



Aviation Clean Air has designed and perfected a product which seamlessly and economically provides pristine air as well as continually sanitized surfaces onboard and throughout the aircraft from wall to wall and floor to ceiling

Unique Abilities of the ACA Product that Sets it in a Class by Itself and Far Above Any Other Method, Product, Component or Device on the Market Today for the purpose of achieving continuous improved air quality and surface purification:

- Provides pristine air by Effectively, Proactively, and ***Instantaneously*** controlling both existing as well as newly created odors [VOCs] including but not limited to odors associated with the fueling process, fuel emissions/exhaust and off gassing of finishes while at the same time controlling body odors, cooking, and cleaning odors and sour or musty odors created by stale air wherever the conditioned air reaches via the ECS.
- Provides for an enhanced environment by Effectively, Proactively, and ***Continuously*** killing in moments existing as well as newly created pathogens both airborne and on surfaces brought into the aircraft and spread by infectious aircraft servicing personnel, passengers or crew members by touching, coughing or sneezing. These pathogens include but are not limited to the common cold virus, all types, and variations of flu, tuberculous, MRSA, C. diff, E. coli, Polio, Staph and many more throughout the cockpit and cabin in minutes thereby significantly reducing the likelihood of aircraft acquired diseases.
- ***Proactively*** and Continuously removes allergens from the breathing zone throughout the cockpit and cabin thereby improving air quality which translates into comfort for the passengers, enhancing the overall flying experience, and lends the likelihood of higher alertness of the crew.
- ***Proactively*** and Continuously reduces static electricity throughout the cockpit and cabin which results in the comfort and enhancement of the overall flying experience for all.
- ***Instantaneously***, Proactively, and Significantly reduces from the breathing zone the concentration by size the smallest and thereby the most harmful micro molecules suspended in the air during an oil mist event and by analysis reduce overall exposure time.

Unique Features:

- The ACA Product is not a filter and has no characteristics of a filtration system.
- The ACA Product is a 100% Green Technology.
- The ACA product Replicates and Accelerates Nature's Natural cleaning, odor eliminating and disinfection process *with nothing else added*.
- The ACA product uses no chemicals.
- The ACA product produces no harmful by-products.
- The ACA product produces no odors.
- The ACA product requires no scheduled maintenance or upkeep.
- The ACA product has nothing to repair or replace as no consumables are required for continuous operation.
- The ACA product has no moving parts to wear out.
- The ACA product is 100% electronic and therefore has no moving parts.
- Once installed and activated the process of air and surface purification is automatic whenever the ECS is activated and air is flowing through the ducts into the cabin and cockpit.
- The ACA product installs quickly and seamlessly into any aircraft's Existing ECS system.
- The benefits of the ACA product are noticeable to the crew and passengers in just seconds.

Application:

- The ACA Product Environmental Condition and Tests are applicable to all airborne vehicles including fixed wing and rotary aircraft platforms.
- The ACA Product can be installed and is effective on any airframe that has an ECS System. It has been installed under an STC on a Boeing 737 and a Gulfstream G550 as well as under a FAA Form 337 on several additional models of aircraft.

Testing:

The ACA Product has been fully tested and meets and/or exceeds the requirements of RTCA DO-160.

RTCA/DO-160 and DEF STAN Qualifications:

ACA-RN-0001 Component meets or exceeds the following by test or analysis:

Temperature	Section 4 Cat B4 (-65degrees C [-85 F] to +85 degrees C [+185 F])
Altitude and Air Transportability	Section 4 Cat B4 / 55,000 feet
Humidity	Section 6 Cat C
Operational Acceleration	DEF STAN 00-35 Part 3 Test M-13
Operational Shock	Section 7 Cat B & E
Crash Safety Acceleration	DEF STAN 00-35 Part 3 Chapter 2-13 Test M-13
Crash Safety Impulse/Sustained	Section 7 Cat B
Vibration Operating	Section 8 Cat R Curve G
Explosive Atmosphere	Section 9 Cat E
Waterproofness	Section 10 Cat W
Fluids Susceptibility	Section 11 Cat F
Sand and Dust	Section 12 Cat D
Fungus	Section 13 Cat F
Corrosion and Erosion	DEF STAN 00-970 Vol 2 Chapter 407
Salt Fog	Section 14 Cat S
Magnetic Effect	Section 15 Cat Z
Power Import	Section 16 Cat Z
Voltage Spike:	Section 17 Cat A
Audio-Frequency Susceptibility	Section 18 Cat Z
Induced Signal Susceptibility	Section 19 Cat ZCE
HIRF, Radio Frequency	Section 20 Cat T
Emission of Radio Frequency	Section 21 Cat H,P
Lightning Induced Transient Susceptibility	Section 22
Lightning, Direct Effect	Section 23 Cat X
Icing	Section 24 Cat C
In-flight Loss of Cooling	N/A / No Cooling Required
Electrostatic Discharge	Section 25 Cat A
Emitted Spike	DEF-STAN 59-411 DCE03.B
Fire and Flammability	Section 26 Cat A
Solar Radiation	DEF STAN 00-35 Part 3 Chapter 3-03
Humidity Temperature and Pressure	DEF STAN 00-35 Part 3 Chapter 1-03
Tropical Exposure	DEF STAN 00-35 Part 3 Chapter 1-06
Hail	DEF STAN 00-35 Part 3 Chapter 1-19

