) —
Famille D (Compresseurs) —*

*Partie 2: Spécifications des catégories DAG, DAI et DAJ (Lubrifiants
pour compresseurs d'air rotatifs à injection d'huile)*

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Foreword

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A list of all parts in the ISO 6521 series can be found on the ISO website.

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Introduction

Lubricants for compressors are used in various compressor designs. The lubricants for these applications can vary in composition; from straight mineral oils to more complex blends, based on mineral oils, synthetic oils (e.g. poly α -olefins, esters, poly-glycols), with appropriate antioxidants, rust and corrosion inhibitors, extreme-pressure and anti-wear additives, possibly associated with detergent and dispersing agents.

In flooded rotary air compressors, the compressor oil is injected with the air at the inlet port. The oil serves as a coolant and limits the air temperature increase due to compression, allowing higher compression rates in one stage. The oil is submitted to high oxidative stresses; the oil/air mixture is submitted to temperatures up to 100 °C and even more. It is important to limit oil degradation.

In addition, oil has to be separated from the air at the exit of the compressor; this separation is achieved using coalescing filters. Oil oxidation has the effect of disturbing the functioning of these filters, leading to pressure drop increase and loss of the separating efficiency and, as a consequence, the oil consumption increase. Oil oxidation stability is therefore of utmost importance.

Presently, there is no method making consensus to assess the oxidation stability of flooded rotary compressor oils (see [Annex B](#)). Waiting for the development of a sound and accepted method, a technical specification is proposed.

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