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# INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (ICA)

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|---|---|
| ID: | **AEF-0819-ICA-0007** |
| Issue: | **03** |
| Date: | **04-07-2025** |
| Company data: | **AeroFEM GmbH**<br>**Aumühlestrasse 10**<br>**CH-6373 Ennetbürgen**<br>**Switzerland** |
| DOA Reference: | **EASA.21J.644** |
| Project title: | **HEC_5_H125** |
| STC ID: | **10085893** |
| STC parts S/N: | **All** |
| Aircraft manufacturer: | **AIRBUS Helicopters** |
| Aircraft type: | **AS350 B3 (H125), all variants** |
| S/N: | **All** |

# RECORD OF REVISIONS

| Issue No. | Date | Description of Change |
|---|---|---|
| 01 | 04-11-2024 | Initial Issue |
| 02 | 28-05-2025 | Inclusion of the life time limits for the resuce hook HUB 7/8-8 as stated in the A&H document HEC_5_H125_PDP_A (editorial correction only). |
| 03 | 04-07-2025 | Inclusion of additional end fitting variants and editorial corrections. |
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# 1 References

| | | |
|---|---|---|
| Ref [1] | HEC_5_H125 installation & maintenance instructions AirWorks & Heliseilerei GmbH (A&H GmbH) | AWA_HEC_5_H125, latest issue |
| Ref [2] | HUB 7/8-8 installation & maintenance instructions AirWorks & Heliseilerei GmbH (A&H GmbH) | AWA_HEC_6_HUB, latest issue |
| Ref [3] | Flight manual supplement HEC_5_H125 | AEF-0819-FMS-0005, latest issue |

# 2 Abbreviations

| Abbreviation | Description |
|---|---|
| A&H | Airwork & Heliseilerei GmbH |
| AEF | AeroFEM GmbH |
| AFM | Airplane flight manual |
| FMS | Flight manual supplement |
| HEC | Human external cargo |
| ICA | Instructions for continued airworthiness |
| RFM | Rotorcraft flight manual |
| SEP | Sharp edge protection |

**Table 1: Abbreviations**

# 3 Scope

These Instructions for Continued Airworthiness (ICA) specify maintenance/service information, instructions, airworthiness limitations and other relevant information under the following requirements:

- ❑ CS 27.1529, Amdt. 10 including the requirements per Appendix A

# 4 Introduction

This ICA is a supplement to the rotorcraft instructions for continued airworthiness.

The information given herein supplements the rotorcraft ICA only in those areas where the rotorcraft has been modified or additional equipment has been installed by the implementation of the EASA supplemental type certificate STC 10085893.

For maintenance/service information, instructions, airworthiness limitations and other relevant information not given in this ICA the rotorcraft ICA shall be consulted.

The technical content of this ICA is approved under the authority of the DOA Ref. EASA.21J.644.

# 5 Description of the aircraft installation / modification

| Aircraft Installation / Modification | Description | Aircraft Location |
|---|---|---|
| Human external cargo (HEC) fixed rope system HEC_5_H125 | Fixed rope system for human external cargo (HEC) operation. The rope system is attached to the rotorcraft using the dual cargo hook system composed from the primary hook on the cargo swing (supplier: AIRBUS Helicopters or ONBOARD Systems) and the HEC dual cargo hook system B1310 (supplier: BOOST Systems) See the flight manual supplement Ref [3] for further details. | Attached to the dual cargo hook system located on the belly of the rotorcraft. |

# 6 Installation, control and operating information

The installation, control and operating instructions for the HEC_5_H125 system are published in its full content in the A&H document AWA_HEC_5_H125, Ref [1].

Supplementary installation, control and operating instructions for the rescue hook HUB 7/8-8 are published in the A&H document AWA_HEC_6_HUB, Ref [2].

# 7 Servicing information

The servicing instructions for the HEC_5_H125 system are published in its full content in the A&H document AWA_HEC_5_H125, Ref [1].

Supplementary servicing instructions for the rescue hook HUB 7/8-8 are published in the A&H document AWA_HEC_6_HUB, Ref [2].

