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13  
 14 **UNITED STATES DISTRICT COURT**  
 15 **CENTRAL DISTRICT OF CALIFORNIA**

16 ANDREA RIDGELL, on behalf of  
 17 herself and others similarly situated  
 18 Plaintiff,

19 v.

20 FRONTIER AIRLINES, INC. a  
 21 Colorado corporation; AIRBUS S.A.S.,  
 22 a foreign corporation doing business in  
 the State of California; AIRBUS  
 23 GROUP HQ INC., a corporation doing  
 business in the State of California  
 24 Defendants.

CASE NO. 2:18-CV-04916

**CLASS ACTION COMPLAINT**

1. Strict Products Liability
2. Breach of Warranties
3. Negligence
4. False Imprisonment
5. Negligent Infliction of Emotional Distress

**DEMAND FOR JURY TRIAL**

1 Plaintiff Andrea Ridgell (“Plaintiff”), by and through her attorneys of record,  
2 files this Complaint against the above-named Defendants Frontier Airlines Holdings,  
3 Inc. (hereinafter referred to as “Frontier”), Airbus S.A.S., Airbus Group HQ Inc  
4 (hereafter Airbus S.A.S. and Airbus Group, HQ Inc. shall be collectively referred to as  
5 “Airbus”) (hereafter defendants Frontier and Airbus are collectively referred to as  
6 “Defendants”) and states as follows:

7 **INTRODUCTION**

8 1. This case arises from “fume” events which occur as the result of the  
9 defective design and manufacture of Frontier Airline’s fleet of Airbus aircrafts. Fume  
10 events occur when the air inside the passenger cabin of an aircraft becomes  
11 contaminated with pyrolised compounds such as engine oil, de-icing or hydraulic fluid.

12 2. Such events are caused by the “bleed” air system used in Defendants’  
13 aircrafts which draws pre-heated compressed air from the engine and pumps this air  
14 straight into the cabin after being cooled.

15 3. Defendants have repeatedly experienced fume events yet have failed to  
16 eliminate the traditional pneumatic system and bleed manifold and instead adopt a no-  
17 bleed system whereby electrically driven compressors provide the cabin pressurization  
18 function, with fresh air brought onboard via dedicated cabin air inlets. Moreover,  
19 Defendants have failed to warn consumers about the dangers of the “bleed” air system.

20 4. Such system has caused damage to Plaintiff and other passengers in the  
21 form of personal injury and lost money.

22 5. As such, Plaintiff seeks relief in this action individually and as a class  
23 action on behalf of all passengers of Frontier Airlines who experienced “fume” events  
24 in the United States (the “Class”). Plaintiff also seeks relief in this action individually  
25 and as a class action on behalf of a subclass of all passengers on Frontier Flight 1630  
26 which departed Los Angeles International Airport on June 2, 2017 (the “California  
27 Class”).

**PARTIES**

1  
2  
3 1. Plaintiff is a citizen of the United States of America, domiciled in Santa  
4 Barbara County, California.

5 2. Defendant Airbus S.A.S. is a European multinational corporation that  
6 designs, manufactures, and sells civil and military aeronautical products worldwide.  
7 Defendant Airbus S.A.S. has in the past and continues to engage in substantial and non-  
8 isolated business activity on a continuous and systemic basis in the United States and  
9 California.

10 3. At all relevant times, Defendant Airbus Group HQ Inc. was, and is, a  
11 United States corporation having its principal place of business in Herndon, Virginia;  
12 and is registered with the California Secretary of State to conduct business in the State  
13 of California.

14 4. Defendants have in the past and continue to engage in substantial and non-  
15 isolated business activity on a continuous and systematic basis in the United States and  
16 California. For example, and without limitation:

17 a. Airbus S.A.S. maintains a North American headquarters in Herndon, Virginia;  
18 and numerous offices throughout the United States including engineering centers in  
19 Mobile, Alabama and Wichita, Kansas.

20 b. In the State of California, Airbus S.A.S. owns and operates Airbus Group HQ  
21 Inc., which holds a principal address in San Jose, California. The purpose of Airbus  
22 Group HQ Inc. is to sell Airbus S.A.S. aircraft in the State of California (hereafter,  
23 defendant Airbus S.A.S. and Airbus Group HQ Inc. shall be referred to as “Airbus”.)

24 c. In the State of California, Airbus S.A.S. owns and operates Airbus Defense  
25 and Space, Inc., a Delaware corporation that is registered with the California Secretary  
26 of State; and, qualified for the transaction of intrastate business to sell AIRBUS S.A.S.  
27 aircraft in the State of California.

1 d. Additionally, Airbus S.A.S. by and through Airbus Group HQ Inc., doing  
2 business as A<sup>3</sup> (“A-Cubed”) that operates a Customer Support Center in Los Angeles,  
3 California, where it provides on-site technical assistance, and helps solve in-service  
4 problems.

5 5. Frontier is a Delaware corporation with a principal place of business and  
6 corporate headquarters in Denver, Colorado. Frontier operates passenger service  
7 throughout the United States including between California and Florida.

8 **JURISDICTION AND VENUE**

9 6. Jurisdiction and venue is proper in this Court because California is the  
10 location of the subject flight origination.

11 7. At all times relevant, Defendants were engaged in substantial and not  
12 isolated activity within the State of California including, but not limited to, transacting  
13 business, contracting to supply goods or services and providing goods or services to  
14 California.

15 8. At all times relevant, Defendants purposefully directed their activities to  
16 residents of the State of California and purposefully conducted activities within the  
17 State of California thereby invoking the benefits and protections of California law.

18 9. The injuries and causes of action of Plaintiff and the members of the Class  
19 arise from Defendants’ activities within the State of California.

