

INFORMATION LETTER

DATE: **March 05th, 2020**No.: **GEN-20-082**

To: All AgustaWestland helicopters Owners / Operators / Service Centres

SUBJECT: Coronavirus 'SARS-CoV-2' Infections – Cleaning advices

Helicopters Affected: All AgustaWestland helicopters

Dear Customer / Operator,

referring to the ongoing SARS-CoV-2 outbreak, Leonardo Helicopters Customer Support & Services LH would like to provide you some advices on possible activities to be performed for an adequate helicopter decontamination.

With reference also to EASA SIB 2020-02 and ECDC Technical Report “Interim guidance for environmental cleaning in non-healthcare facilities exposed to SARS-CoV-2”, it is worth to highlight that in order to minimize the risk of spreading COVID-19 “[...] *cleaning with water and household detergents and use of common disinfectant products should be sufficient for general precautionary cleaning*”.

For this reason based on Operators common practice, especially in EMS environment, please consider that commercial products, including those reported in Annex A (but not limited to), can be taken into consideration for cleaning and disinfection for helicopter interiors.

LH suggests to increase the cleaning frequency based upon the aircraft usage on operations that may have an increased probability of contamination; for such application approaches, it is hereby suggested to keep all precautionary actions to protect the health of cleaning personnel and to all specific prescriptions that can be submitted by national CAAs.

In addition, based on the experience of previous phenomena linked to coronaviruses, specific agents can be considered eligible for decontamination actions. The use of such antimicrobial agents (following the minimum requirements in terms of concentration reported into Annex B) has been demonstrated to minimize the effects of possible contamination.

Please consider to refer also to each product technical data sheet for further information on the usage method as allowed and respect an adequate time to allow all treated parts to dry completely.

Should you need any additional information, do not hesitate to refer to the point of contact provided with the Customer Support & Training Worldwide Directory, available on the Leonardo website at this [link](#).

Yours Sincerely,



Giovanni Cecchelli
Leonardo Helicopters
Vice President
Customer Support & Services - Italy

Annex A

| Name | Supplier | Notes |
|---------------|---------------------------------------|--|
| Dismozon Pur | Bode Chemie company (Hamburg - DE) | Oxygen-active disinfectant cleaner - wide range of material compatibility |
| Minutil | Ecolab (MuttENZ - CH) | Hospital usage for surgical suite and Ambulances disinfection |
| Incidur | Draeger Safety Co. (Lübeck - DE) | Hospital usage for surgical suite and Ambulances disinfection |
| Dialzima Plus | Mondial snc (Padua - IT) | Hospital usage for Ambulances disinfection |
| Fenocid | Mondial snc (Padua - IT) | Hospital usage for Ambulances disinfection |
| Icepur | IC Products SA (Minusio CH). | Used in the medical sector, in laboratories, in the food industry |

Annex B

| Antimicrobial agent | Concentration | Coronaviruses tested |
|-----------------------|-----------------------|------------------------------------|
| Ethanol | 70% | HCoV-229E, MHV-2, MHV-N, CCV, TGEV |
| Sodium hypochlorite | 0.1–0.5% 0.05–0.1% | HCoV-229E SARS-CoV |
| Povidone-iodine | 10% (1% iodine) | HCoV-229E |
| Glutaraldehyde | 2% | HCoV-229E |
| Isopropanol | 50% | MHV-2, MHV-N, CCV |
| Benzalkonium chloride | 0.05% | MHV-2, MHV-N, CCV |
| Sodium chlorite | 0.23% | MHV-2, MHV-N, CCV |
| Formaldehyde | 0.7% | MHV-2, MHV-N, CCV |

INFORMATION LETTER

DATE: **March 17th, 2020**No.: **GEN-20-084**

To: All Leonardo Helicopters products Owners / Operators / Service Centres

SUBJECT: Coronavirus 'SARS-CoV-2' Infections – Cleaning advices update

Helicopters Affected: All Leonardo Helicopters products

References:

- [1] IL GEN-20-082 - Coronavirus 'SARS-CoV-2' Infections – Cleaning advices
- [2] EASA SD-2020-01 - Safety Directives: Operational measures to prevent the spread of Coronavirus `SARS-CoV-2` infection
- [3] EASA SD-2020-02 - Safety Directives: Operational measures to prevent the spread of Coronavirus `SARS-CoV-2` infection

Dear Customer / Operator,

Referring to the ongoing SARS-CoV-2 outbreak, Leonardo Helicopters (LH) would like to provide you an update regarding the Cleaning Advices as anticipated with the Letter at Reference [1].

Since last communication EASA has issued the Safety Directives at Reference [2] and [3] requiring aircraft Operators, involved in commercial air transport of passengers from an airport located in an affected area with high risk of transmission of the CoViD-19, to clean and fully disinfect the aircraft using substances suitable for aviation containing 62%-71% ethanol alcohol, 0.5% hydrogen peroxide, or 0.1% sodium hypochlorite.

For this reason, LH would like to inform you that it is possible to use the following compounds to clean and fully disinfect the helicopter interiors (Cabin and Cockpit):

- Cleaning agents respecting the requirements of non-corrosivity to metals and compatibility with non-metallic materials (i.e. SAE AMS 1452 and SAE AMS 1453 standards) in addition to any possible local HSE requirements, if any.