# 8 Maintenance Instructions

## 8.1 Terms and definitions

The following terms and definitions are used for maintenance activities:

| Term | Definition |
|---|---|
| Check | Compare a measurement of time, pressure, temperature, resistance, dimension or other quantity with a specific figure for that measurement. |
| Examine | Look at the condition of an item for the following: Chafing, contamination, corrosion, cracks, deterioration, discoloration due to overheating, distortion, faulty or broken locking devices, fractures, fraying, insecurity of attachment, loose clips or fasteners, loose or missing rivets, leaks, scoring, wear. |
| Remove | Disconnect a component or system and move it from its correct position. |
| Install | Put a component in the correct position and attach it correctly. |
| Replace | Remove an item and install a new or serviceable item in its place. |
| Functional Test | Use special equipment to make sure that a component or system operates correctly. |
| Operational Test | Show by normal operation and with no special equipment or measurements, that a system or component operates correctly. |
| Lubricate | Apply lubricant |
| Fill | Fill to the correct level, pressure or quantity. This also includes where necessary the following: Remove caps/covers, examine caps/covers/gaskets/seals, install caps/covers, install locking devices if appropriate. |

## 8.2 Inspection & maintenance schedules

The inspection & maintenance schedules for the HEC_5_H125 system are published in its full content in the A&H document AWA_HEC_5_H125, Ref [1], chapter 9.

Supplementary inspection & maintenance schedules for the rescue hook HUB 7/8-8 are published in the A&H document AWA_HEC_6_HUB, Ref [2], chapter 8.

## 8.3 Trouble-shooting information

The troubleshooting information and related check/maintenance actions for the HEC_5_H125 system are published in its full content in the A&H document AWA_HEC_5_H125, Ref [1].

The troubleshooting information and related check/maintenance actions for the rescue hook HUB 7/8-8 are published in the A&H document AWA_HEC_6_HUB, Ref [2].

## 8.4 Removal and replacement information

The A&H document AWA_HEC_5_H125, Ref [1] contains all information related to the removal/replacement of the HEC_5_H125 equipment. Applicable limitations for the equipment are stated in chapter 9 of this document.

The A&H document AWA_HEC_6_HUB, Ref [2] contains supplementary information related to the removal/replacement of the rescue hook HUB 7/8-8. Applicable limitations for the rescue hook HUB 7/8-8 are stated in chapter 8 of this document.

## 8.5 Diagrams/illustrations

See AWA_HEC_5_H125, Ref [1] and AWA_HEC_6_HUB, Ref [2].

## 8.6 Special inspection requirements

Certain events in operation require unscheduled inspections. See AWA_HEC_5_H125, Ref [1], chapter 9.3 and AWA_HEC_6_HUB, Ref [2], chapter 8.3 for a description of such events and the required inspection/maintenance actions.

## 8.7 Protective treatments

The A&H documents AWA_HEC_5_H125, Ref [1], chapter 9.6 and AWA_HEC_6_HUB, Ref [2], chapter 8.6 contain all information related to the correct care & storage of the equipment.

# 9 Airworthiness limitations

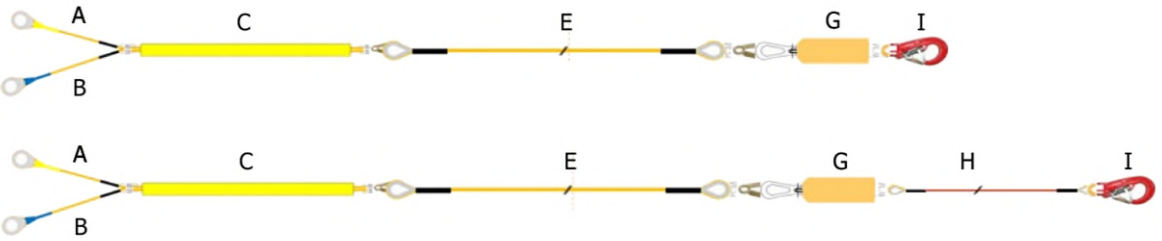
## 9.1 Operational limitations

The HEC_5_H125 fixed rope system must be exclusively used for human external cargo (HEC) operation within the limits as stated in the flight manual supplement Ref [3].

Any other operation is strictly prohibited.

## 9.2 Equipment lifetime/cycle & event driven limitations

Following limitations apply to the HEC_5_H125 fixed rope system.