20 **FACTS**

21 **Facts About Frontier Flight F91630**

22 10. On or about May 16, 2017, Plaintiff purchased a one-way ticket on Frontier  
23 airlines for travel from Los Angeles, California to Orlando. Plaintiff paid a purchase  
24 price of \$163.99.

25 11. On or about June 2, 2017, Plaintiff boarded Frontier airlines flight number  
26 F91630 with a scheduled departure time of 10:19 PM and an arrival time of 6:04 AM  
27  
28

1 on June 3, 2018. The flight was direct from Los Angeles to Phoenix with no scheduled  
2 stops.

3 12. Plaintiff believes the aircraft to have been an airbus A320 (320) V1. The  
4 aircraft was designed and manufactured by Airbus.

5 13. At the times mentioned, and at all times relevant to this complaint, Frontier  
6 is a common carrier engaged in the business of transporting passengers for hire by air.

7 14. Approximately two hours into the flight, the subject aircraft experienced a  
8 problem with the air quality in the cabin.

9 15. Many of the passengers including Plaintiff experienced physical distress  
10 including one or more of the following non-exhaustive symptoms: passing out, choking,  
11 coughing and eye irritation.

12 16. Upon information and belief, while onboard the subject aircraft Plaintiff  
13 and the members of the classes (as defined below) were exposed to toxic fumes that  
14 entered the passenger cabin through the aircraft's ventilation system as a result of what  
15 is commonly referred to as a "fume" event.

16 17. The toxic fumes entered the passenger cabin through the air delivery  
17 system as a result of the product defect as alleged herein. The "product" for purposes of  
18 this Complaint is the Airbus aircraft and its component parts.

19 18. Bleed air is the outside air fraction of the cabin supply air that is first  
20 compressed in the aircraft engines or Auxiliary Power Unit and which, as a result of the  
21 product defect alleged herein, is prone to contamination with high-temperature engine  
22 oil and hydraulic fluid, and their byproducts, under normal operating conditions.

23 19. These airborne toxins were not removed from the bleed air before the air  
24 was supplied to the passenger cabin for the flight attendants and passengers to breathe.

25 20. As a result of the aforementioned problems, the subject aircraft was forced  
26 to make an emergency landing in Phoenix, Arizona, and the subject aircraft was  
27 grounded. The passengers were immediately de-boarded from the plane.  
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1           21. Some of the passengers were analyzed by paramedics, others were taken  
2 to the hospital.

3           22. Although they each requested to leave, the passengers were confined in  
4 the terminal. They were not permitted to board other flights or to leave the terminal  
5 area. The passengers were never informed as to what chemicals they had been exposed  
6 to.

7           23. After three (3) hours the passengers were released from the forced  
8 confinement.

9           24. Frontier has refused to acknowledge the event. Indeed, publicly accessible  
10 records maintained by Frontier reported the flight as having landed on time in Orlando  
11 without incident.

12           25. Plaintiff contacted Frontier about the incident on or about June 7, 2017 via  
13 email submitted through Frontier's website. Defendant Frontier in a response email  
14 received June 7, 2017, stated that there was "nothing wrong with [the plane]" and did  
15 not provide Plaintiff with any additional details or redress other than a \$200 travel  
16 voucher (provided to all passengers) which expired on September 7, 2017.

17           26. To date, Defendant Frontier has not informed Plaintiff or any of the  
18 passengers on the subject plane of the name and type of chemicals to which they were  
19 exposed.

20           27. Due to her exposure to contaminated cabin air, Plaintiff suffered personal  
21 injuries including nausea, blurred vision, headaches, emotional distress and lost monies.

22           **General Facts about Defendants' Bleed Air System**

23           28. Life is unsustainable at the altitudes at which airliners cruise. This is due  
24 to extremely low atmospheric pressure, density, temperature and humidity. The  
25 industry-referred solution has been a system of drawing or "bleeding" high-pressure air  
26 into the aircraft through the aircraft's jet engines.

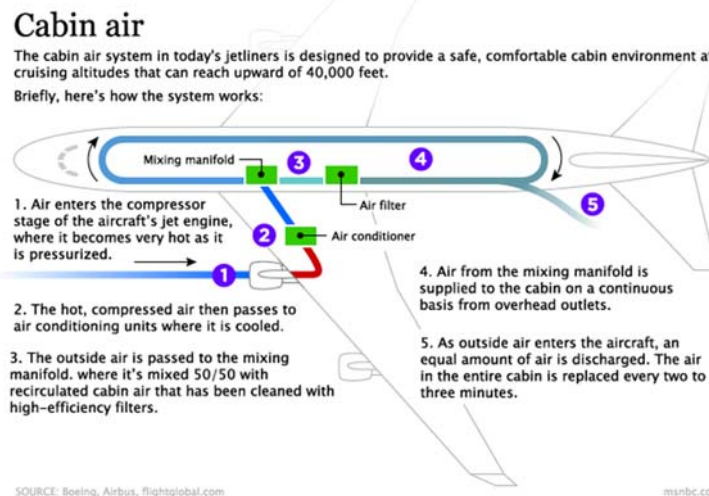
27           29. Defendants use a bleed air system on every aircraft in the Frontier fleet  
28

1 including, but not limited to, the Airbus A318, Airbus A319, Airbus A320, and the  
2 Airbus A321.

3 30. A bleed air system uses a network of ducts, valves and regulators to  
4 conduct medium to high pressure air, "bled" from the compressor section of the  
5 engine(s) and auxiliary power unit (APU), to various locations within the aircraft. There  
6 the air is utilized for a number of functions including:

- 7 • pressurization;
- 8 • air conditioning;
- 9 • engine start;
- 10 • wing and engine anti-ice systems;
- 11 • water system pressurization;
- 12 • hydraulic system reservoir pressurization; and
- 13 • boundary layer separation enhancement.

