

Whistleblower Response to Agency Report

OSC File DI-20-000536
(Weight and Balance)

18 June 2021

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Background

The Federal Aviation Administration (FAA) publically projects an **Illusion of Safety** that is blindly accepted by Congress and members of the public. However when a public failure occurs, the issues “discovered” highlight conditions that were often known or should have been known well before the tragic event.

While recent failures related to the Boeing 737 MAXX and Southwest Airlines Flight 1380 properly demand FAA attention, other known hazards such as weight & balance are often ignored until it can no longer be dismissed.

When you read this report please note a 2014 internal whistleblower investigation (AAE 10 12 0024C) substantiated the initial allegation and found that Flight Standards Service (AFS) was slow to respond to the new information introduced by the inaccurate standard average weight. My opinion is the FAA has no reasonable excuse and cannot adequately explain their inaction or inability to resolve this known safety concern for over 10+ years.

It is important to note that the Agency report shows that the Department of Transportation (DOT) delegated the investigation of these serious allegations including gross mismanagement by the FAA to be investigated by the same FAA.

No one from the FAA Investigation Team contacted me (or possibly FAA Office of Audit and Evaluation (AAE)) about these Office of Special Counsel (OSC) allegations to ensure a complete understanding of the issues or concerns. According to the Agency report the FAA did NOT investigate the allegation that FAA has failed to adequately oversee air carriers and commercial operators’ weight and balance programs and ensure the safety of the aviation industry.

While this Agency report did not substantiate any of the allegations the report appears to validate the whistleblower safety concerns when they reported “*the new circular... streamlines the process and **mitigates a significant amount of the risk that existed** at the time of the Midwest Flight 5481*”. The FAA has often been accused of being a reactive organization. The safety issues related to my weight and balance disclosures provide another example of this type of behavior.

- Please note that AC 120-27F was not published until 2019. As of today many airlines still have not revised their weight and balance programs.
- The issues discussed within the Agency Report should raise many questions about the FAAs ability or inability to detect and resolve known/emerging trends.

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In response to the Air Midwest Flight 5481 crash the FAA issued Advisory Circular (AC) 120-27E¹, dated June 10, 2005. This document stated *“If the FAA finds that the data from NHANES² indicates a weight change of more than 2 percent, the FAA will revise this AC to update the standard average weights.”*

Almost a decade ago I was approached by FAA employees who raised concerns to FAA Senior Management that passenger/baggage weight were no longer accurate. Their concerns included resistance by FAA Executive leadership to recognize this as a safety issue. I conducted a study of the concerns and validated that the NHANES weight had changed by more than 2% thereby requiring a change to the AC and certificate holder approved programs. Our reviews also determined that passenger carryon personal/baggage weight also needed to be increased.

Over the course of a few years these findings were provided (multiple times) both orally and in writing to the Senior Executive leadership within the FAA.

The following text was written in an email from the Director, Flight Standards Service to other Senior Executives dated August 15, 2011.

Subject: Re: URGENT--- Need to revise average standard weights
I talked with [REDACTED] on this. We need to brief [REDACTED] and [REDACTED] to bring awareness to this problem and assure them that we won't create a PR problem.
[REDACTED]

It was only after the FAA leadership failed to act that I submitted to the Office of Audit and Evaluation (AAE)³ a safety issue concerning FAA Advisory Circular (AC) 120-27, Aircraft Weight and Balance Control, dated June 20, 2005.

My 2012 disclosure to AAE alleged that the standard average weights (SAW) for passenger, carry-on baggage and personal items in the AC were inaccurate, necessitating revision. Additionally, I reported to AAE that there was little to no action by AFS Leadership to revise the AC despite a Flight Standards (AFS) workgroup's findings and recommendations in 2010. In October 2012, the FAA Office of Audit and Evaluation (AAE) initiated an investigation into my allegations.

AAE documented their independent investigation in a February 25 2014 Memo from AAE to the FAA Administrator which stated part *“In 2008, most airlines instituted a checked baggage fee which significantly altered a passenger's travel profile by maximizing the use*

¹

https://www.faa.gov/regulations_policies/advisory_circulars/index.cfm/go/document.information/documentid/22749

² National Health and Nutrition Examination Survey

³ https://www.faa.gov/about/office_org/headquarters_offices/aae/

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of carry-on baggage and personal items. In addition, nationally published information reflected that passenger body weights had increased. As a result of Safety Recommendations made by the National Transportation Safety Board (NTSB) in 2004 in response to a fatal accident in 2003, AFS examined standard average weights in AC 120-27. To date, two recommendations related to standard average weights are still open. AFS has acknowledged the need to revise weight and balance guidance and published a draft revision to AC 120-27 in November 2013. AFS is reviewing public comments prior to formal publication. The investigation by AAE substantiated the allegation and found that AFS was slow to respond to the new information introduced by the inaccurate SAW, even though there was AFS leadership support for revising AC 120-27 following the 2010 workgroup's findings and recommendations."

As the years passed since the FAA Administrator was notified of the substantiated allegations the silence became deafening. Because of the inaction by the FAA Leadership I alerted the Office of Special Counsel (OSC).

Since I had previously disclosed the concerns to the FAA, the OSC only accepted my submission (DI-18-2728) into their informal whistleblower process. A review of agency responses to the OSC about this ongoing safety hazard appeared to show very misleading and/or inaccurate information. For example the FAA response to the OSC showed

- *“the FAA utilized other tools to monitor the accuracy of aircraft weight and balance, such as the planned versus actual fuel burns and”*
 - Note- This statement is not likely accurate since the FAA generally does not have access to individual air carrier fuel burn data. The OSC should have requested access to the “other tools” including fuel burn data from the FAA.
- *“that airlines must come into compliance with the circular within 12 months of its publication.”*
 - Note- This statement was simply not true. In fact a FAA Advisory Circular (AC) only presents recommendations for an acceptable means, but not the only means, to develop and receive approval for a W&B control program.
 - Note- Please note the revised AC dated May 6, 2019 did not mention or approve a 12 month compliance date for the airline industry as stated by the OSC letter to me.

Once again when the FAA failed to ensure compliance with their own stated 12 month deadline I alerted the OSC who accepted my concern as a new submission⁴.

After my second OSC submission, the FAA issued Notice 8900.552. This new Notice contained new 12 month due date and a requirement for certificate holders to provide the

⁴ OSC Case DI-20-000536

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FAA a plan that demonstrates the operator's willingness and ability to gain approval of their updated WBP by June 12, 2021. The Notice appeared to suggest that airlines revise their program or start using actual weights after June 12, 2021⁵. This was not correct because the FAA used the word "should". The use of "should" permitted certificate holders to continue using previously approved weights.

- It is also interesting to note that the FAA continued to approve many revisions over the year using the Notice due date has their authority to not require revisions to passenger/baggage weights that the FAA acknowledged no longer reflect the United States population.

After almost a decade of procrastination the FAA is finally beginning to move in the right direction, unfortunately their rush to respond to the most recent OSC submission and the lack of any formal training has introduced many new safety, regulatory and policy concerns which a few are shown below.