Mechanical Specifications:

- Airflow Capacity: 2400 CFM
- Pressure Drop : <0.05” W.C. @ 5,000 FPM
- Dimensions: 7.02” L x 3.27” W x 5.36” H (w/Probes Extended)
- Enclosure: Black Anodized Aluminum (Sealed)
- Electrode Material: Carbon Fiber
- Component Weight: 1.34 pounds (607 grams)
- Temperature Range: -65 degrees C (-85 degrees F) to +85 degrees C (+185 degrees F)
- Humidity Range: 0-99% noncondensing

Electrical Specifications:

- Voltage : 28 VDC (Range 18-32 VDC)
- Current: 150 mA
- Power: 4.2 Watts
- Frequency: N/A
- Air Flow Sensing: Electronic – no external air pressure switch required.
- Connection Type: MIL-C-26482, Series 2 Connector / 8 pin / Model MS-3470-L12-8-P
- Connection Details: A= 28 VDC, B = DC Common, C= Chassis Ground, D = Dry Contact Status Contact, E = Dry Contact Status Contact (F,G, & H not used)
- Monitoring: Continuity between pins D & E when unit is powered and no alarms present. When alarm occurs/unit is not powered, pins D & E will be open.

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Diamond Capital Investments Co. Ltd.

To: Howard Hackney and the ACA Team

Gentlemen,

As you know, I have been around Gulfstream a few decades or so beginning in 1978. I was a Field Service Rep at Gulfstream for many years as well. I am very familiar with the full line of aircraft and the overall operational characteristics. Even though Gulfstream has the cleanest air in the industry once at altitude, we felt the need to complement the superior inflight air quality with the ACA Component. This would help provide cleaner surfaces and cut back on odors.

Our first installation of the ACA Air Ionization System was on a G550 in March of 2014. The components were installed in the air ducts behind the closets and served the gaspers. The thinking at the time was that it was worth a try for the price (as aviation goes an actual real deal), now it has definitely paid off. We are very pleased with the results. The ACA Ionization system not only cleans the surfaces it removes the fumes and a odors, the air is fresh and crisp. The aircraft still has that pristine new aircraft feel and smell even after 880 hours of operation over the past two years.

The next installation was on a GV in February 2015. This aircraft has chemical toilets and the odors were noticeable even at altitude prior to installing the ACA Ionization system. Once the ACA Component was installed the odors were no longer noticeable. Additionally, the aircraft's users tested the ionization system and it even removed the cigarette smoke smell from the fingers by simply holding them under a gasper for a couple of moments.

The latest installation was on a G650 in October 2015. The location of the installation is on the cold air manifold which services the floor outlets as well as the overhead gaspers. We are experiencing the same beneficial results.

In summary, the ACA Ionization system has provided consistent outstanding results. The ability to neutralize odors is far beyond what you would expect. The ACA Ionization system only complements the benefits of the Gulfstream Environmental Control System. Additionally, we feel that the ACA Ionization system will be a beneficial selling point when we decide to sell. The Principal is happy and it is a given that the ACA Ionization system will be on all future purchases. The ACA Ionization system is a great added value for the cost.

Sincerely,



Robert Haldeman

Director of Maintenance

Diamond Capital Investments Co LTD

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SEAFLIGHT AVIATION LIMITED

Gentlemen,

Following the ACA cabin Air Ionizer system installation on our company managed Gulfstream G550 on July 2015, and after several months of a busy flight schedule, I am in the pleasant position to report that the system performs as advertised.

In fact it exceeds our expectations regarding the air quality in the cabin.