14 31. The use of the air for pressurization and air-conditioning is of particular  
15 importance. After leaving the engine and passing through the air-conditioning pack,  
16 where it is cooled, this bleed air is combined with recirculated cabin air before it enters  
17 the cabin. The airliner cabin is a hermetically sealed pressure vessel, with an inflow of  
18 bleed air and a computer-controlled outflow, which exhausts back to the atmosphere.  
19 Jet engines operate at extremely high temperatures. The only air that enters the interior  
20 of the aircraft during operation is the bleed air from the engines.



32. It is important to note that this bleed air is cooled but not cleaned (i.e., filtered) before being mixed with recirculated cabin air. Recirculated air, however, is cleaned using high-energy particulate air (HEPA) filtration. HEPA filters, by definition, are designed to capture particles but not gases and vapors, which pass directly through, and collection efficiency is established on the basis of particles that pass through the filter (i.e., penetration efficiency).

33. HEPA filters capture particles measuring 0.3 micrometers ( $\mu\text{m}$ ) in diameter and, as such, certain particles, molecules, and microorganisms can nevertheless pass through. For example, viruses are among the smallest of microorganisms, ranging in size from 0.02 to 0.3  $\mu\text{m}$  in diameter and are thus too small to be captured by HEPA filters. Likewise, fumes are generally less than 0.05  $\mu\text{m}$  in diameter which are also too small to be captured via filtration.

### **Facts About "Fume" Events**

34. 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.

35. The hydraulic systems discussed above vent to atmosphere, which, in this case, is the interior of the aircraft. In addition, the hydraulic pumps, and some actuators,



1 are mounted in the engines, and the bleed air is also used to pre-pressurize the hydraulic  
2 systems. The very high pressure of aircraft hydraulic systems (>10 MPa) creates  
3 “sweats”, leaks and ruptures. The overall result is that the interior air of aircraft is  
4 routinely contaminated by hydraulic fluid in addition to the engine lubricating oil and  
5 other substances.

6 36. One of the fundamental problems of such systems lies in the fact that all  
7 the constituents of jet engine lubricating oil and aircraft hydraulic fluid are harmful to  
8 humans with various degrees of toxicity. Air contamination can occur during normal  
9 operation of the airplane but is particularly high during “fume events” or events where  
10 additional toxins enter the air system.

11 37. Gases contained in contaminated cockpit/cabin air as constituents of  
12 “bleed” air include carbon monoxide (“CO”) from engine exhaust and carbon dioxide  
13 (“CO<sub>2</sub>”) as a product of incomplete combustion. Trioxygen (“O<sub>3</sub>”), originating in the  
14 stratosphere, may enter the cockpit/cabin from outside the aircraft via the environmental  
15 control system.

16 38. Exposure to high CO<sub>2</sub> concentrations can lead to symptoms such as  
17 headache, dizziness, and restlessness and ultimately lead to asphyxia.

18 39. Exposure to O<sub>3</sub> may be associated with symptoms ranging from irritation  
19 to eyes and mucous membranes to chronic respiratory disease. Additionally, O<sub>3</sub> reacts  
20 with materials in the cabin, including seat fabric, carpet, plastic, and clothing to emit  
21 VOC byproducts. In controlled experiments, the most common VOC emissions  
22 detected were aldehydes, 6-methyl-5-hepten-2-one, and acetone.

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

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

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

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

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

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

22 46. A typical user, when using the product as designed, does not expect to be  
23 exposed to tricresyl phosphates, other chemicals or combustion products and to be  
24 potentially inflicted with permanent disability, life altering central and peripheral  
25 nervous system damage, chronic migraines, tremors, cognitive deficits, gastrointestinal  
26 distress, nausea, vision impairment, fatigue, significant and traumatic emotional and  
27 mental stress and depression or other related symptoms.

1           **“Fume” Events Are Common on Defendant’s Aircrafts**

2           47. Plaintiff and the members of the Flight F91630 Class (defined below) are  
3 not the only consumers who have been subjected to fume events on Defendants’  
4 aircrafts. Thousands of passengers (both before and after the “fume” event experienced  
5 by Plaintiff and the members of the F911630 Flight Class) have suffered in exactly the  
6 same manner from exactly the same defect:

7           48. On or about May 20, 2018, Frontier airline flight 1839 departed Tulsa,  
8 Oklahoma with a destination of San Diego, California. However, the plane, an Airbus  
9 A320 jet, was forced to make an emergency landing following a fume event that caused  
10 smoke to enter the plane’s cabin<sup>1</sup>.

11           49. On or about Frontier flight 1676 traveling from Las Vegas to Orland,  
12 Florida made an emergency landing after crew reported a suspicious odor<sup>2</sup>.

13           50. On or about November 22, 2017, Frontier flight No 1686 from Nashville,  
14 Tennessee to Las Vegas, Nevada, was diverted to Albuquerque due to an odor in the  
15 cockpit<sup>3</sup>.

16           51. On or about June 21, 2010, Frontier Airlines flight 1903 from Milwaukee,  
17 Wisconsin made an emergency landing after smoke was reported in the cockpit<sup>4</sup>.