However the bigger question is why it should take a decade, three whistleblower submissions and several hundred Hotline submissions for the Agency to finally recognize a well-known safety issue?

Another troubling concern directly related to me is that the FAA continues to retaliate against whistleblowers for making safety disclosures which may be aimed at others to discourage them from reporting known safety issues⁶. An internal FAA Investigation (H12E047CC) revealed that I was retaliated against for cooperating with the OIG during their audit of ASIAs. Another internal FAA Investigation (AERO-4741) revealed a respected FAA employee reported in a Memorandum for Record that the former Manager & Chief Investigator, Audit and Analysis Branch (AAE-100) which oversees the FAA Whistleblower Program had planned to get me fired just like he did other whistleblowers.
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Listed below are various areas which highlight the past/present/future dangers related to my weight and balance whistleblower disclosures and Hotline submissions.

While the FAA leadership often claims that safety is their top priority this is simply not true because over the past decade and since my disclosure "other top priorities" have caused this whistleblower to be organizationally reassigned many times.

"When everything is a priority, nothing is a priority"

⁵ FAA Hotline Reference Number FHIS-0044337

⁶ FAA Hotline Case A20210325002

⁷ Memorandum for Record, March 14, 2014, April 18, 2014,
<https://www.commerce.senate.gov/services/files/621F43CC-9CFE-45AE-BA35-CD5EF9A60FC4>

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Systemic Organizational Hazard

A review of FAA and NASA Aviation Safety Reporting System (ASRS) data show several reported concerns related to FAA approved weight and balance program / passenger weights. The FAA reportedly relies on numerous databases to identify aviation safety hazards. For too many years I have reported that many of these AVS safety databases/systems contain incomplete, inconsistent, and inaccurate data. If the quality of the data continues to remain poor, its inputs to safety-related decisions may not be reliable, and WILL impact our ability to effectively support the FAA'S safety mission.

For example; a March 11, 2021 Memo from AAE-1 to the Whistleblower states, *“In June 2019, after unsuccessful attempts to report discrepancies, or organizational and operational vulnerabilities through various AVS reporting means, you recommended the FAA establish an “employee safety reporting program.” In response, I encouraged you to utilize the FAA Hotline for such reports. Since then, you have filed over 650 reports on varying systemic issues centric to the use of Flight Standards’ Web-Based Operations Safety Systems (WebOPPS) and currency of data collected and maintained therein. To date, substantiated reports clearly point to a systemic weakness with WebOPPS that appears to hinder optimal operator oversight by the certificate holding office. As a result of the number of substantiated allegations, I have asked my Chief Investigator to assess and summarize the findings related to your disclosures and I will make appropriate recommendations to the Administrator, pursuant to the provisions of Title 14 USC Section 106(t)(3)(A)(iii) under case number IWB21802”.*

In August 2012 I properly disclosed to the FAA Office of Audit and Evaluation (AAE) a significant safety issue concerning FAA Advisory Circular (AC) 120-27, Aircraft Weight and Balance Control, dated June 20, 2005. My disclosure alleged that the standard average weights (SAW) for passenger, carry-on baggage and personal items in the AC were inaccurate, necessitating revision. Additionally, I reported to AAE that there was little to no action by AFS Leadership to revise the AC despite a Flight Standards (AFS) workgroup's findings and recommendations in 2010. My disclosure was supported by many facts, emails and internal reports.

In October 2012, the FAA Office of Audit and Evaluation (AAE) initiated an investigation into my allegations.

The attached February 25 2014 Memo from AAE to the FAA Administrator states:

“In 2008, most airlines instituted a checked baggage fee which significantly altered a passenger's travel profile by maximizing the use of carry-on baggage and personal items. In addition, nationally published information reflected that passenger body weights had increased. As a result of Safety Recommendations

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made by the National Transportation Safety Board (NTSB) in 2004 in response to a fatal accident in 2003, AFS examined standard average weights in AC 120- 27. To date, two recommendations related to standard average weights are still open. AFS has acknowledged the need to revise weight and balance guidance and published a draft revision to AC 120-27 in November 2013. AFS is reviewing public comments prior to formal publication.

The investigation by AAE substantiated the allegation and found that AFS was slow to respond to the new information introduced by the inaccurate SAW, even though there was AFS leadership support for revising AC 120-27 following the 2010 workgroup's findings and recommendations.

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Safety Risk Management

The Agency report minimizes the whistleblower allegations and did NOT investigate the allegation that FAA has failed to adequately oversee air carriers and commercial operators’ weight and balance programs and ensure the safety of the aviation industry.

The Agency Report seems to show the FAA acknowledged and accepted a “significant amount of risk” has existed since 2003. A quick review of FAA Order 8040.4B FAA Safety Risk Management Policy⁸ shows that this ongoing risk may be classified between Medium and High.

The Agency Report did not show any classification of the risk associated with these allegations. The Agency report should describe how the FAA used FAA Order 8040.4B when reviewing these allegations. Additionally the Agency report should describe the mitigation being used for each reported concern.

Table C-1: Severity Definitions*

Minimal 5	Minor 4	Major 3	Hazardous 2	Catastrophic 1
Negligible safety effect	<ul style="list-style-type: none"> - Physical discomfort to persons - Slight damage to aircraft/vehicle 	<ul style="list-style-type: none"> - Physical distress or injuries to persons - Substantial damage to aircraft/vehicle 	Multiple serious injuries; fatal injury to a relatively small number of persons (one or two); or a hull loss without fatalities	Multiple fatalities (or fatality to all on board) usually with the loss of aircraft/vehicle

* Excludes vehicles, crew, and participants of commercial space flight.

Table C-2: Likelihood Definitions – Commercial Operations/Large Transport Category

	Qualitative	Quantitative – Time/Calendar-based Occurrences Domain-wide/System-wide
Frequent A	Expected to occur routinely	Expected to occur more than 10 times per year
Probable B	Expected to occur often	Expected to occur between one and 10 times per year
Remote C	Expected to occur infrequently	Expected to occur one time every 1 to 3 years
Extremely Remote D	Expected to occur rarely	Expected to occur one time every 3 to 10 years
Extremely Improbable E	Unlikely to occur, but not impossible	Expected to occur less than once every 10 years

⁸ https://www.faa.gov/documentLibrary/media/Order/FAA_Order_8040.4B.pdf

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05/02/17

8040.4B
Appendix C

When the issue or change being assessed might include both commercial and general aviation, the issue or change should be parsed into separate items to allow targeted assessments and enable the appropriate risk matrix to be used.

