EHA Position Paper

Proposal – NVIS Line Check Element in Simulator

Executive Summary

This position paper proposes that the Night Vision Imaging System (NVIS) element of helicopter line checks be conducted in a suitably qualified Full Flight Simulator (FFS) with NVIS capability.

This aligns with EASA Part-CAT, SPA.NVIS, and HEMS requirements, ensuring compliance while improving safety, training quality, and operational efficiency. The aircraft line check remains mandatory under ORO.FC.230, but NVIS-specific elements can be assessed in a Line-Oriented Evaluation (LOE) in an NVIS-capable simulator.

1. Regulatory Framework

The following EASA regulatory elements underpin the proposal:

• ORO.FC.230 – Recurrent training and checking requires an aircraft line check every 12 months.
• SPA.NVIS.130 – NVIS training and checking may be completed in an approved FFS including NVIS elements.
• AMC1 SPA.NVIS.130 – NVIS OPC and line check validity is 12 months; checks may be combined.
• AMC1 SPA.HEMS.130 – Permits splitting the HEMS line check between FSTD and ground/base elements when justified.

2. Compliance and Implementation Strategy

1. Maintain the annual aircraft line check per ORO.FC.230.
2. Conduct NVIS-specific risk scenarios in a qualified NVIS FSTD through an LOE combined with the Operator Proficiency Check (OPC).
3. For HEMS, apply AMC1 SPA.HEMS.130 to split the line check between simulator and ground/base segments.
4. Align validity and scheduling across OPC, NVIS, and line checks to a 12-month cycle.
5. Update the Operations Manual (OM-D) to include NVIS LOE syllabus and simulator standards.

3. Simulator Qualification and Capability

The FSTD must comply with CS-FSTD(H) standards and demonstrate specific NVIS capability.

This includes NVIS-compatible cockpit lighting, IR-capable visual systems, and NVG interaction features. A Level C or D FFS is recommended, and the qualification certificate must explicitly state NVIS capability.

4. NVIS Line-Oriented Evaluation (LOE) Content

A representative NVIS LOE should evaluate:

• Pre-flight planning, NVG setup, and briefings.
• NVIS departures, transits, and landings under night conditions.
• Abnormal and emergency scenarios: NVG failure, inadvertent IMC, DVE, black-hole approaches.
• CRM and Threat-Error Management (TEM) under NVIS operations.
• Debriefing using recorded simulator data and video playback.

5. Examiner and Crew Requirements

NVIS LOEs must be conducted by NVIS-qualified TRE/TRIs trained in CRM assessment. HEMS crews, including Technical Crew Members (TCM), should be included where applicable. The LOE may be combined with OPC to optimise scheduling.

6. Safety and Operational Advantages

• Shifts hazardous NVIS tasks (e.g., brownout, wire avoidance) to a controlled simulator setting.
• Enables consistent evaluation of NVIS competencies and CRM.
• Reduces operational disruption during line checks.
• Enhances data capture and debriefing for safety improvement.

7. Implementation Plan

1. Update OM-D to include the NVIS LOE syllabus and list approved FSTDs.
2. Cross-reference NVIS validity and procedures in OM-A/B/C.
3. Train TRE/TRIs for NVIS-specific assessments.
4. Submit updated OM-D to the competent authority for acceptance.
5. Review annually to incorporate feedback and simulator performance data.

8. Conclusion

The EHA supports the integration of NVIS line-check elements into qualified simulators as an alternative means of compliance to improve safety and training efficiency.

This approach remains fully compliant with EASA Part-CAT and SPA.NVIS requirements while aligning with HEMS operational needs.