18           52. Indeed, while Defendants have utterly failed to warn consumers of the  
19 dangers of these events, consumers been forced to take matters into their own hands  
20 taking to online forums to complain of similar experiences. For example,

21           **Marci of San Diego, CA Verified Reviewer** Original review: May 29, 2018

22           Two times in the last week Frontier Airlines had had emergency landing because of  
23 unknown chemical odors on the plane. I was on the first of these one week ago. Pilot

24 <sup>1</sup> <http://www.businessinsider.com/frontier-plane-makes-emergency-landing-after-odor-fills-cabin-2018-5> (last viewed May 31, 2018)

25 <sup>2</sup> <https://www.clickorlando.com/travel/odor-prompts-frontier-flight-to-make-emergency-landing-in-orlando> (last viewed May 31, 2018)

26 <sup>3</sup> <http://www.wkrn.com/news/flight-from-vegas-to-nashville-diverted-to-albuquerque/1077006699>  
27 (last viewed May 31, 2018)

28 <sup>4</sup> <http://www.kctv5.com/story/14786310/frontier-flight-makes-emergency-landing-at-kci-6-21-2010>  
(last viewed May 31, 2018)

1 announced emergency landing while gasping for breath in his oxygen mask. After  
2 landing in Albuquerque we were kept up all night in the airport in a line waiting to get  
3 rebooked to San Diego. Although medical people checked out Frontier staff on the plane  
4 not one mention was made for passengers to get checked out. I have been feeling sick  
all week and yesterday felt I might have some type of pneumonia.

5 I looked online to see if Frontier had released info about what the gas was we breathed  
6 in during the hours we were on the flight. Instead I saw another article explaining  
7 another emergency landing on Frontier happened yesterday- same route- San Diego-  
8 Tulsa- same problem. Fumes on plane. This time they emergency landed in Phoenix.  
9 Frontier said everyone was offered a medical exam yesterday (no one mentioned that  
option on my flight) and one 62 year old man was admitted to the hospital.

10 I am very healthy- never get sick and have been feeling horrible for a week. Will  
11 Frontier have to explain what is going on? On the plane before the emergency landing  
12 a male flight attendant was lying on the floor by the bathroom. The entire experience  
13 was bizarre and I am wondering if others are sick. I contacted Frontier and they  
14 responded by saying we were all getting 200.00 vouchers to use on their flights.<sup>5</sup>

### 15 **Defendants Have Known of The Dangers of Fume Events and Bleed Air for** 16 **Years**

17 53. According to the FAA's Aerospace Medicine Technical Report No  
18 DOT/FAA/AM-15/20 report published in November of 2015, "[t]he quality of air  
19 distributed throughout the cockpit and cabin during air transportation in a pressurized  
20 aircraft is critically important to human health. For more than 30 years, the topic of  
21 cabin air quality has been of concern."

22 54. In 1994, the U.S. Congress mandated that the Federal Aviation  
23 Administration (FAA) establish an aircraft cabin air quality research program and to  
24 contract with the Centers for Disease Control and Prevention (CDC) to carry out studies  
25 specific to cabin air quality (Public Law 103-305, 1994).

26 55. In 2012, Congress directed the FAA to initiate a study of air quality in  
27

28 <sup>5</sup> <https://www.consumeraffairs.com/travel/frontier.html> (last viewed June 1, 2018.)

1 aircraft cabins to: 1) assess bleed air quality on the full range of commercial aircraft  
2 operating in the United States; 2) identify oil-based contaminants, hydraulic fluid  
3 toxins, and other air toxins that appear in cabin air and measure the quantity and  
4 prevalence, or absence, of those toxins through a comprehensive sampling program; 3)  
5 determine the specific amount and duration of toxic fumes present in aircraft cabins that  
6 constitutes [sic] a health risk to passengers; 4) develop a systematic reporting standard  
7 for smoke and fume events in aircraft cabins; and 5) identify the potential health risks  
8 to individuals exposed to toxic fumes during flight.

9       56. Since 2012, Airbus has been performing real-time monitoring of cabin air  
10 quality.

11       57. Prior to the subject flight, Defendants received actual or constructive  
12 notice of the dangers posed by a loss of cabin pressure to the airworthiness of the aircraft  
13 and the safety of the passengers, including Plaintiffs, aboard an aircraft.

14       58. Prior to the subject flight, Defendants received actual or constructive  
15 notice of the pressurization problems in its fleet and/or the subject aircraft.

16       59. Prior to the subject flight, Defendants received actual or constructive  
17 notice of the contaminated bleed air problems in its fleet and/or the subject aircraft.

18       60. Prior to the subject flight, Defendants received actual or constructive  
19 notice of the maintenance problems in its fleet and/or the subject aircraft.

20       61. Prior to the subject flight, Defendants received actual or constructive  
21 notice of the dangers posed to the safety of its passengers and crew by allowing toxic  
22 fumes to enter the cabin of its aircraft through the aircraft's ventilation system.

23       62. Prior to the subject flight, Defendants received actual or constructive  
24 notice of contaminated bleed air and toxic fumes entering the cabin while its passengers  
25 and crew were onboard.

26       63. Despite such knowledge Defendants have not, to date, retrofitted their  
27 products with either sensors or recirculated air filtration systems designed to detect  
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1 and/or eliminate and/or minimize vaporized and/or pyrolyzed engine oil and/or  
2 hydraulic fluid and its byproducts and/or other toxic substances under normal  
3 operations.

4 64. There are, however, planes that have been so modified. For example, the  
5 Boeing 787 “Dreamliner” uses dedicated electrical compressors with air bearings,  
6 without risk of oil or hydraulic system contamination, to pressurize, refresh and heat  
7 the aircraft interior.

8 65. Frontier had a duty to provide its passengers with an aircraft that was in  
9 good mechanical condition and free of defects such as pressurization problems and  
10 toxic fumes.

11 66. After exposing its passengers to unidentified toxic fumes, Defendants had  
12 a duty to inform each and every passenger exactly which chemical or chemicals they  
13 had been exposed to, all possible consequences of such exposure, and information  
14 relevant to medical treatment for such exposure (including antidotes). Defendants also  
15 had a duty to measure the level of exposure each passenger sustained, as close in time  
16 to the fume event as practicable.