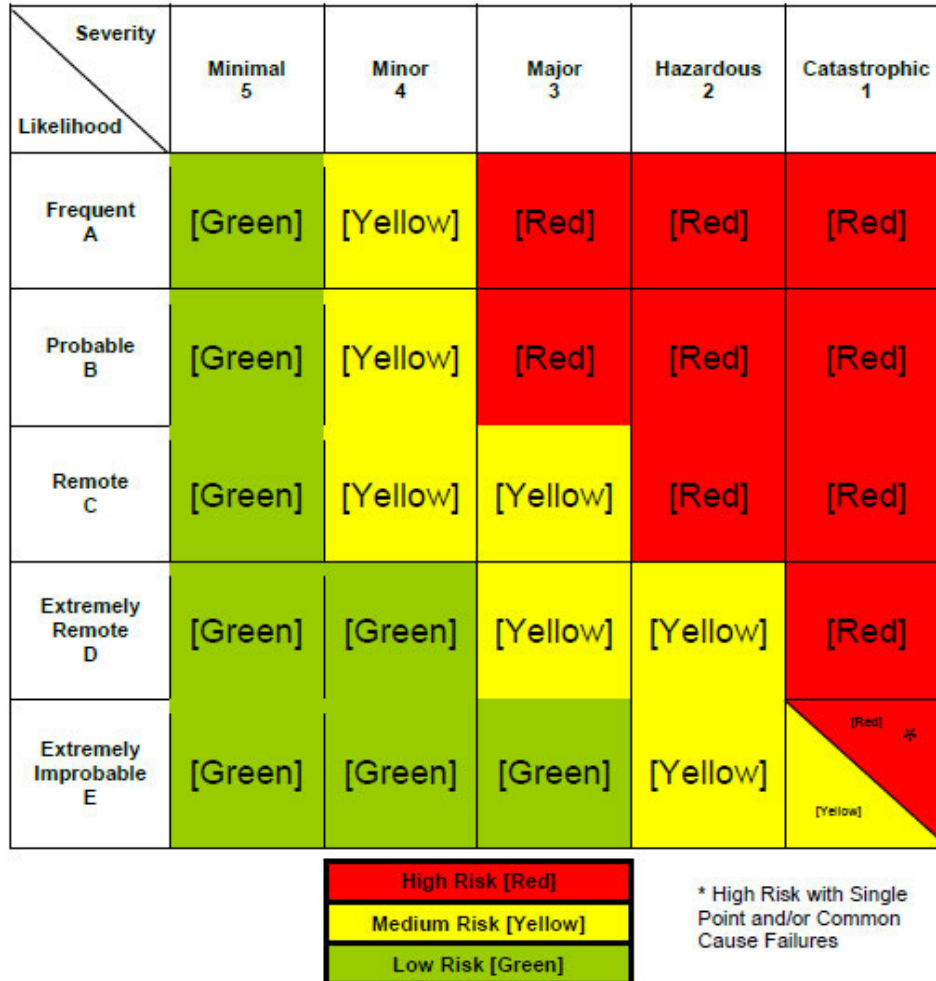


Figure C-1: Risk Matrix – Commercial Operations/Large Transport Category

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FAA Policies

FAA Policies make it very clear that the operation of overweight aircraft could and has led to loss of life and presents a very substantial and specific danger. Despite this knowledge, senior leadership failed to recognize the ongoing danger even after the FAA Administrator was alerted in writing by the Office of Audit and Evaluation who substantiated a 2012 whistleblower allegation.

Sample Policy Excerpts

- Correct data is equally important for all methods used to calculate weight and balance”, but unlike other methods, software programs usually have pre-loaded information, such as basic operating weight. If the pre-loaded data is not verified to be accurate, then the calculations will be incorrect and could place the aircraft outside of weight and/or center of gravity limitations, which could have **catastrophic consequences**.⁹
- In some isolated cases, air carriers have developed procedures for aircraft loading that exceeds the structural design capability of the aircraft. Exceeding this capability can lead to **catastrophic failure of the aircraft**.¹⁰
- Errors in takeoff performance calculation increase the risk of a takeoff runway excursion. Operators should have procedures in place that provide proper weight-and-balance data, accurate takeoff performance data and methods for error detection. Incorrect data used to calculate takeoff performance or the lack of the required data could result in an incident or accident. Operation with the center of gravity (CG) outside the approved limits results in control difficulty¹¹.
- Compliance with the weight and balance limits of any aircraft is critical to flight safety. Operating above the maximum weight limitation **compromises the structural integrity of an aircraft and adversely affects its performance**.¹²
- Improper loading decreases the efficiency and performance of an aircraft from the standpoint of altitude, maneuverability, rate of climb, and speed. It may even be the cause of failure to complete the flight or, for that matter, failure to start the flight. Because of abnormal stresses placed upon the structure of an improperly loaded

⁹ [FAA SAFO 18012- Weight and Balance Calculations for Title 14 of the Code of Federal Regulations Part 135 Certificate Holders.](#)

¹⁰ [FAA SAFO 17003- Non-compliance with a Manufacturer’s Federal Aviation Administration \(FAA\)-approved Aircraft Weight and Balance Manual \(WBM\)](#)

¹¹ [FAA SAFO 16008 titled Reducing the Risk of Runway Excursions During Takeoff](#)

¹² [FAA-H-8083-25B- The Pilot’s Handbook of Aeronautical Knowledge](#)

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aircraft, or because of changed flying characteristics of the aircraft, **loss of life and destruction of valuable equipment may result**.¹³

- In the FAA's view, it would be unsafe for an aircraft operator to use standard average weights in any of the following aircraft:
 - All single-engine piston-powered aircraft.
 - All multiengine piston-powered aircraft.
 - All turbine-powered single-engine aircraft"¹⁴.
 - Note- I have reported to the FAA Hotline many examples of the FAA approving these types of aircraft in various OPSS paragraphs.

¹³ [FAA-H-8083-1B -The Aircraft Weight and Balance Handbook](#)

¹⁴ [FAA Advisory Circular 120-27F - Aircraft Weight and Balance Control](#)

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Fatal Accidents

General Aviation- the National Transportation Safety Board stated that between 2008 and 2016, the probable causes of 136 general aviation (GA) accidents were related to pilots improperly conducting preflight performance calculations for weight and balance or not conducting them at all. **One-third of these accidents resulted in pilot and/or passenger deaths.**¹⁵

Chicago & Southern Airlines (16 fatalities) - On October 21, 1971 Flight 804 was destroyed in an accident near Peoria-Greater Peoria Airport, Illinois. All sixteen on board were killed.

As of June 14, 2021 the NTSB still classifies their weight and balance safety recommendation as follows;

- **A-72-054 as Closed – Unacceptable Action**¹⁶

Arrow Airlines, Inc. (256 fatalities) - On December 12, 1985, an Arrow Airlines, Inc. (Arrow) McDonnell Douglas DC-8-63, N950JW, crashed shortly after takeoff from Gander, Newfoundland, Canada, where it had stopped to refuel on a military contract flight from Cairo, Egypt, to Fort Campbell, Kentucky. The flight crew of N950JW were operating under 14 CFR Part 121 rules as flight MF128R from Cairo to Ft. Campbell via Cologne, West Germany, and Gander. All 248 passengers, who were soldiers from the U.S. Army 101st Airborne Division, and the crew of 8 were killed in the impact and post-crash fire.

