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Airworthiness Certification Plan (ACP)
Aero Lubricants/Oils/ Greases

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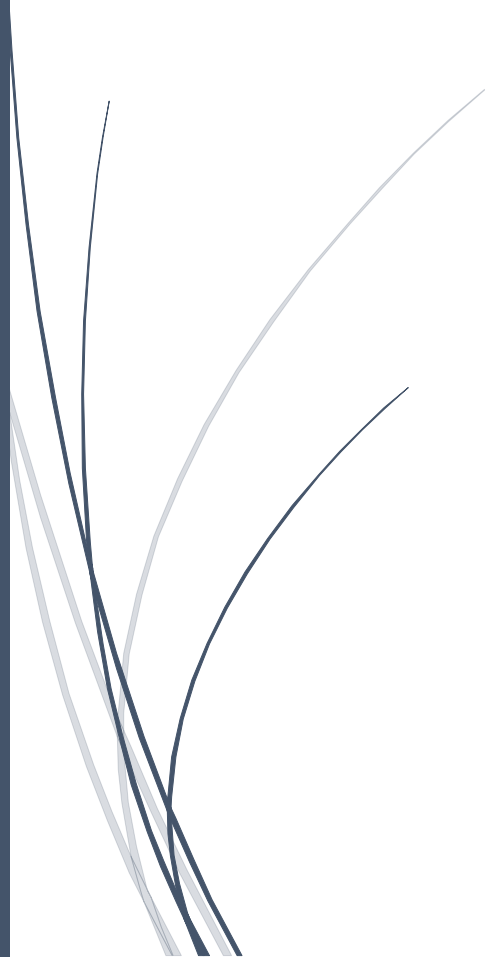

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Title:	**Project/System :**
Airworthiness Certification Plan (ACP) **Aero Lubricants/Oils/ Greases**	< Project/System Name>
	LRU/System Part No.
	<No.>
	Critical Level
	<A/B/C/D/E>

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<Design Firm Name & Address>

Airworthiness Certification Plan (ACP)
Aero Lubricants/Oils/ Greases

<write the product nomenclature > developed and manufactured by < company name > to the specification ..... for airborne application

The ACP for lubricating oil/grease/ Oil for other airborne use application will involve a staircase approach, which will be carried out in the following steps. The D&D / MSME agency will involve oversee and manage the entire process.

A. Step 1: Document requirements:

- Description of the product where the material will be used
- Indigenous requirement(s) projected by user service.
- Duly filled Input data sheet Form 21F
- System Safety Analysis as per IMAP 2023
- Applicable international specification / QTS

B. Step 2:

The LTCC convened with all stakeholders to discuss the Certification basis, ACP, QTS, provisional PCD and clearance for non-critical items

For Critical airborne FOL items,

C. Step 3: Provisional approval of Process Control Document by CEMILAC

D. Step 4: Process verification and witnessing of Qualification testing to the applicable specification / QTS by TAA.

The important aspects/conditions of the product with respect to certification and usage to be documented in this ACP are listed in Annexure-1 for compliance

Failure Criteria:

In the event of one or more batches failing during testing, the LTCC meeting will be reconvened to determine the appropriate course of action for way forward.

E. Step 5: Process and test compliance report duly coordinated by DGAQA / Concerned QA of Indian Armed forces.

Upon satisfactory compliance to PCD and Specification/QTS provisional clearance will be issued by RCMA / CEMILAC.

F. Step 6: Functional Evaluation (Rig/ground Run (and/or) Flight trials):

On issue of the provisional clearance based on step 5, the relevant rig test/ground run tests (and/or) flight trials shall be done with this indigenous lube / Grease / Oil for other airborne use in consultation /co-ordination with the platform RCMA/CEMILAC and the user service. The methodology, procedure, number of hours of Rig/ ground level testing and / or flight trials shall be decided by the user in consultation with platform RCMA.

The need for conduct of rig test / ground run tests (and/or) flight trials shall be decided by the user in co-ordination with user RCMA.

G. Step 7:

The necessary documents, including the type record as per IMAP-2023 accompanied by the necessary documents, including the type record as per IMAP-2023 and satisfactory tests/trials, as well as in-flight performance feedback from end users, the Letter of Approval (LoA) to the specification/QTS will be issued by RCMA /CEMILAC for the product.

H. Requalification:

CEMILAC reserves the right to require requalification of the product in the event of any modifications to the raw material, additive, source, manufacturing technology, or manufacturing location. The completion of this qualification will be determined at the discretion of CEMILAC.