17 67. Frontier had a duty to use the highest degree of care consistent with the  
18 operation of its aircraft and its business as a common carrier.

19 68. Even though Frontier knew that the chemical contained in the “bleed air”  
20 can cause harm to humans, it is Frontier’s policy not to inform passengers that they may  
21 be, are, or have been, exposed to compounds and chemicals that are known to be  
22 dangerous and/or toxic. This intentional concealment has prevented Plaintiff and the  
23 proposed class from making informed decisions on whether to fly on this airline or  
24 evaluate alternative means of transportation to minimize their exposure to chemicals.

25 **There Exists A Better Alternative Design for the Aircraft**

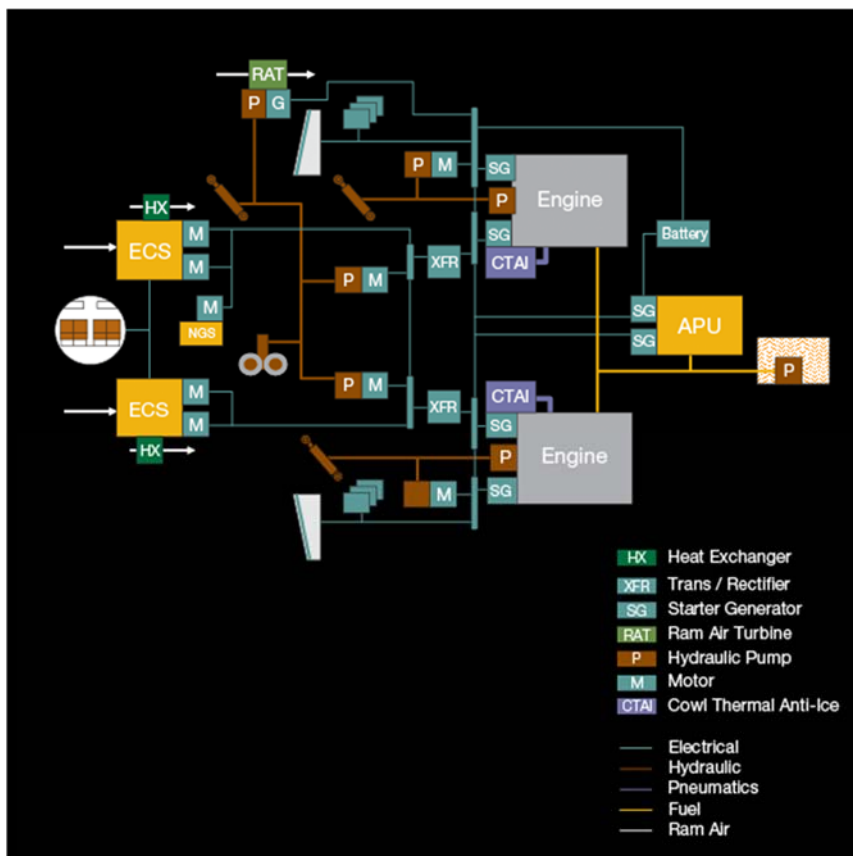
26 69. The bleed air system, while common, is not the only available system for  
27 the design and manufacture of the aircrafts.

1           70.     Indeed, there is a non-bleed system that is preferable in many regards  
2 including the protection of the health and welfare of the passengers and increased fuel  
3 economy.

4           71.     The no-bleed systems architecture replaces the traditional pneumatic  
5 system and the bleed manifold with a high-power electrical system that, in addition to  
6 the traditional electrical system functions, supports a majority of the airplane functions  
7 that were traditionally performed via bleed air.

8           72.     In the no-bleed architecture, electrically driven compressors provide the  
9 cabin pressurization function, with fresh air brought onboard via dedicated cabin air  
10 inlets. This approach is significantly more efficient than the traditional bleed system  
11 because it avoids excessive energy extraction from engines with the associated energy  
12 waste by pre-coolers and modulating valves. There is no need to regulate down the  
13 supplied compressed air. Instead, the compressed air is produced by adjustable speed  
14 motor compressors at the required pressure without significant energy waste. That  
15 results in significant improvements in engine fuel consumption while also protecting  
16 the safety and quality of the air inside the cabin.

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No Bleed System Architecture

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73. Eliminating the maintenance-intensive bleed system is also expected to reduce airplane maintenance needs and improve airplane reliability because there are fewer components on the engine installation resulting in a simplified and more reliable APU.

74. The no-bleed architecture also features modern power electronics and motors that will provide increased overall reliability, decreased costs, and improved performance.

75. Finally, the architecture means reduced airplane weight, reduced part count, and simpler systems installation.

**CLASS ACTION ALLEGATIONS**

76. Plaintiff brings this action individually and on behalf of all other persons similarly situated. The Classes which Plaintiff seeks to represent are defined as:



1           **Nationwide Class**

2           All persons in the United States who have flown in one of Defendants’  
3           aircraft that have experienced a bleed air event. Specifically excluded  
4           from this Class are Defendants, the officers, directors, or employees of  
5           Defendants, any entity in which Defendants have a controlling interest;  
6           and any affiliate, legal representative, heir, or assign of Defendants. Also  
7           excluded any federal, state, or local governmental entities, any judicial  
8           officer presiding over this action and the members of his/her immediate  
9           family and judicial staff, and any juror assigned to this action.

10           **Flight 1630 Class**

11           All passengers in the United States who were on Frontier Airlines Flight  
12           1630 on June 2, 2017.

13           77.     The Class is sufficiently numerous, as each includes hundreds of persons.  
14           Thus, joinder of such persons in a single action or bringing all members of the Classes  
15           before the Court is impracticable for purposes of Federal Rule of Civil Procedure, Rule  
16           23. The question is one of a general or common interest of many persons and it is  
17           impractical to bring them all before the Court. The disposition of the claims of the  
18           members of the Classes in this class action will substantially benefit both the parties  
19           and the Court.