Some of the findings listed in the Canadian Aviation Safety Board report include;

- The take-off weight at Gander calculated by the crew was about 14,000 pounds less than the actual take-off weight of the aircraft.
- The take-off reference speeds believed to have been used by the crew during the accident take-off were applicable to a take-off weight at least 14,000 pounds less than the actual take-off weight and may have been applicable to a take-off weight as much as 35,000 pounds less than the actual take-off weight.
- Although the use of actual passenger weights was required by the Arrow Air Operations Manual, the crew used a standard average weight to

¹⁵ <https://www.nts.gov/safety/safety-alerts/Documents/SA-072.pdf>

¹⁶ <https://data.nts.gov/carol-main-public/sr-details/A-72-054>

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calculate the weight of passengers. This average passenger weight did not accurately reflect the actual weight of the passengers carried on the flight.

As of June 14, 2021 the NTSB still classifies their weight and balance safety recommendation as follows;

- **A-86-021 as Closed – Unacceptable Action**¹⁷
- Note the above recommendation was for the Department of Defense however topic is applicable to airlines who support these types of operations today.

Ryan Air Service (18 fatalities) – On November 23, 1987, at 6:25 p.m., Alaskan standard time, Ryan Air Service, Inc., (Ryan Air) flight 103, a Beechcraft 1900C, N401RA, with 2 flight crewmembers and 19 passengers on board, crashed short of runway 3 at Homer Airport, Homer, Alaska. Flight 103 was a regularly scheduled 14 CFR Part 135 flight operating between Kodiak and Anchorage, Alaska, with intermediate stops at Homer and Kenai, Alaska. Sixteen passengers and the two flight crewmembers were fatally injured. Three passengers received serious injuries.

As of June 9, 2021 the NTSB still classifies their weight and balance safety recommendation as follows;

- **A-88-041 as Closed – Unacceptable Action**¹⁸

Fine Air (5 fatalities) – On August 7, 1996 a McDonnell Douglas DC-8-61F N27UA operated Fine Air Flight 101 from Miami International Airport to Las Américas International Airport crashed after take-off at Miami International Airport.^[1] All 4 people on board and one person on the ground were killed.^{[2][3]}

The NTSB released the accident report on June 16, 1998. The "probable cause" reads: Contributing to the accident was;

- **the failure of the Federal Aviation Administration (FAA)** to adequately monitor Fine Air's operational control responsibilities for cargo loading and the failure of the FAA to ensure that known cargo-related deficiencies were corrected at Fine Air.¹⁹

¹⁷ <https://data.nts.gov/carol-main-public/sr-details/A-86-021>

¹⁸ <https://www.asias.faa.gov/apex/?p=100:42:::NO::AP BRIEF RPT VAR:A-88-041>

¹⁹ <https://www.nts.gov/investigations/AccidentReports/Reports/AAR9802.pdf>

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As of June 12, 2021 the NTSB still classifies their weight and balance safety recommendations as follows;

- **A-98-051 as Closed - Unacceptable Action**²⁰

Air Midwest (21 fatalities) - On January 8, 2003, Air Midwest Flight 5481 (operating as US Airways Express Flight 5481) stalled while departing Charlotte Douglas International Airport and crashed into an aircraft hangar, killing all 21 passengers and crew aboard and injuring one person on the ground.

In response to this fatal accident the NTSB issued several safety recommendations including A-04-018. This recommendation stated unless an actual weight program is developed and implemented, establish a weight and balance program that requires 14 Code of Federal Regulations Part 121 air carriers to periodically sample passenger and baggage weights and determine appropriate statistical distribution characteristics for regional, seasonal, demographic, aircraft, and route variances.

The NTSB released the accident report on February 26, 2004²¹. The "probable cause" reads: Contributing to the cause of the accident were;

- Air Midwest's weight and balance program at the time of the accident;
- the **Federal Aviation Administration's (FAA) average weight** assumptions in its weight and balance program guidance at the time of the accident; and
- the **FAA's lack of oversight** of Air Midwest's maintenance program and its weight and balance program.

As of May 25, 2021 the NTSB still classifies their weight and balance safety recommendations as follows;

- **A-04-018 as Open - Unacceptable Response**²².
 - NTSB Comment- "We believe that your agency's plan to revise Order 8900.1 to include guidance for inspectors to periodically sample the weight and balance data operators use to ensure that it is valid is responsive to this recommendation. We are concerned,

²⁰ <https://data.nts.gov/carol-main-public/sr-details/A-98-051>

²¹ <https://www.nts.gov/investigations/AccidentReports/Pages/AAR0401.aspx>

²² <https://data.nts.gov/carol-main-public/sr-details/A-04-018>

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however, **because this recommendation is now 16 years old and you still need to revise the order. Pending the appropriate revisions to Order 8900.1, Safety Recommendation A-04-19 is classified “Open—Unacceptable Response.**

- **A-04-019 as Open - Unacceptable Response²³**

Blackhawk International Airways (9 fatalities)- On August 25, 2001 at the Marsh Harbour International Airport, Marsh Harbour, Abaco, Bahamas, a Cessna 402B utility liner aircraft, Registration N8097W, operated by Black Hawk International Airways crashed shortly after takeoff from Runway 27. The baggage from the airplane was removed and weighed. The total weight of the luggage, fuel on board at the time of the accident, plus the weight of the passengers showed that the total **gross weight of the airplane was substantially exceeded.** Preliminary center of gravity calculations showed that the center of gravity was significantly outside the flight envelope past the aft center of gravity.²⁴

Carson Helicopters, Inc. (9 fatalities) On August 5, 2008, about 1941 Pacific daylight time, a Sikorsky S-61N helicopter, N612AZ, impacted trees and terrain during the initial climb after takeoff from Helispot 44 (H-44), located at an elevation of about 6,000 feet in mountainous terrain near Weaverville, California. The pilot-in-command, the safety crewmember, and seven firefighters were fatally injured; the copilot and three firefighters were seriously injured.

The NTSB released the accident report on December 7, 2010²⁵. The "probable cause" reads: The National Transportation Safety Board determines that the probable causes of this accident were the following actions by Carson Helicopters:

- the intentional understatement of the helicopter's empty weight,
- the alteration of the power available chart to exaggerate the helicopter's lift capability, and
- the practice of using unapproved above-minimum specification torque in performance calculations that, collectively, resulted in the pilots relying on performance calculations that significantly overestimated the helicopter's load-carrying capacity and did not provide an adequate performance margin for a successful takeoff; and

²³ <https://data.nts.gov/carol-main-public/sr-details/A-04-019>

²⁴ https://www.nts.gov/layouts/nts.aviation/brief2.aspx?ev_id=20010907X01905&ntsbno=MIA01RA225&akey=1

²⁵ <https://www.nts.gov/investigations/AccidentReports/Pages/AAR1006.aspx>

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- **insufficient oversight by the USFS and the Federal Aviation Administration (FAA).**

National Airlines (7 fatalities) Flight 102 was a cargo flight operated by National Airlines between Camp Bastion in Afghanistan and Al Maktoum Airport in Dubai, with a refueling stop at Bagram Airfield, Afghanistan. On 29 April 2013, the Boeing 747-400 operating the flight crashed moments after taking off from Bagram, killing all seven people on board.