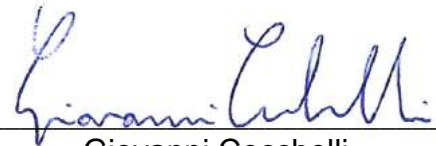
- Cleaning agents containing 62%-71% ethanol alcohol, 0.5% hydrogen peroxide, or 0.1% sodium hypochlorite provided that all the recommendations reported in relevant Material Safety Data Sheet are complied with. In particular, make sure to respect an adequate time to allow all treated parts to dry completely and consider that prolonged usage of chemical agents might cause aging and/or discoloration of textile and leather interior finishing.

As best practice, in case of usage of a cleaning agent for the first time, LH recommends to:

- Perform a test before cleaning: apply the cleaning agent to a small section of the component and monitor the results.
- Verify with the compound Supplier that the selected product does not cause on the internal arrangements:
 - The paint removal.
 - The softening of non-metallic parts.
 - The corrosion of the metallic parts.

Should you need any additional information, do not hesitate to refer to the point of contact provided with the Customer Support & Training Worldwide Directory, available on the Leonardo website at this [link](#).

Yours Sincerely,



Giovanni Cecchelli
Leonardo Helicopters
Vice President
Customer Support & Services - Italy

DATE: March 19th, 2020

No.: AIRW/2020/07

To: All AW139 and AW169 AgustaWestland helicopters Owners/Operators /Service Centres

SUBJECT: AW139 and AW169 ISOARK N 36-4 biocontainment isolation system installation – technical evaluation.

Leonardo Helicopter, with refers to ongoing SARS-CoV-2 emergency, provides this letter in order to support all HEMS helicopter operators that will perform emergency air transportation with patients that require biocontainment isolation system installed on AW139 and AW169. This letter is to support helicopter operator's proper risk assessment in accordance to EU 2018/1139 art.71 exemption provisions and NAAs.

Leonardo Helicopter evaluated the installation of one single ISOARK N 36-4 biocontainment isolation system in cabin equipped with EMS KIT P/N 139172-501 / -502 on AW139 and EMS Aerolite STC FLIGHT MANUAL SUPPLEMENT FMS-169-0040200-501 and AW169 RFM SUPPLEMENT 40 Stretcher Installation Layout on AW169, the installation is compatible with transport operations provided that:

- A specific installation trial Stretcher with the biocontainment system installed is positively executed with regards to the following evidences:
 - ISOARK N 36-4 biocontainment isolation system is installed in accordance with the prescriptions specified by the Manufacturer.
 - The cabin insulation is made by means of metallic tape or equivalent suitable means on all the perimeter of the cabin/cockpit separation wall (both rigid and soft) on all Hinges and Zippers and in general all gaps and apertures. The material of the separation walls (both rigid and soft) are considered water-repellent.

Leonardo - Società per azioni

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- If Kit Heating is installed on the helicopter it can be OFF. In this case all cabin ducts shall be closed with metallic tape or equivalent. If the kit Heating is requested to be ON, it shall be left ON for all the flight.
 - Access to Exit Cabin Doors Handles is ensured on both sides.
 - Emergency EXIT are accessible by operators and relevant indications are visible.
 - Cabin portable Fire Extinguishers accessibility is confirmed by at least one crew member.
 - Before any mission ISOARK N 36-4 biocontainment isolation system shall be installed on helicopter with battery charged. In case the helicopter have appropriate power outlet and is requested to plug the system, please verify the Electrical Load Analysis, specific for each single helicopter configuration to verify the compatibility of the additional power consumption. If necessary contact Leonardo Customer Support.
- When installed on the helicopter, each single biocontainment isolation system shall be tested through EMC compatibility check in accordance to the applicable procedure (e.g. AMP-39-A-00-80-00-06A-369A-A), to verify that the additional equipment when powered up do not interfere with basic aircraft electrical and avionics systems.

The operations are authorized with the following flight limitations with the biocontainment system installed on the stretcher:

- Avoid severe turbulence and harsh maneuvers.

Operative limitations

- With reference weight and balance calculation please consider the Stretcher including both the patient and the biocontainment system please refer to the proper RFM applicable limitations (ref. RFM FMS 08-008 for AW139 and ref. RFM STC FLIGHT MANUAL SUPPLEMENT FMS-169-0040200-501 and AW169 RFM SUPPLEMENT 40 Stretcher Installation Layout for AW169).
- The cabin temperature range shall be guarantee between 0°C – 45 °C in accordance to biocontainment system Operative Manual.
- Before the installation of biocontainment isolation system with a patient it is necessary to activate the ECS/Ventilation system in the cabin and keep it ON for all the duration of the mission. As soon as the patient is disembarked, perform cleaning procedure keeping ON the ECS/Ventilation System.

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Operative Recommendations

Referring to the ongoing SARS-CoV-2 outbreak, and in accordance to EASA SD-2020-01, EASA SD-2020-02, Leonardo Helicopters states that the Cleaning procedures of the cabin after a biocontainment isolation mission can be performed in accordance to the LHD SIL GEN-20-082 and LHD SIL GEN-20-084.

Other References

Please refer to ISOARK N 36-4 Tech publication for installation and maintenance tasks.

Best Regards



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Leonardo Helicopters



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AW139 Chief Project Engineer
Leonardo Helicopters



Ing. Emanuele Bufano
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