20           78.     There are questions of law and fact common to each Class for purposes of  
21           Federal Rule of Civil Procedure, Rule 23, including:

- 22           a.     Whether or not the chemicals present in the “bleed air” introduced into  
23           Defendant’s passenger cabins can cause harm to people exposed thereto;
- 24           b.     Whether Defendant had a duty to warn of the potential exposure to toxic  
25           chemicals that can result from “bleed” air;
- 26           c.     Whether Plaintiffs and the members of the Flight 91630 Class were falsely  
27           imprisoned; and
- 28           d.     Whether Defendants breached any express and/or implied warranties.

79.     Plaintiff asserts claims that are typical of the claims of each respective

1 Class for purposes of Federal Rule of Civil Procedure, Rule 23. Plaintiff and all  
2 members of each respective Class have been subjected to the same wrongful conduct  
3 because they have been exposed to chemicals as a result of the uniform defective design  
4 of Defendants' aircrafts. Plaintiff and the members of the Classes paid a premium for  
5 the service, over similar alternatives. Plaintiff and the members of each Class have thus  
6 all overpaid for the service.

7 80. Plaintiff will fairly and adequately represent and protect the interests of the  
8 other members of each respective Class for purposes of Federal Rule of Civil Procedure,  
9 Rule 23. Plaintiff has no interests antagonistic to those of other members of each  
10 respective Class. Plaintiff is committed to the vigorous prosecution of this action and  
11 has retained counsel experienced in litigation of this nature to represent her. Plaintiff  
12 anticipates no difficulty in the management of this litigation as a class action.

13 81. Additionally, class certification is appropriate because Defendant has  
14 acted or refused to act, on grounds generally applicable to the class, making monetary  
15 and injunctive relief appropriate as more specifically set forth below. The common  
16 complaints of Plaintiff and the Proposed Class form common grounds for equitable and  
17 monetary relief, further making class certification appropriate.

18 82. Proceeding as a class action provides substantial benefits to both the  
19 parties and the Court because this is the most efficient method for the fair and efficient  
20 adjudication of the controversy. Members of each Class have suffered and will suffer  
21 irreparable harm and damages as a result of Defendants' wrongful conduct. Because of  
22 the nature of the individual claims of the members of each Class, few, if any, could or  
23 would otherwise afford to seek legal redress against Defendants for the wrongs  
24 complained of herein, and a representative class action is therefore the appropriate,  
25 superior method of proceeding and essential to the interests of justice insofar as the  
26 resolution of claims of the members of each Class is concerned. Absent a representative  
27 class action, members of each Class would continue to suffer losses for which they  
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1 would have no remedy, and Defendants would unjustly retain the proceeds of its ill-  
2 gotten gains. Even if separate actions could be brought by individual members of each  
3 Class, the resulting multiplicity of lawsuits would cause undue hardship, burden, and  
4 expense for the Court and the litigants, as well as create a risk of inconsistent rulings,  
5 which might be dispositive of the interests of the other members of each Class who are  
6 not parties to the adjudications and/or may substantially impede their ability to protect  
7 their interests.

8 **COUNT I**

9 **Strict Liability: Design Defect**

10 **(By Plaintiff and the Members of the Classes Against All Defendants)**

11 83. Defendants manufactured, designed, promoted, marketed and sold the  
12 subject aircraft. At the time the subject aircraft left Defendants' custody and control, it  
13 was defective and unreasonably dangerous because:

- 14 a. Its design rendered the aircraft unreasonably dangerous.
- 15 b. The danger of this design was beyond that contemplated by the ordinary  
16 consumer with ordinary knowledge common to the community as to its  
17 characteristics as such consumer would not believe that they would be exposed  
18 to cabin air which was contaminated with toxic chemicals.
- 19 c. The benefits of this design are outweighed by the design's inherent risk of  
20 danger

21 84. Defendants'' design of the subject aircraft made such aircraft unreasonably  
22 dangerous in one of more of the following respects:

- 23 a. The subject aircraft's ventilation system allows bleed air, which can  
24 become contaminated with dangerous toxins, to enter the breathing zone of the  
25 aircraft.
- 26 b. The subject aircraft lacked adequate air quality monitors, sensors or  
27 alarms.
- 28 c. The subject aircraft provides no safeguards or systems so the flight crew

1 could identify the source of the contaminated air or mitigate or prevent  
2 contamination of the cabin air.

3 d. The subject aircraft lacked adequate or appropriate filters which would  
4 have purified the cabin air and prevented or mitigated bleed air contamination.

5 85. By reason of the foregoing, the subject aircraft was unreasonably  
6 dangerous and defective and Defendants are strictly liable for the damages sustained by  
7 the Plaintiff and the members of the Classes.

8 86. Under the risk-benefits test, the risks of the design outweigh the benefits.  
9 Indeed, the design of the Boeing 787 “Dreamliner” uses dedicated electrical  
10 compressors with air bearings, without risk of oil or hydraulic system contamination,  
11 to pressurize, refresh and heat the aircraft interior. Such design protects against fume  
12 events and is also more fuel efficient.

## 13 **COUNT II**

### 14 **Breach of Warranties**

#### 15 **(Plaintiff and the members of the Classes Against All Defendants)**

16 87. Plaintiff incorporates by reference each prior allegation and fact, as if  
17 specifically restated herein, paragraph for paragraph and word for word.

18 88. The Federal Aviation Administration (FAA) has issued a number of  
19 federal aviation regulations (FARs), airworthiness directives (ADs), and advisory  
20 circulars (ACs) regarding cabin air ventilation requirements and contaminant  
21 concentration limits.