The NTSB released the accident report on July 14, 2015²⁶. The National Transportation Safety Board stated;

- **Contributing to the accident was the FAA's inadequate oversight** of National Airlines' handling of special cargo loads.
- **Important Note-** While the NTSB report clearly shows that oversight of the certificate was the responsibility of the assigned inspectors it is important to note that the FAA did have safety personnel assigned on location to the Middle East that could have supplemented the inadequate FAA oversight. For example former Manager, AFS-50 International Program Division was located onsite in Afghanistan between 2012- 2013.

As of June 16, 2021 the NTSB still classifies their weight and balance safety recommendations as follows;

- **A-15-014 as Open - Unacceptable Response**²⁷.
- **A-15-015 as Closed - Unacceptable Action**²⁸
- **A-15-018 as Closed - Unacceptable Action**²⁹

Rediske Air (10 fatalities) - On 7 July 2013, a single-engine de Havilland Canada DHC-3 Otter, N93PC operated by air charter company Rediske Air, crashed on take-off at Soldotna Airport, Alaska. The sole crewmember and all nine passengers on board were killed³⁰.

²⁶ <https://www.nts.gov/investigations/AccidentReports/Pages/AAR1501.aspx>

²⁷ <https://data.nts.gov/carol-main-public/sr-details/A-15-014>

²⁸ <https://data.nts.gov/carol-main-public/sr-details/A-15-015>

²⁹ <https://data.nts.gov/carol-main-public/sr-details/A-15-018>

³⁰ <https://data.nts.gov/carol-rep-gen/api/Aviation/ReportMain/GenerateNewestReport/87398/pdf>

Because of previous (substantiated) and ongoing whistleblower retaliation by FAA Management Officials the **WHISTLEBLOWER DOES NOT CONSENT** to name or other identifying information from being released into the public information files.

OSC File DI-20-000536 (Weight and Balance)
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The National Transportation Safety Board determines the probable cause(s) of this accident to be:

- The operator's failure to determine the actual cargo weight, leading to the loading and operation of the airplane outside of the weight and center of gravity limits contained in the airplane flight manual, which resulted in an aerodynamic stall.
- **Contributing to the accident was the Federal Aviation Administration's failure to require weight and balance documentation** for each flight in 14 Code of Federal Regulations Part 135 single-engine operations.

As of June 9, 2021 the NTSB still classifies their weight and balance safety recommendations related to this accident as follows;

- **A-89-135 as Closed – Unacceptable Action**³¹
- **A-99-061 as Closed - Unacceptable Action**³²

³¹ <https://data.nts.gov/carol-main-public/sr-details/A-89-135>

³² <https://data.nts.gov/carol-main-public/sr-details/A-99-061>

Because of previous (substantiated) and ongoing whistleblower retaliation by FAA Management Officials the **WHISTLEBLOWER DOES NOT CONSENT** to name or other identifying information from being released into the public information files.

Gross Mismanagement

Definition- White v. Department of the Air Force, 63 M.S.P.R. 90, 95 (1994) (**gross mismanagement means a management action or inaction which creates a substantial risk of significant adverse impact upon the agency's ability to accomplish its mission**)³³.

FAA Internal Whistleblower (IWB) Case 21802- A March 11, 2021 Memo from AAE-1 to the Whistleblower states, *"In June 2019, after unsuccessful attempts to report discrepancies, or organizational and operational vulnerabilities through various AVS reporting means, you recommended the FAA establish an "employee safety reporting program." In response, I encouraged you to utilize the FAA Hotline for such reports. **Since then, you have filed over 650 reports on varying systemic issues centric to the use of Flight Standards' Web-Based Operations Safety Systems (WebOPPS) and currency of data collected and maintained therein. To date, substantiated reports clearly point to a systemic weakness with WebOPPS that appears to hinder optimal operator oversight by the certificate holding office.** As a result of the number of substantiated allegations, I have asked my Chief Investigator to assess and summarize the findings related to your disclosures and I will make appropriate recommendations to the Administrator, pursuant to the provisions of Title 14 USC Section 106(t)(3)(A)(iii) under case number IWB21802"*.

FAA Policy to Use Operations Specifications

- **FAA Order 8900.1, Volume 3, Chapter 18, Section 1, paragraph 3-679**
 - **LEGAL BASIS FOR OPSPECS.** Title 49 of the United States Code (49 U.S.C.) (formerly the Federal Aviation Act of 1958 (FA Act)), through the Secretary of Transportation, empowers the Federal Aviation Administration (FAA) to issue certificates to qualified air operators. Title 49 U.S.C. § 44701 requires each air carrier certificate to include the terms, conditions, and limitations reasonably necessary to ensure safety in air transportation. Included in FAA certificates issued to air operators conducting operations under parts 121, 125, 135, 142, and 145 is a stipulation that those operations must be conducted in accordance with the provisions and limitations specified in the OpSpecs. The regulations in 14 CFR part 119 require that the OpSpecs issued to parts 121, 125, and 135 certificate holders specify the authorizations, limitations, and certain procedures under which each type of operation must be conducted and under which each class and size of aircraft

³³ [MSPB JUDGES' HANDBOOK](#)

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OSC File DI-20-000536 (Weight and Balance)
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must be operated. Part 119 specifies in general terms the basic content of OpSpecs for each kind of operation. The regulations also state that a person engaged in operations governed by OpSpecs issued under part 121, 125, 135, 142, or 145 may not conduct those operations either without OpSpecs or in violation of the appropriate OpSpecs. These regulations also stipulate that the Administrator may add to or amend the OpSpecs whenever necessary to address particular situations. In addition, the rule provides for the suspension or cancellation of OpSpecs for cause.

- **FAA Order 8900.1, Volume 3, Chapter 18, Section 3**
 - **OPSPEC/MSPEC/LOA A097—SMALL CABIN AIRCRAFT PASSENGER AND BAGGAGE WEIGHT PROGRAM.** Operators of small-cabin aircraft (aircraft originally certificated for 5 to 29 passenger seats) that wish to use any combination of standard average, survey-derived average, and/or actual passenger and baggage weights must be issued OpSpec/MSpec/LOA A097.
 - **OPSPEC/MSPEC/LOA A098—MEDIUM CABIN AIRCRAFT PASSENGER AND BAGGAGE WEIGHT PROGRAM.** Operators of medium-cabin aircraft (aircraft originally type certificated (TC) for 30 to 70 passenger seats) that wish to use any combination of standard average, survey-derived average, and/or actual passenger and baggage weights must be issued OpSpec/MSpec/LOA A098.
 - **OPSPEC/MSPEC/LOA A099—LARGE CABIN AIRCRAFT PASSENGER AND BAGGAGE WEIGHT PROGRAM.** Operators of large-cabin aircraft (aircraft originally certificated for 71 or more passenger seats) that wish to use any combination of standard average, survey-derived average, and/or actual passenger and baggage weights must be issued OpSpec/MSpec/LOA A099.

