Engine Critical Parts Life Limit Exceedance Prevention on ARH Tiger

2018 ADF Propulsion Systems Symposium
Usage Monitoring System Regulations

DASR 21.A.44 Obligations of the holder
DASR M.A.301 Continuing airworthiness tasks
DASR M.A.302 Aircraft Maintenance Programme (AMP)
DASR M.A.305 Aircraft continuing airworthiness record system
DASR M.A.901 Military Airworthiness Review
eADRM Sect 3 Chap 13 ‘Propulsion Systems’ Design Requirement (Essential) - Usage Monitoring
Engine Life Monitored, Life Limited and Safety Critical Parts

- Compressor Impellers
- Power Turbine Discs
- HP Turbine Disc and Cover Plate
- HP and PT1 Turbine Blades
LUM Data Process Cycle
Predictive LUM Calculation

Remaining Life Cycles after next S11 inspection =

Remaining Life Cycles \( \text{(Released Life Limit Cycles – Current Consumed Life Cycles)} \) –

Cycles per hour till the next S11 \( \left( \frac{\text{Cycles per Flight}}{\text{Run Time per Flight}} \times 25 \text{AFHR} \right) \)
MMS-Ops Warnings

**Aircraft Status CAUTION**

Engine Life Usage Monitoring (LUM) Data indicates an engine will exceed life cycles on at least one component before the next 511 inspection.

Continued flying of this aircraft is **NOT RECOMMENDED**

Helicopter: A30-021
Position: Engine1
Engine S/N: 5035
Gas Gen. S/N: 25006
Power Turbine S/N: 35035
Component indicator that will exceed max life limit Cycles before next 511 [LA01]

To Proceed press 'Acknowledge'

Note: By pressing 'Acknowledge' you are confirming this warning has been viewed, understood and escalated as required. User identity for tracking acknowledgement will be recorded against this warning.

Notes:

Acknowledged

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**Aircraft Status WARNING**

Engine Life Usage Monitoring (LUM) Data indicates an engine has at least one component that has exceeded life cycles.

Continued flying of this aircraft is **NOT PERMITTED**

Helicopter: A30-021
Position: Engine1
Engine S/N: 5035
Gas Gen. S/N: 25006
Power Turbine S/N: 35035
Component indicator that exceeded max Life Limit Cycles [LA01]

To Proceed press 'Acknowledge'

Note: By pressing 'Acknowledge' you are confirming this warning has been viewed, understood and escalated as required. User identity for tracking acknowledgement will be recorded against this warning.

Notes:

Acknowledged

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**Create Mission & DID**

Enter the following details then select Create Mission to proceed to the DID screen.

**Mandatory Details:**
- Mission Name
- Mission Start Time
- Aircraft
- Mission Type

**Optional Details:**
- AOP Number
- Pilot
- Battle Captain
- Mission Start Base
- Mission End Base
- Mission Description

[Create Mission and DID]

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**AIRBUS**
Thank you for listening

The MTR390 engine continues to power one of the most capable attack helicopters in its class.