| Item | P/N | | Length | Mass |
|---|---|---|---|---|
| Double cargo hook y-rope (A/B/C) | HEC_Y_5_H125 | | 2.2m (7.2ft) | 2.8kg (6.0lbs) |
| Fixed rope (E)<br>(3 lengths available) | HEC_BT_6_5<br>HEC_BT_6_10<br>HEC_BT_6_50 | | 5.0m (16.4ft)<br>10.0m (32.8ft)<br>50.0m (164.0ft) | 1.7kg (4.0lbs)<br>2.5kg (5.5lbs)<br>8.8kg (19.4lbs) |
| Load element without SEP steel rope (G/I) and 3 end fitting variants | HEC_SLE_6l-HUB<br>HEC_SLE_6l-AW<br>HEC_SLE_6l-CAR | (rescue hook)<br>(oblong ring)<br>(carabiner) | 0.5m (1.8ft)<br>0.5m (1.8ft)<br>0.5m (1.8ft) | 11.2kg (24.7lbs)<br>10.8kg (23.7lbs)<br>10.7kg (23.5lbs) |
| Load element with SEP steel rope (G/H/I) and 3 end fitting variants (2 length available) | HEC_SLE_6l-2-HUB<br>HEC_SLE_6l-5-HUB<br>HEC_SLE_6l-2-AW<br>HEC_SLE_6l-5-AW<br>HEC_SLE_6l-2-CAR<br>HEC_SLE_6l-5-CAR | (rescue hook)<br>(rescue hook)<br>(oblong ring)<br>(oblong ring)<br>(carabiner)<br>(carabiner) | 2.6m (8.5ft)<br>5.6m (18.4ft)<br>2.6m (8.5ft)<br>5.6m (18.4ft)<br>2.6m (8.5ft)<br>5.6m (18.4ft) | 12.4kg (27.3lbs)<br>13.5kg (29.8lbs)<br>12.0kg (26.5lbs)<br>13.2kg (29.1lbs)<br>11.9kg (26.2lbs)<br>13.0kg (28.7lbs) |

**Figure 1: HEC_5_H125 rope system - parts identification**

**Lifetime limitations**

| | |
|---|---|
| Textile ropes (items A,B,C,E) | 5 years |
| Load element with SEP steel rope (items G,H) | 10 years |
| Rescue hook HUB 7/8-8 (item I) or other approved end fitting variant | 10 years |

After expiration of the lifetime, the parts must discarded and replaced.

**Flight cycle limitations**

The damper rope (polyamide rope, item C) has a limitation of 300 flight cycles. After reaching the cycle limitation, the damper rope must be discarded & replaced.

The flight cycles must be recorded by the operator using the form as attached to this ICA in chapter 11 (Appendix A).

**Event driven limitations**

The damper rope (polyamide rope) must be discarded & replaced in case of the following occurrences:

- ❑ After an inadvertent release of the primary (cargo) or secondary (HEC) hook with attached external load of more than 300kg. In this case the damper rope experiences shock loads due to the free fall of the external load until it is restrained by the second line remaining attached to the helicopter.
- ❑ After an intentional complete release of the external cargo in an emergency situation. In this case the damper rope experiences shock loads due to the free fall of the external load after the initial release of the primary (cargo) hook and the subsequent release of the secondary (HEC) hook (or vice-versa). Furthermore, the complete system may be dropped to ground from an altitude leading to damages on the parts.
- ❑ After a lift-up of the external load with a slack rope with an attached HEC load of more than 300kg producing a clearly noticeable shock.

# 10 Reporting of failures, malfunctions and/or defects

It is in the rotorcraft operators/owner's responsibility to notify AeroFEM if any failure, malfunction and/or defect has been occurred/detected.

Reporting/notification shall be done in writing (E-mail, Fax) to AeroFEM immediately after the problem has been detected using the "Failure-Malfunction & Defects Reporting (FMD)" form "FO 8.3.015".

Form available at: https://www.aerofem.com/de/training-support/technical-publications (DE)
https://www.aerofem.com/en/training-support/technical-publications (EN)

The completed form shall be sent to: occurrence@aerofem.com

For the full access to all documentation related to the HEC_5_H125 product, the operator needs to create a **user login**.

The login can be requested at: https://www.aerofem.com/de/login (DE)
https://www.aerofem.com/en/login (EN)

# 11 Appendix A: Flight cycle log form

## HEC_5_H125 - Flight cycle log for the y-rope

| Part ID | Part name | Serial Number | Manufacturing Date |
|---|---|---|---|
| HEC_Y_5_H125 | y-rope | | |

| Flight Cycle | Date | Observation / NOTE | Signature |
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## HEC_5_H125 - Flight cycle log for the y-rope

| Part ID | Part name | Serial Number | Manufacturing Date |
|---|---|---|---|
| HEC_Y_5_H125 | y-rope | | |

| Flight Cycle | Date | Observation / NOTE | Signature |
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## HEC_5_H125 - Flight cycle log for the y-rope

| Part ID | Part name | Serial Number | Manufacturing Date |
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| HEC_Y_5_H125 | y-rope | | |

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