Office of Special Counsel Cases linked to FAA Operations Specifications

- **OSC File No. DI-17-1298**
 - **SUBSTANTIATED-** ASIs are improperly approving aircraft for addition to Operations Specifications (Ops Specs) under Part 135 without appropriately reviewing the exemptions of the aircraft.

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- **SUBSTANTIATED-** Aircraft had operated in the National Airspace System without the authority to operate due to expired registration and airworthiness certificates.
- **OSC File No. DI-19-2560**
 - **SUBSTANTIATED-** Aviation Safety Inspectors have failed to verify that all aircraft on carriers' operations specifications are properly insured.
 - **SUBSTANTIATED-** Aircraft have operated in the national air system (sic) without a certificate of liability insurance on file with the FAA.
- **OSC File No. DI-19-3959**
 - **SUBSTANTIATED-** Principal Inspectors have failed to ensure that training centers are conducting only FAA-approved training curriculum.
 - **SUBSTANTIATED-** Pilots and flight crewmembers may have obtained certification based upon expired training courses.
- **OSC File No. DI-20-000393- Referred to DOT- Non Standard OPSS**
 - Submission to OSC a substantial and specific danger to public health or safety and/or possible violation of a law, rule, or regulation. OPSS Nonstandard Text-
- **OSC File No. DI-20-000690- Referred to DOT- North Atlantic Operations**
 - Submission to OSC a substantial and specific danger to public health or safety and/or possible violation of a law, rule, or regulation-OPSS B039 Operations
- **OSC File No. DI-20-000914- Referred to DOT- Unauthorized Training Providers**
 - Submission to OSC a substantial and specific danger to public health or safety and/or possible violation of a law, rule, or regulation- Hundreds of Certificate Holder possible use of non-approved Outsourced Training Center/Providers

Conclusion- the FAA will generally revoke the certificate of any person or airline that demonstrates a pattern of unsafe practices or noncompliance.

Individually the bullets shown below should raise concern. However the bullets taken as a group clearly show any reasonable person Gross Mismanagement by the FAA.

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- **FAA requires by law³⁴ the use of OPSS**
- **OPSS is required to be used by Inspectors to approve certificate holders weight and balance programs**
- The FAA knows about systemic weakness with WebOPPS that appears to “*hinder optimal operator oversight by the certificate holding office*”.
 - The FAA has been alerted to deficiencies with OPSS Automation
 - The FAA has been alerted to deficiencies with OPSS Policies
- The FAA has been alerted by the OSC to several concerns related to this submission
 - OSC File No. DI-17-1298
 - OSC File No. DI-19-2560
 - OSC File No. DI-19-3959
 - OSC File No. DI-20-000393
 - OSC File No. DI-20-000690
 - OSC File No. DI-20-000914
- Over the past decade, the FAA has been extremely slow to address and resolve known safety concerns related to passenger and baggage weights
- Over the past decade, the FAA has been extremely slow to respond or follow-up to NTSB recommendations
- The FAA regularly dismisses my submitted safety recommendations
- The FAA retaliates against whistleblowers
- The FAA is slow to investigate Hotline Complaints
- **The DOT/FAA submitted a report to the OSC that admitted the FAA did NOT investigate the allegation that FAA has failed to adequately oversee air carriers and commercial operators’ weight and balance programs and ensure the safety of the aviation industry**
- **The Agency Report shows the DOT assigned the FAA to investigate itself**
- A review of NTSB reports list some type of failure by the Federal Aviation Administration (FAA) contributed to the cause of the fatal accident.

³⁴ §119.5 Certifications, authorizations, and prohibitions

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OSC File DI-20-000536 (Weight and Balance)
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Reported Safety Issues

Please understand that this list of reported safety issues is not me highlighting “*Look what I have done*”, but rather a list of what the FAA has not done or done well.

The purpose of this list is to provide the reader objective evidence supporting the substantial and specific danger to public health or safety and gross mismanagement allegations. Because of my commitment to aviation safety, the FAA Leadership cannot ignore or report in good faith they did not know about these organizational and operational deficiencies.

The purpose of this OSC complaint was to continue highlighting real safety concerns that were getting worse due to Airline pressure and the FAAs lack of commitment to the American public that safety rather than economic (or public relations) considerations was its highest priority.

Once again the FAA oversight failed to notice or adapt to these weight changes when Airlines started reducing leg room by adding extra seats and then started charging extra for carry-on baggage.

I cannot explain why the FAA did not notice these new hazards since they were topics of a Congressional Hearing³⁵ and many Media reports³⁶. These issues not only frustrated passengers it added “real” weight to the aircraft that was largely ignored by both the airlines and the Federal Aviation Administration (FAA) who delayed action for over a decade.

It was disappointing that no one from the FAA Investigation Team even contacted me (or possibly AAE) about these OSC allegations to ensure a complete understanding of the issues or concerns. According to the Agency report the **FAA did NOT investigate the allegation** that the FAA has failed to adequately oversee air carriers and commercial operators’ weight and balance programs and ensure the safety of the aviation industry.

The table below shows a partial list of safety/regulatory/policy concerns that were reported by me. It does not include safety concerns reported by other employees or contractors

These reported concerns highlight specific examples where the FAA has failed to adequately oversee air carriers and commercial operators’ weight and balance programs and ensure the safety of the aviation industry.

³⁵ [House Hearing- State of Aviation Safety - February 27, 2018](#)

³⁶ [Washington Post Article titled Are airplane seats getting dangerously small? The FAA is about to find out.](#)