Specifically, since the ACA system was installed on our G550, all cabin odors from the galley, the lavatories and due to humidity disappear within a couple of minutes of the air conditioning system operation.

What really impressed us was the fact that the oil vapor odor during engine starts that used to linger in the cabin for a several minutes until, it now disappears within few seconds, with the ACA system operating.

In general the passengers as well as the crew report having a feeling of well-being and feeling refreshed especially even after long flights.

One last –unexpected- effect of the ACA system is the almost complete elimination of the static electricity generated by crew members and passengers walking the length of the cabin on the wool carpet.

The static electricity manifesting itself in the form of annoying electric shocks any time they reached for a metal door handle or similar metallic fitting.

Overall, we are impressed with the system performance, and coupling this to the very professional and neat installation by the ACA team, I strongly recommend the ACA cabin air purification system for aircraft use.

Best Regards

Gregory Chrysostomidis

Director of Maintenance
Seaflight Aviation Ltd

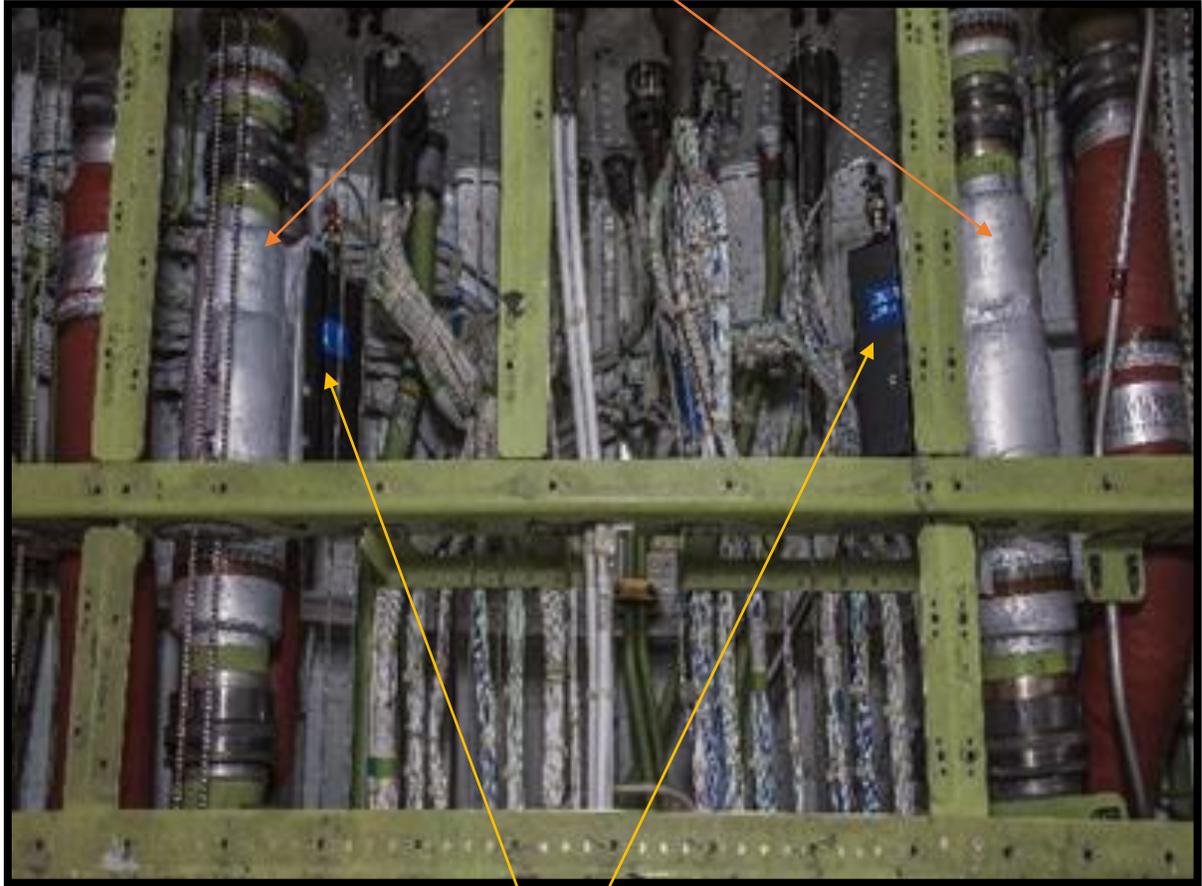


ACA RN-001 Component



Installed View [Inside the ECS duct]

ECS Ducts



ACA RN-0001 Components

(Typical Under Floor Application)

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