

MESSAGE SENT TO ALL CAMs, FSRs, AND EMBRAER-OWNED AND AUTHORIZED SERVICE CENTERS

SUBJECT: EMBRAER UPDATES CLEANING RECOMMENDATIONS FOR NOVEL CORONAVIRUS (2019-NCOV)

APPLICABILITY: ALL EMBRAER EXECUTIVE AIRCRAFT

DESCRIPTION:

The purpose of this bulletin is to inform operators of Embraer aircraft where to find proper cleaning procedures, following questions we've received about the outbreak of novel coronavirus.

Due to the current state of the virus, with no scientifically proven measures for prevention or treatment, Embraer cannot recommend an interior air sterilization product, filter, or procedure that displays clear efficacy against the virus. Embraer recommends that operators reach out to their local authorities or the World Health Organization (WHO) for proper sanitary guidance.

The disinfectant products with Hydrogen Peroxide 3% and Isopropyl Alcohol 70% have been tested and obtained successful results for application on Embraer aircraft, showing no signal of interior finishing degradation. Embraer has created dedicated disinfection tasks to recommend to our customers.

The MS360 Renew and MS360 Antimicrobial products manufactured by Microshield 360 have also been tested and Embraer has No Technical Objection for application on our aircraft interior PAX cabin finishing (leather, varnish, fabric, etc.) as long-term dwelling disinfecting products. Further details shall be obtained with supplier and approved applicators, including Embraer Service Centers.

Embraer has also tested the Bacoban[®]WB products obtaining successful results and has No Technical Objection for application on our aircraft interior PAX cabin finishing (leather, varnish, fabric, etc.) for an additional cleaning service. Embraer recommends its dilution shall be at 1% in volume for application by wiping. Further details shall be obtained with supplier and approved applicators, including Embraer Service Centers.

It is important to highlight that Isopropyl Alcohol remains as a recommended application on the avionic equipment for Rockwell Collins (Legacy and Praetor family) and Garmin (Phenom family). The PAX cabin electronic displays of Birk and Honeywell (Legacy and Praetor family) share the same recommendation.

All operators may find the standard disinfection procedures for Embraer aircraft in the relevant maintenance manuals, chapter 12 of AMM PART II:

Phenoms – Task 12-24-00-670-802-A AIRCRAFT DISINFECTION – SERVICING
Legacy & Praetors – Task 12-24-00-670-802-A AIRCRAFT DISINFECTION - SERVICING
Legacy 600/650 –Task 12-30-02-600-802-A AIRCRAFT DISINFECTION - SERVICING
Lineage – Tasks 12-24-01-670-804-A - PASSENGER CABIN DISINFECTION – SERVICING
Lineage – Task 12-24-01-670-805-A – CARGO COMPARTMENT DISINFECTION – SERVICING
Lineage – Task 12-24-01-670-806-A – COCKPIT DISINFECTION – SERVICING

Health authorities generally recommend that contaminated surfaces be cleaned with broad spectrum (bactericidal, fungicidal, and virucidal) disinfectants of proven efficacy. Some of these products are based on sodium hypochlorite or formaldehyde solutions, which may corrode the aircraft metallic structure. Being so, this kind of product should be avoided. In case a product with potential corrosion effects is spilled in the airframe, the spill should be flushed with fresh water, and the area should be dried. After this, adequate corrosion prevention measures should be adopted, including the application of corrosion inhibiting compounds.

CABIN AIR

As the virus can be in the ambient air, through the cough of an infected passenger, it can pass through the cabin air system. Therefore, as a preventive measure, we recommend:

- Open the main door and the emergency door for adequate ventilation, at least 2 hours before cleaning starts.
- Allow air to circulate in the cabin while the cabin is being disinfected, including opening all gaspers, so that air circulates through all ducts, vents, inlets, and gaspers.
- Always be careful when applying a disinfectant product to the various delicate internal surfaces. Test the product on a non-visible area of the affected surface to ensure that there are no adverse effects. If an adverse effect is found, immediately stop using the disinfectant on the specific material to be tested.
- Use new microfiber and towel products when transitioning between sections of the aircraft. Do not transfer use from one area to another.
- Replace gloves, respirators and all towel products when moving to a different aircraft.
- All PPE and cleaning materials can be disposed with normal waste.

For reference, please find below three relevant guides to hygiene and sanitation in aviation.

The European Union Aviation Safety Agency's advice for airlines and crew (SIB No: 2020-02, Coronavirus '2019-nCoV' Infections – Operational Recommendations):

<https://www.easa.europa.eu/newsroom-and-events/news/coronavirus-further-advice-airlines-and-their-crews>

The Federal Aviation Administration's health guidance for disease control and prevention for air carriers and crews:

<https://www.faa.gov/news/media/attachments/CDC%20FAA%20airline%20guidance.pdf>

The Federal Aviation Administration's Special Airworthiness Information Bulletin on Aircraft Interior Disinfection:

https://rgl.faa.gov/Regulatory_and_Guidance_Library/rgSAIB.nsf/0/EB6C8208F4CCD3318625861600518AF8?OpenDocument&Highlight=%20nm-20-17

The World Health Organization's "Guide to Hygiene and Sanitation In Aviation":

https://www.who.int/water_sanitation_health/publications/aviation_guide/en/

The disinfectant products with Hydrogen Peroxide 3% which meet with EPA's criteria for use against SARS-CoV-2, may be find at the following link:

<https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2-covid-19>

As reference, please find below Etihad Airway's video on the use of the Bacoban[®]WB:

<https://www.youtube.com/watch?v=0f7Ne5RySIQ>

As has been noted by the most up-to-date research on the virus, disease prevention procedures could differ from country to country. Embraer's recommendation is for operators to comply with the guidance provided by the medical and sanitary authorities in their countries of operation.