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OSC File DI-20-000536 (Weight and Balance)
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Title of Submission/Concern	Status	Date Opened	Date Closed	FAA CASE Number(s) / Notes
Report of Internal Whistleblower Contribution, Aircraft Weight and Balance Control, Advisory Circular 120-27E	Substantiated	25-Feb-14		AAE10-12-0024 (c)
Spirit Airlines Flight 202 from Dallas Fort-Worth (DFW) to Baltimore/Washington (BWI) various weight and balance concerns report to assigned inspectors	Substantiated	15-Jun-18		CMT will use the FAA Compliance Philosophy to resolve this matter.
Safety Concern- FAA SAFO 18012 titled Weight and Balance Calculations for Title 14 of the Code of Federal Regulations Part 135 Certificate Holders.	Rejected	31-Oct-18		FHIS-0011100 AAE Note- This one was not converted into a case as the OSC weight and balance issue was pending. If it was weight and balance, they were all not accepted into the system since there was a pending OSC matter related to weight and balance.
Regulatory and Safety Concerns - American Airlines - Average Passenger Weight, Carry-on/Personal Item Weight and OPSS A099	Not Substantiated	01-Apr-19	03-Dec-19	FHIS-0013795 A20190402010 Submitted FOIA Request- 2020-002207
Regulatory, Policy and Safety Concerns AC 120-27E why after so many years the FAA will not take immediate and appropriate action for these well-known data-driven safety and regulatory concerns	Not Opened	15-Apr-19	14-Aug-19	FHIS-0014008 AAE Note- This one was not opened as a hotline as the issue of weight and balance, safety recs and was a matter you had reported to the OSC.
Safety/Regulatory Concern - Possible Non Compliance with 14 CFR 119.5 and/or other rules by many commercial operators when the FAA cancelled AC 120-27E	Open	10-May-19		FHIS-0014444
Grand Canyon Airlines, Inc. (GCNA035A) - Possible Unsafe Operations - Aircraft Weight and Balance Control Program	Substantiated	30-May-19	21-Aug-20	FHIS-0014757 A20190530015
TRUE AVIATION CHARTER SERVICES, LLC (STRA245M) - Possible Unsafe Operations - Aircraft Weight and Balance Control Program	Substantiated	30-May-19	21-Aug-20	FHIS-0014753 A20190530014
Planemasters, Ltd.(DPUA243K) - Possible Unsafe Operations - Aircraft Weight and Balance Control Program	Substantiated	30-May-19		FHIS-0014754 A20190530013
Possible non compliance with FAA Policy- If OpSpec A096 is issued, OpSpecs A097, A098, and/or A099 may not be issued- Weight and Balance	Substantiated	03-Jun-19	03-Nov-20	FHIS-0014812 A20190603012
Global Aviation Inc. G73A732I - Possible Unsafe Operations - Aircraft Weight and Balance Control Program	Open	07-Jun-19		FHIS-0014877 A20190822013
PC-12 Aircraft - Possible Unsafe Operations - Certificate Holders Aircraft Weight and Balance Control Program	Open	07-Jun-19		FHIS-0014879 A20190822014

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RU3A - Flight Program Operations - Aircraft Insurance / Weight and Balance Control Program Concerns	Open	07-Jun-19		FHIS-0014882
W9FA - FAA Washington Flight Program - Aircraft Insurance / Weight and Balance Control Program Concerns	Open	07-Jun-19		FHIS-0014880 A20200604015
Possible Non Compliance with approved Weight and Balance Program - HFQA - Aviation Concepts, Inc.	Substantiated	19-Jul-19	29-Jul-20	FHIS-0015602 A20190722004
Possible Non Compliance with approved Weight and Balance Program - KY7A - Key Lime Air Corporation	Substantiated	19-Jul-19	29-Jul-20	FHIS-0015601 A20190722003
Possible Non Compliance with approved Weight and Balance Program -5SNA - SOIN INTERNATIONAL, LLC	Substantiated	22-Jul-19	29-Jul-20	FHIS-0015642 A20190722030
Safety/Regulatory Concern - FAA approved many OPSS A097 Paragraphs with paragraph 5 being empty	Open	13-Jan-20		FHIS-0018389 A20200114006
Possible Unsafe Operations -EFVA - East Coast Flight Services - Certificate Holders Aircraft Weight and Balance Control Program	Open	14-Jan-20		FHIS-0018401 A20200115009
Possible Unsafe Operations -VPEA- Choice Aviation - Certificate Holders Aircraft Weight and Balance Control Program	Open	15-Jan-20		FHIS-0018408 A20200115009
Possible Unsafe Operations -MHIA - Liberty Helicopters, Inc- Certificate Holders Aircraft Weight and Balance Control Program)	Open	15-Jan-20		FHIS-0018409 A20200115009
Possible Unsafe Operations -FVJA - Lyon Aviation, Inc. - Certificate Holders Aircraft Weight and Balance Control Program	Open	15-Jan-20		FHIS-0018411 A20200115009
Possible Unsafe Operations -A80A - FlightWorks, Inc. - Certificate Holders Aircraft Weight and Balance Control Program	Open	15-Jan-20		FHIS-0018412 A20200115009
Possible Unsafe Operations -Y9PA - Wing Aviation Charter Services LLC - Certificate Holders Aircraft Weight and Balance Control Program	Open	15-Jan-20		FHIS-0018413 A20200115009
Safety/Regulatory Concern -454A - INTEGRA AVIATION LLC - FAA approved OPSS A097 Paragraph with Table 1 cells being empty	Substantiated	15-Jan-20	03-Dec-20	FHIS-0018420 A20200115012
Safety/Regulatory Concern -HFQA Aviation Concepts - FAA approved OPSS A098 Paragraph with many discrepancies	Open	15-Jan-20		FHIS-0018421 A20200115011
Safety/Regulatory Concern -TXHA - Trans Executive Airlines of Hawaii - FAA approved OPSS A098 Paragraph	Open	16-Jan-20		FHIS-0018437 A20200122014
Safety/Regulatory Concern -ZESA- FAA approved many years ago the OPSS	Substantiated	16-Jan-20	10-Mar-21	FHIS-0018438 A20200122015

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**OSC File DI-20-000536 (Weight and Balance)
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A097 Paragraph with Table 3 being empty				
Safety/Regulatory Concern -UWUA - The Whitewind Company FAA approved OPSS A097 with many discrepancies	Open	16-Jan-20		FHIS-0018439 A20200122016
Safety/Regulatory Concern -29GA - Silver Airways - FAA approved OPSS A098 and A099 with empty cells	Substantiated	16-Jan-20	30-Dec-20	FHIS-0018440 A20200122017
Possible noncompliance with FAA Policy-5GCA - Glacier Aero Professionals LLC. - If OpSpec A096 is issued, OpSpecs A097, A098, and/or A099 may not be issued	Substantiated	22-Jan-20	29-Sep-20	FHIS-0018530 A20200123001
SIRS Submission- L. J. Associates, Inc. (ZESA)- FAA Approved the Operations Specification (OPSS) A097 with empty cells and/or inaccurate information..	Unknown	11-Mar-21		DR202180
Possible Unsafe Operations N135TR and N815KD TRUE AVIATION CHARTER SERVICES, LLC (5TRA245M) - Aircraft Weight and Balance Control Program	Open	22-Apr-20		FHIS-0019943 A20200422013
FW: Grand Canyon Airlines, Inc. (GCNA035A) - Possible Unsafe Operations - Aircraft Weight and Balance Control Program	Open	23-Apr-20		FHIS-0019951 A20200423005
Safety/Regulatory/Policy Concern- MY5A - M & N EQUIPMENT LLC FAA Approved Weight and Balance Program	Substantiated	23-Apr-20	13-Jun-21	FHIS-0019952 A20200423006
Safety/Regulatory/Policy Concern N135SL- 417A - USAC AIRWAYS 694 LLC - Possible Unsafe Operations - Certificate Holders Aircraft Weight and Balance Control Program	Open	23-Apr-20		FHIS-0019953 A20200423008
Safety/Regulatory/Policy Concern N6818R- CIEA - MAYO AVIATION INC - Possible Unsafe Operations - Certificate Holders Aircraft Weight and Balance Control Program	Open	23-Apr-20		FHIS-0019959 A20200423013
Safety/Regulatory/Policy Concern- AC 120-27 - OPSS A097 for 1JAA - Jet Access Aviation, LLC - Non Standard Text Approval	Open	07-May-20		FHIS-0020168 A20200507008
CONFIDENTIAL SUBMISSION Safety/Regulatory/Policy Concern - 37CA - CRITICAL CARE SERVICES INC - Possible Unsafe Operations and Non Compliance with approved Weight and Balance Control Program	Open	23-Nov-20		FHIS-0039905 S20201123022
CONFIDENTIAL SUBMISSION Safety/Regulatory/Policy Concern -1KSA - Sky One Holdings, LLC - Possible Unsafe Operations and Non Compliance with approved Weight and Balance Control Program	Open	24-Nov-20		FHIS-0039921 S20201124010