22 89. For example, 14 C.F.R. provides § 23.831(b) provides in pertinent part:  
23 “[f]or pressurized airplanes, the ventilating air in the flight crew and passenger  
24 compartments must be free of harmful or hazardous concentrations of gases and vapors  
25 in normal operations and in the event of reasonably probable failures or malfunctioning  
26 of the ventilating, heating, pressurization, or other systems and equipment.

27 90. 14 C.F.R. §23.1109(a) provides, “[t]he cabin air system may not be subject  
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1 to hazardous contamination following any probable failure of the turbocharger or its  
2 lubrication system.”

3 91. 14 C.F.R. §23.1111 provides, “[h]azardous contamination of cabin air  
4 systems may not result from failures of the engine lubricating system.”

5 92. 14 C.F.R. §25.831 provides in pertinent part:

6 [u]nder normal operating conditions and in the event of any probable  
7 failure conditions of any system which would adversely affect the  
8 ventilating air, the ventilation system must be designed to provide a  
9 sufficient amount of uncontaminated air to enable the crewmembers to  
10 perform their duties without undue discomfort or fatigue and to provide  
11 reasonable passenger comfort. For normal operating conditions, the  
12 ventilation system must be designed to provide each occupant with an  
13 airflow containing at least 0.55 pounds of fresh air per minute.

14 (b) Crew and passenger compartment air must be free from harmful or  
15 hazardous concentrations of gases or vapors. In meeting this  
16 requirement, the following apply:

17 (1) Carbon monoxide concentrations in excess of 1 part in 20,000  
18 parts of air are considered hazardous. For test purposes, any acceptable  
19 carbon monoxide detection method may be used.

20 (2) Carbon dioxide concentration during flight must be shown not  
21 to exceed 0.5 percent by volume (sea level equivalent) in compartments  
22 normally occupied by passengers or crewmembers.

23 93. These Defendants’ knowing violation of these minimum federal aviation  
24 regulations was a causal factor in the fume event at issue.

25 94. Defendants voluntarily warranted, expressly and impliedly, that they  
26 complied with minimum industry standards and federal regulations such as those above  
27 during the design and manufacture of the subject aircraft such that it was not defective,  
28 in airworthy condition and reasonably fit for their intended and foreseeable uses and  
purposes on the subject engine.

95. Plaintiff and the members of the Classes were injured by the defective  
design of the subject aircraft which were, at the time of the accident, in essentially the  
same condition as when they left the hands of the defendants. The breach of express  
and implied warranties was the proximate cause of injury for Plaintiff and the Class.

1 96. Defendant Frontier contracted with Defendant Airbus so that Frontier  
2 could transport passengers in its aircraft. Defendant Airbus intended that consumers  
3 would be the end users of their aircrafts and that consumers would be the beneficiaries  
4 of its contracts with airlines such as Defendant Frontier.

5 **COUNT III**

6 **Negligence**

7 **(By Plaintiff and the members of the Classes Against All Defendants)**

8 97. Plaintiffs re-allege all previous paragraphs as if set forth verbatim herein.

9 98. At all times relevant hereto, Defendants owed a duty to the Plaintiffs to  
10 use reasonable care in designing, manufacturing, assembling, testing, maintaining,  
11 servicing, selling, marketing, promoting and providing warnings or instructions about  
12 the subject aircraft.

13 99. Such failure had the result that Plaintiff and the members of the Class could  
14 not weigh the risks and chose an alternative plane design or alternative method of  
15 transportation. Thus, but for the failure to warn Plaintiff and the members of the Class  
16 would not have sustained such injuries.

17 100. Defendants negligently breached its duty of care owed to the Plaintiff and  
18 the members of the Classes though one or more of the following negligent acts and  
19 omissions, when Defendants:

20 a. negligently designed, manufactured, assembled and sold the subject  
21 aircraft such that its ventilation system allowed contaminated bleed air to enter  
22 the breathing zone of the aircraft;

23 b. negligently designed, manufactured, assembled and sold the subject  
24 aircraft without an adequate or appropriate air quality monitor, sensor or alarm  
25 to detect bleed air contamination, allow the flight to identify the source of such  
26 contamination and / or permit the flight crew to mitigate or prevent fume events;

27 c. negligently designed, manufactured, assembled and sold the subject  
28 aircraft without adequate or appropriate filters to protect cabin air from

1           contamination;

2           d.     negligently designed, manufactured, assembled and sold the subject  
3           aircraft without proper warnings or instructions regarding the potential of the air  
4           supply system to become contaminated or the danger of exposure to such  
5           contaminated air;

6           e.     negligently designed, manufactured, assembled and sold the subject  
7           aircraft without knowing the actual chemical composition of the aviation jet  
8           engine lubricating oil, required for use on its aircraft;

9           f.     negligently designed, manufactured, assembled and sold the subject  
10          aircraft without knowing what chemicals or byproducts are created when aviation  
11          jet engine lubricating oil is heated to temperatures consistent with those  
12          experienced in the engines, required for use on its aircraft;

13          g.     negligently designed, manufactured, assembled and sold the subject  
14          aircraft without properly testing heated aviation jet engine lubricating oil;

15          h.     negligently designed, manufactured, assembled and sold the subject  
16          aircraft without knowing the quality of the bleed cabin air;

17          i.     negligently failed to incorporate a proper and effective environmental  
18          control system on the subject aircraft;

19          j.     negligently failed to incorporate a proper and effective air supply system  
20          on the subject aircraft;

21          k.     negligently failed to properly test the subject aircraft before distributing it;

22          l.     negligently failed to adequately maintain, service, retrofit and/or inspect  
23          the subject aircraft;

24          m.     negligently represented, promoted and marketed its aircraft as being safe  
25          and failed to provide adequate warnings and instructions about its aircraft; and

26          n.     were otherwise negligent and careless.

