| **PROJECT TYPE** | | | | **APPLICABILITY:**<br>• **A109S**<br>• **AW109SP** |
|---|---|---|---|---|
| **STC** | ☒ | **Minor Change** | ❑ | |

Helicopter Emergency Egress Light (HEEL) System has been designed to comply with over-water activity requirements as automatic system which became active in case of helicopter ditching due to any emergency condition.

In case of helicopter ditching, with water penetrating into the pilots and/or passengers cabins, the emergency exits are automatically illuminated, as shown in figure 1, in order to help the occupants to easily recognize the apertures used as emergencies exits, and their actuation means, with insufficient internal lighting conditions created by water submersion condition.

No pilot actions are required to control or activate this emergency system.

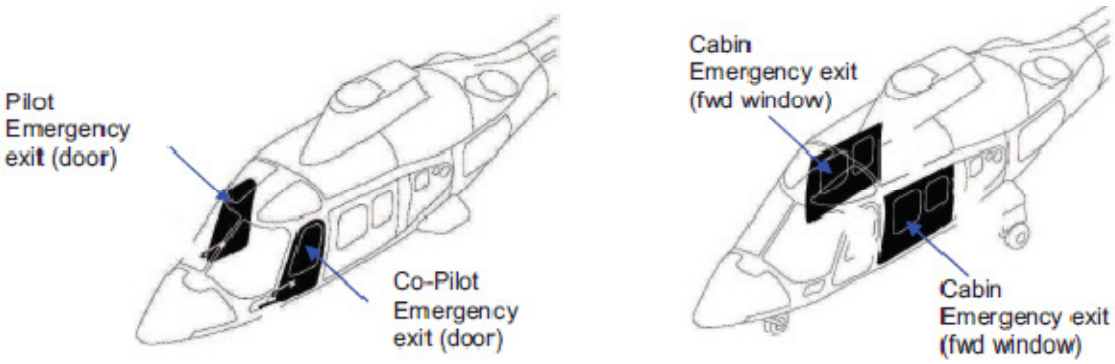


Fig. 1 – Helicopter emergency exits

The helicopter is provided with four emergency exits:

1. Pilot exit door;
2. Co-pilot exit door;
3. Forward window into left cabin door;
4. Forward window into the right cabin door

Each of the HEEL lights group is automatically and independently activated by means of its water sensors. A pair of sensors are installed on each of the four exit areas, one on the lower and one on upper side, in order to assure that the HEEL lights will activate also when the cabin is submerged and capsized.

As emergency system, a minimum of periodical maintenance is required; the follow table provides a summary:

| Description | Threshold Interval | Repetitive Interval | Inspection Details |
|---|---|---|---|
| HEEL wiring inspection | On Condition | On Condition | As per EWIS procedures |
| HEEL hardware inspection | 12 months | 12 months | DVI |
| HEEL system check | 6 months | 6 months | Operational Test |
| HEEL battery packs | 2 years or<br>life expiry date | 2 years or<br>life expiry date | HT (whichever come first) |

Table 1 – Required Maintenance

The system is currently available and certified for Leonardo helicopters A109S and AW109SP, based on the specific size and shape of the cockpit and cabin doors used as emergency exit; nevertheless, the HEEL system can be easily adapted to every helicopter model with different type of doors.

Figure 2 – typical installation on cabin door

For more information you can contact:

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European Aviation Safety Agency

# SUPPLEMENTAL TYPE CERTIFICATE

# 10027831

Project reference: 0010001147-001

This Supplemental Type Certificate is issued by EASA, acting in accordance with Regulation (EC) No. 216/2008 on behalf of the European Community, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation and in accordance with Commission Regulation (EC) No. 1702/2003 to

**NORTHERN AVIONICS S.r.l.**
**VIALE DELL' AVIAZIONE, 65**
**20138 MILANO**
**ITALY**

and certifies that the change in the type design for the product listed below with the limitations and conditions specified meets the applicable Type Certification Basis and environmental protection requirements when operated within the conditions and limitations specified below:

**Original Product TC Number:** **EASA.R.005**
**TC Holder:** **AGUSTA S.P.A.**
**Model:** **A109S**

**EASA Certification Basis:**
The Certification Basis for the original product remains applicable to this certificate.

**Description of Design Change:**
NAV-396 "Installation of Helicopter Egress Light System (HEEL)"

**Associated Technical Documentation:**
- RFM Supplement NAV-396 Rev. 0
or later revisions of the above document approved by EASA
- Modification Bulletin NAV-396 Rev. 0

**Limitations:**
None.

**Conditions:**
Prior to installation of this modification it must be determined that the interrelationship between this modification and any other previously installed modification and/or repair will introduce no adverse effect upon the airworthiness of the product.

This Certificate shall remain valid unless otherwise surrendered or revoked.

**For the European Aviation Safety Agency,**

**Date of issue: 09.11.2009**

**Massimo MAZZOLETTI**
**Certification Manager**
**Rotorcraft, Balloons, Airships**

European Aviation Safety Agency

# SUPPLEMENTAL TYPE CERTIFICATE

# 10036508

This Supplemental Type Certificate is issued by EASA, acting in accordance with Regulation (EC) No. 216/2008 on behalf of the European Community, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation and in accordance with Commission Regulation (EC) No. 1702/2003 to

## NORTHERN AVIONICS S.R.L.

**VIALE DELL' AVIAZIONE 65**
**20138 MILANO**
**ITALY**

and certifies that the change in the type design for the product listed below with the limitations and conditions specified meets the applicable Type Certification Basis and environmental protection requirements when operated within the conditions and limitations specified below:

**Original Product TC Number : EASA.R.005**
**TC Holder : AGUSTAWESTLAND S.P.A.**
**Model : AW109SP**

**Description of Design Change:**
NAV 434 "Installation of Helicopter Emergency Egress Light (HEEL)"

**EASA Certification Basis:**
The Certification Basis for the original product remains applicable to this certificate/ approval.
The requirements for environmental protection and the associated certificated noise and/or emissions levels of the original product are unchanged and remain applicable to this certificate/approval.

**Associated Technical Documentation:**
Modification Bulletin NAV-434 Rev. 0

**Limitations:**
None

See Continuation Sheet(s)

**For the European Aviation Safety Agency,**

**Date of issue: 14.09.2011**

**Massimo MAZZOLETTI**
**Certification Manager**
**Rotorcraft, Balloons, Airships**

Note:
The following numbers are listed on the certificate:
EASA current Project Number: 0010012111-001