#### IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF VIRGINIA Richmond Division

#### FLORENCE CHESSON,

Plaintiff,

Case No. 3:20-cv-00004-JAG

v.

AIRBUS AMERICAS, INC., a corporation doing business in the Commonwealth of Virginia,

**AIRBUS GROUP, INC., a corporation doing business in the Commonwealth of Virginia.** 

Defendants.

#### **COMPLAINT**

Plaintiff Florence Chesson ("Ms. Chesson") by and through her attorneys of record, files this Complaint against the above-named Defendants (hereinafter referred to collectively as "Airbus") and states as follows:

#### **STATEMENT OF THE CASE**

1. This case arises from "fume" events which occur as the result of the defective design and manufacture of Airbus aircrafts. Fume events occur when the air inside the passenger cabin of an aircraft becomes contaminated with pyrolyzed compounds such as engine oil, lubricants, deicing or hydraulic fluid.

2. Such events are caused by the "bleed" air system used in Airbus aircrafts which draws pre-heated compressed air from the engine and pumps this air straight into the cabin after being cooled.

3. Airbus aircrafts have repeatedly experienced fume events yet Airbus has failed to

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eliminate or remediate the traditional pneumatic system and bleed manifold in favor of a no-bleed system whereby electrically driven compressors provide the cabin pressurization function, with fresh air brought onboard via dedicated cabin air inlets. Moreover, Airbus has failed to warn consumers about the dangers of the "bleed" air system.

4. This "bleed" air system has caused damage to Plaintiff in the form of personal injury and monetary damages. As such, Plaintiff seeks relief.

#### PARTIES

1. Ms. Chesson is a citizen of the United States of America, domiciled in Richmond, Virginia.

2. Defendant Airbus Americas, Inc. is a corporation with its principal place of business and corporate headquarters in Herndon, Virginia.

3. Defendant Airbus Group, Inc. is a corporation with its principal place of business and corporate headquarters in Herndon, Virginia.

4. Airbus routinely conducts substantial and non-isolated business activity on a continuous, regular, and systematic basis in Virginia and in Richmond, Virginia including, but not limited to, transacting business, contracting to supply goods or services and providing goods or services to Virginia.

5. At all times relevant to this Complaint, Airbus was engaged in the business of designing, manufacturing, assembling, testing, servicing, marketing, promoting, leasing and selling commercial aircraft as well as providing information and warnings about such aircraft, including the aircraft at issue.

#### JURISDICTION AND VENUE

6. Jurisdiction and venue is proper in this Court because the Airbus Defendants are headquartered in Virginia and they maintain a principal place of business in Virginia.

Likewise, Virginia is Ms. Chesson's home state.

7. Furthermore, the Airbus Defendants routinely conducts substantial and regular business in Virginia. At all times relevant, Airbus purposefully directed their activities to residents of the Commonwealth of Virginia and purposefully conducted activities within the Commonwealth of Virginia.

#### **FACTS**

8. The facts of this case highlight a previously hidden and "dirty little secret" of the commercial airline industry: Cabin air in Airbus's commercial aircraft comes in through the aircraft's engines before entering the cabin.

9. This is known as a "bleed air" system because the cabin air is in effect "bled" off the airplane's engines and can thus become contaminated with heated jet engine oil and its toxic by-products.

10. A bleed air system uses a network of ducts, valves and regulators to conduct medium to high pressure air, "bled" from the compressor section of the engine(s) and auxiliary power unit (APU), to various locations within the aircraft. There the air is utilized for a number of functions including: pressurization; air conditioning; engine start; wing and engine anti-ice systems; water system pressurization; hydraulic system reservoir pressurization; and boundary layer separation enhancement.

11. The use of the air for pressurization and air-conditioning is of particular importance. After leaving the engine and passing through the air-conditioning pack, where it is cooled, this bleed air is combined with recirculated cabin air before it enters the cabin. The airliner cabin is a hermetically sealed pressure vessel, with an inflow of bleed air and a computer-controlled outflow, which exhausts back to the atmosphere. Jet engines operate at extremely high temperatures. It is important to note that this bleed air is cooled but not cleaned

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(i.e., filtered) before being mixed with recirculated cabin air. The only air that enters the interior of the aircraft during operation is the bleed air from the engines.

12. Air contamination can occur during normal operation of the airplane but is particularly high during "fume events" or events where additional toxins enter the air system.

#### **Fume Events**

13. The term "fume" is used commonly to describe any noxious gas, smoke, or vapor in the atmosphere. In the case of contaminated air inside an aircraft cockpit/cabin, the term "fume event" has been used to refer to a potentially toxic environment created by contaminated bleed air.

14. The bleed air system vents to the interior of the aircraft. In addition, the hydraulic pumps, and some actuators are mounted in the engines, and the bleed air is also used to prepressurize the hydraulic systems. The very high pressure of aircraft hydraulic systems (>10 MPa) creates "sweats", leaks and ruptures. The overall result is that the interior air of aircraft can and does become contaminated by hydraulic fluid in addition to the engine lubricating oil and other substances.

15. One of the fundamental problems of the Airbus bleed air system is that all the jet engine lubricating oil and aircraft hydraulic fluid are harmful to humans with various degrees of toxicity. Air contamination can occur during normal operation of the airplane but is particularly high during "fume events" or events where additional toxins enter the air system.

16. Fume events can sometimes produce distinctive odors, often described as a chemical, oily or a "dirty socks" smell.

17. Gases contained in contaminated cockpit/cabin air as constituents of "bleed" air include carbon monoxide ("CO") from engine exhaust and carbon dioxide ("CO2") as a product of incomplete combustion. Exposure to high CO2 concentrations can lead to symptoms such as headache, dizziness, and restlessness and ultimately lead to asphyxia.

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18. Vapors contained in contaminated cockpit/cabin air may also include both volatile ("VOCs") and semi-volatile organic compounds ("SVOCs"), both of which are chemical compounds based on carbon chains or rings that also contain hydrogen with or without oxygen, nitrogen, and other elements that represent constituents of jet engine oils, hydraulic fluids, and deicing fluids.

19. Among the many possible VOCs and SVOCs representing constituents of contaminated bleed air, particular concern has been attributed to tricresyl phosphate (Tricresyl phosphates are anti-wearing agents that are added to all jet engine oils used on jet propelled commercial airliners in the United States.)

20. Tricresyl phosphates are known neurotoxins, i.e. nerve agents. A neurotoxin or nerve agent is a toxin that acts specifically on nerve cells of the central and peripheral nervous systems. Inhalation exposure to tricresylortho phosphate ("TOCP") (one of the isomeric forms of Tricresyl phosphate) at higher concentrations is associated with a delayed neurotoxic toxic effect (i.e., several days following exposure) manifested by peripheral nervous system abnormalities. Additionally, TOCP can affect the body if it comes in contact with the eyes or skin.

21. Tricresyl phosphates are organophosphates. Organophosphates are chemical compounds used in insecticides, herbicides, pesticides, nerve agents and nerve gases, all sharing a similar chemical structure. Organophosphates, as a family of chemicals, are considered toxic to human health. Indeed, in 2001 the Environmental Protection Agency banned most residential uses of organophosphates in part because of their risk to human health.

22. De-icing fluids and exhaust from jet engines may also enter the bleed air supply during ground operations.

23. Thus, inhaling toxic cabin air can cause short-term or transient symptoms as well as permanent and serious personal injury.

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