27          101.    Defendants owed a duty to adequately warn and instruct about the dangers  
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1 of its aircraft of which it knew, or, in the exercise of ordinary care, should have known,  
2 at the time the product left Defendants' control.

3 102. Defendants negligently failed to warn of the defective and unreasonably  
4 dangerous conditions of the subject aircraft.

5 103. Defendants negligent and willfully misrepresented the safety of its aircraft  
6 and the dangers of air cabin contamination.

7 104. As a direct and proximate result of one or more of the aforesaid negligent  
8 acts and omissions of Defendants, Defendants caused Plaintiff and the members of the  
9 Classes to suffer personal injuries and/or damages and to require medical monitoring.

10 **COUNT IV**

11 **Negligent Infliction of Emotional Distress**

12 **(Against Plaintiff and the Members of the Classes Against Defendant**  
13 **Frontier)**

14 105. Plaintiff repeats and realleges the above paragraphs as if fully stated  
15 herein.

16 106. Defendants' conduct negligently caused emotional distress to Plaintiff and  
17 the Class Members.

18 107. Defendants could reasonably foresee that his action would have caused  
19 emotional distress to Plaintiff and the Class Members.

20 108. Plaintiff and the Class Members were in a specific zone of danger during  
21 and following the "fume event" and at risk of physical harm, causing their fear.

22 109. Plaintiff and the Class Members, immediately or shortly after the "fume  
23 event" suffered distress and emotional harm.

24 110. The intentional and/or reckless conduct of Defendants and each of them  
25 was outrageous and was made with reckless disregard of the probability of causing  
26 injuries and emotional distress to Plaintiff and the members of the Classes, knowing  
27 that Plaintiff and the members of the Classes would be subjected to toxic exposure.  
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1 111. As a foreseeable result of Defendants' intentional and/or reckless conduct,  
2 as described above, Plaintiff and the members of the Classes suffered and continue to  
3 suffer from personal injuries and severe emotional distress from the reasonable fear of  
4 developing cancer amongst other serious health conditions.

5 112. As a direct and proximate result of Defendants' negligent acts and  
6 omissions, Plaintiff and the Classes have suffered and will suffer from great physical,  
7 mental and nervous pain and suffering, including but not limited to fear of cancer, and  
8 Plaintiff and the Classes are informed and believe and based thereon allege that they  
9 will be compelled to seek further treatment in the future for care of injuries sustained  
10 as a direct and proximate result of the Defendants negligence. Plaintiff and the Classes  
11 are further informed and believe and based thereon allege that they have incurred the  
12 costs of medical treatment and will continue to incur such costs into the future.

13 113. In engaging in the conduct as described herein, Defendants acted willfully,  
14 maliciously, oppressively, outrageously, and in conscious disregard and indifference to  
15 the safety and well-being of Plaintiff and the members of the Classes. By reason of  
16 Defendants conduct, as described above, punitive damages should be assessed against  
17 Defendants, in such an amount as may be determined at trial.

18 **COUNT V**

19 **FALSE IMPRISONMENT**

20 **(By Plaintiff and the Members of the Flight 1630 Class Against Defendant**  
21 **Frontier)**

22 114. Plaintiff repeats and realleges the above paragraphs as if fully stated  
23 herein.

24 115. California law defines the tort of false imprisonment as the “unlawful  
25 violation of the personal liberty of another.” *Fermino v. Fedco, Inc.*, 7 Cal. 4th 701, 715  
26 (1994). The tort of false imprisonment consists of the “nonconsensual, intentional  
27 confinement of a person, without lawful privilege, for an appreciable length of time,  
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1 however short.” Id.

2 116. At all times relevant herein, in the absence of any privilege to do so,  
3 Defendant Frontier acted with the intention of confining Plaintiff and the members of  
4 the Flight 1630 Class within fixed boundaries. Defendant’s acts directly or indirectly  
5 resulted in confinement, and the confinement was effectuated without Plaintiff and  
6 Class members' consent.

7 117. Specifically, Plaintiff and members of the Flight 1630 Class were  
8 intentionally confined by Defendant Frontier for several hours in the terminal area of  
9 the airport.

10 118. Such confinement was non-consensual.

11 119. Defendant Frontier intentionally engaged in these acts of false  
12 imprisonment with oppression, fraud and malice, and with reckless disregard of the  
13 rights of Plaintiff and Flight 1630 Class members, entitling them to punitive damages.

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**PRAYER FOR RELIEF**

Plaintiff, on behalf of herself and on behalf of the members of the Class defined herein, prays for judgment and relief on all Causes of Action as follows:

- 1. An order certifying that the action may be maintained as a class action as defined herein;
- 2. An order awarding Plaintiff and the proposed Class members compensatory, general and special damages and punitive damages in an amount to be proven at trial;
- 3. For medical monitoring;
- 4. For a temporary, preliminary and/or permanent order for injunctive relief;
- 4. Pre-judgment and post judgment interest;
- 5. For Attorney fees, disbursements and litigation expenses; and
- 6. Such other and further relief as the Court may deem necessary or appropriate.

DATED: June 1, 2018

**BRADLEY/GROMBACHER, LLP**

By: /s/ Kiley Lynn Grombacher  
Marcus J. Bradley, Esq.  
Kiley Lynn Grombacher, Esq.  
Attorneys for Plaintiff

**DEMAND FOR JURY TRIAL**

Plaintiff hereby demands a jury trial on all claims so triable in this action.

DATED: June 1, 2018

**BRADLEY/GROMBACHER, LLP**

By: /s/ Kiley Lynn Grombacher  
Marcus J. Bradley, Esq.  
Kiley Lynn Grombacher, Esq.  
Attorneys for Plaintiff