I. Step 8:

Before the usage of the Lubes/ Grease/ Oil for other airborne use in any new airborne platform, **Clearance for Service Use (CSU)** to be issued by the relevant platform RCMA.

J. Step 9:

The assessment of the **service life of oil/lube/grease** through condition monitoring of oils, periodic oil analysis, and RULER test during usage should be conducted by user services in collaboration with platform RCMA.

Annexure-1

The important aspects/conditions of the product with respect to certification and usage

1. Filling Procedure

Product can be filled in Metal /HDPE/ or -------- containers as per technical requirements and customer needs. Containers shall be examined for rust, water, external impurities, and markings. All the containers are to be routed through the washing unit before filling. Only dry and clean containers with proper markings as indicated in para 4. shall be used for product filling.

2. Sampling Procedure for final testing

Sampling for physico-chemical properties testing to be done as per specification /QTS. Composite sample shall be tested for final quality check in accordance with the Governing Specification.

2.1. Re-Sampling and Testing

- If any of test sample first selected FAIL to pass the mentioned test, two further samples from the same batch shall be selected for testing.
- If both these additional sample pass, the batch represented by the samples shall be considered as PASS.
- If any of these additional test samples FAIL, this shall be cause of rejection of the batches. Retesting shall be done with the knowledge of the Airworthiness agency/QA Agency.

3. Finished Product Analysis

The finished product is tested as per the governing specification/ QTS. The equivalent test methods (ASTM/IP etc….) in place of GOST test methods is listed below:

Characteristics	**Units**	**Limits**	**GOST Methods as per specification**	Equivalent ASTM/IP etc. methods
Characteristics 1	----			
Characteristics 2	----			
Characteristics 3	----			
Etc…				

4. Labelling of Containers

The following marking shall appear on each filled container:

Product Name :

Specification /QTS :

Batch /Lot No :

Date of Manufacturing :

Date of Re-inspection :

Total Shelf Life :

Order No :

Consignee :

Name and address of the manufacturer

Net Content :

5. Packaging and storage conditions

Oil –(Quantity) Lit can be filled in Metal or HDPE Containers of appropriate size as per customer requirements. Containers should be clean, dry, and free from manufacturing defects.

The product should be stored in original sealed containers in a suitable warehouse which is clean, dry, well-lit, and not subject to wide temperature changes. Necessary care should be taken to ensure proper ventilation in the warehouse and protection of the product from water seepage, direct sunlight and dirt. Storage of the product at below---- and relative humidity of less than----- is recommended.

6. 1 Shelf life and retest criteria

The initial shelf life of the product is …. months from the date of manufacture as stipulated by the manufacturer. The total shelf life of the product shall be indicated by the manufacturer. Control sample of qualification batch of the product shall be stored at prevailing ambient condition and proved for storage stability by conducting tests as per specification/QTS for periodicity of 12, 24, 36 months or till the total shelf life declared by the manufacturer duly witnessed and coordinated by DGAQA.

6.2 MSDS: MSDS shall be prepared and submitted to TAA and User

6.3 Service Life: Note: Recommended Service life of the product in actual end use application to be mentioned by the manufacturer along with supporting technical documents

7. Records

7.1. Maintenance of Facilities

- Company shall keep records demonstrating the facilities used to produce, control, measure and test the respective product during approval.
- The facilities / testing equipment to be calibrated and the calibration record to be produced on demand by Company.

7.2. Process Sheet

Company shall prepare, document and maintain the process sheets.

7.3. Reports

Formulation and Manufacturing Advice

Blending Log Sheet

Analysis Certificate

8. Certification

8.1. Issue of Provisional Clearance

Application by main contractor for provisional clearance along with Process compliance report (PCR) to process control document (PCD) & 3 batches test compliance report (TCR) to specification; both reports are to be duly witnessed and coordinated by DGAQA. Provisional clearance is valid for 2 years & may be extended for another 2 years if main contractor requests. Failing to convert to LOA (Letter of Approval) within 4 years will lead to Revoking the provisional clearance as per procedure stipulated by CEMILAC.

8.2. Issue of LOA (Letter of Approval)

Application by main contractor for LOA (Letter of Approval) with Form 21G along with type record, performance feedback report of the product (or) component made out of the subject product (for rubber compound) duly signed by main contractor / user and the DGAQA / competent QA authorities and batch test reports. LOA is valid for 10 years.

9. Traceability

All the batches produced at <Company name & address> for Defence supplies shall be traceable and available for verification by relevant authorities as and when required.

10. Rejection

Material not conforming to the specification / QTS/ ACP or to unauthorised modifications in process control documents will be subject to rejection.

11. OTHER RELEVANT DETAILS AS DECIDED BY TAA