

#### **Rolls-Royce Solutions GmbH**

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Mr.

Larry Rumbol / Alan Baker Spectro | Jet-Care Hatchwood Place, Farnham Road Odiham, Hampshire RG29 1AB United Kingdom

Tel. No.: +49 7541 50661 Date: 23 April 2024 Contact: Dr. Julian Bär Ref.: TQMC

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### Qualification and Approval of External Laboratories for Rolls-Royce Solutions GmbH

Dear Sir or Madam,

based on the signed request for approval, you provided on 23 January 2024, the Laboratories

Palace International Ltd trading as Spectro | Jet-Care in Odiham, UK Spectro Oil AG in Kaiseraugst, Switzerland Jet-Care International Inc. in Cedar Knolls, New Jersey, USA

are herewith approved to perform the following Fuels and Lubricants Quality Analysis Services via the delivery standard MTL 5120, Version 2022:

Oil Analysis Level 3 – Root-Cause Analysis Level

**Level 1 – Routine Analysis Level Coolant Analysis** 

The approval remains valid until it is withdrawn.

Please note that any modification in the analysis methods will invalidate the accreditation in accordance with our terms of approval (MTL 5120).

Yours sincerely

Rolls-Royce Solutions GmbH

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i.A. Bär

Definition of Analysis Levels Oil, Diesel Fuel, Coolant Attachment 1, 2 Signed request for approval by Spectro Attachment 3

Board of Management: Dr. Jörg Stratmann (President and CEO), Dr. Thelse Godewerth, Dr. Andreas Strecker. Chairwoman of the Supervisory Board: Jasmin Staiblin. Domicile: Friedrichshafen. Register Court: Ulm, Nr. I No. HRB 630 227. Bank Details: Deutsche Bank AG Stuttgart: (all currencies) SWIFT/BIC DEUTDESSXXX, IBAN DE35 6007 0070 0162 9039 00. Commerzbank AG Friedrichshafen: (EUR) SWIFT/BIC COBADEFF651, IBAN DE68 6514 0072 0170 0038 00. V.A.T. No. DE 811121844





### <u>Attachment 1 – Definition of Oil Analysis Levels</u>

### Analysis Level 1 - Routine Analysis Level

Viscosity at 40°C Viscosity at 100°C Flashpoint COC or PM Water content Element quantification via ICP/OES IR-identification with fresh reference

### Analysis Level 2 – Detailed Analysis Level

All analysis methods of Analysis Level 1 Soot content Oxidation Nitration Ethylene Glycol

### Analysis Level 3 – Root-Cause Analysis Level

All analysis methods of Analysis Level 1 All analysis methods of Analysis Level 2 Viscosity index VI Total base number Total acid number i-pH value





## <u>Attachment 2 – Definition of Coolant Analysis Level</u>

# **Analysis Level 1 - Routine Analysis Level**

Appearance

Precipitation

Odour

Density

Refractive Index

Brix

**Coolant Concentration** 

Bacteria

Funghi/yeasts

pH-value

Conductivity

Alkalinity

Anion quantification via IC

Sum of Anions

Sum of Alkaline earths

Element quantification via ICP/OES