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Safety/Regulatory/Policy Concern-L99A - Copper River Air Taxi, LLC - FAA Inspector approved OPSS A097 with empty tables- Operator may have operated aircraft with undocumented average weights	Substantiated	28-Jan-21	05-May-21	FHIS-0041080 S20210128010
Safety/Regulatory/Policy Concern-EVCA - Air Evac EMS, Inc - FAA Inspector approved OPSS A097 with empty tables and or inaccurate information	Open	28-Jan-21		FHIS-0041081 S20210128011
Safety/Regulatory/Policy Concern-FJTA - Corporate Flight Management, Inc. - FAA Inspector approved OPSS A097 with empty tables- Operator may have operated aircraft with undocumented average weights	Open	28-Jan-21		FHIS-0041082 S20210128012
Safety/Regulatory/Policy Concern-N38A - NEW WORLD AVIATION, INC.- FAA Inspector approved OPSS A097 with empty tables and or inaccurate information	Open	28-Jan-21		FHIS-0041083 S20210128013
Safety/Regulatory/Policy Concern-AOQA - Executive Fliteways, Inc. - FAA Inspector approved OPSS A097 with empty tables and or inaccurate information	Open	28-Jan-21		FHIS-0041084 S20210128014
Safety/Regulatory/Policy Concern-6SHB - STEWART-HAAS RACING LLC - FAA Inspector approved OPSS A097 with empty tables and or inaccurate information	Open	28-Jan-21		FHIS-0041087 S20210128015
Safety/Regulatory/Policy Concern-1JCA - ACP Jet Charters Inc.- FAA Inspector approved OPSS A097 with empty tables and or inaccurate information	Open	28-Jan-21		FHIS-0041091 S20210128023
Safety/Regulatory/Policy Concern-C0LA - Corporate Air Travel, LLC - FAA Inspector approved OPSS A097 with empty tables and or inaccurate information	Open	28-Jan-21		FHIS-0041093 S20210128022
Safety/Regulatory/Policy Concern-2DYA - Eastern Airlines, LLC - FAA Inspector approved OPSS A099 with empty tables and or inaccurate information	Open	28-Jan-21		FHIS-0041094 S20210128021
Safety/Regulatory/Policy Concern-KNIA- LONGHORN AVIATION, LLC - FAA Inspector approved OPSS A097 with empty tables and or inaccurate information	Open	28-Jan-21		FHIS-0041095 S20210128020
Safety/Regulatory/Policy Concern-Q3SA- Malone AirCharter, Inc. - FAA Inspector approved OPSS A097 with empty tables and or inaccurate information	Open	28-Jan-21		FHIS-0041096 S20210128019
Safety/Regulatory/Policy Concern-UJ8A- JOURNEY AVIATION, LLC - FAA Inspector approved OPSS A097 with empty tables and or inaccurate information	Open	28-Jan-21		FHIS-0041097 S20210128018

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OSC File DI-20-000536 (Weight and Balance)
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Safety/Regulatory/Policy Concern-D0EM-National Nuclear Security Administration-FAA Inspector approved OPSS A099 with empty tables and or inaccurate information	Open	28-Jan-21		FHIS-0041098 S20210128017
Safety/Regulatory/Policy Concern-GYWA-Basin Aviation, Inc. - FAA Inspector approved OPSS A097 with empty tables and or inaccurate information	Open	28-Jan-21		FHIS-0041100 S20210128026
Safety/Regulatory/Policy Concern--LEUA-Travis County EMS- FAA Inspector approved OPSS A097 with empty tables and or inaccurate information- Possible operations with inaccurate weights	Open	28-Jan-21		FHIS-0041101 S20210128025
Safety/Regulatory/Policy Concern-BKEA-Clay Lacy Aviation, Inc.- FAA Inspector approved OPSS A097 with empty tables and or inaccurate information	Open	28-Jan-21		FHIS-0041103 S20210128024
Safety/Regulatory/Policy Concern-XR8M-Orbital Sciences, LLC- FAA Inspector approved OPSS A099 with empty tables and or inaccurate information	Open	28-Jan-21		FHIS-0041104 S20210128027
Safety/Regulatory/Policy Concern-OPSS A097 -19AA- ADVANCED AIR LLC- FAA Inspector approved OPSS A097 with empty tables and or inaccurate information	Open	28-Jan-21		FHIS-0041105 S20210128034
Hundreds of "substantiated reports that clearly point to a systemic weakness with WebOPPS that appears to hinder optimal operator oversight by the certificate holding office". See AAE-1 Memo dated March 11, 2021	Open	11-Mar-21		IWB21802
D4NA - Andrew Airways, Inc - FAA Inspector approved OPSS A096 with empty table(s)	Open	13-May-21		VSRP-970
Safety/Regulatory/Policy Concern – 9JLA - Jet Linx Aviation, LLC - FAA Inspector approved OPSS A097 with missing data or information	Open	19-May-21		VSRP-1001
Safety/Regulatory/Policy Concern – CWQA - Executive Jet Management, Inc. - FAA Inspector approved OPSS A097 with missing data or information	Open	19-May-21		VSRP-1002
Safety/Regulatory/Policy Concern – I8PA - Pinnacle Air Charter LLC - FAA Inspector approved OPSS A097 with missing data or information	Open	19-May-21		VSRP-1003
Safety/Regulatory/Policy Concern – GZXA - G C Aviation, Inc. - FAA Inspector approved OPSS A097 with missing data or information	Open	19-May-21		VSRP-1004

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Safety/Regulatory/Policy Concern – 2PSA - Polaris Aviation Solutions, LLC - FAA Inspector approved OPSS A097 with missing data or information	Open	19-May-21		VSRP-1005
Safety/Regulatory/Policy Concern – YGJA - Gary Jet Center, Inc - FAA Inspector approved OPSS A097 with missing data or information	Open	19-May-21		VSRP-1006
Safety/Regulatory/Policy Concern – DBCA - Sterling Aviation, LLC - FAA Inspector approved OPSS A097 with missing data or information	Open	19-May-21		VSRP-1007
Safety/Regulatory/Policy Concern – BQVA - Richmor Aviation, Inc. - FAA Inspector approved OPSS A097 with missing data or information	Open	19-May-21		VSRP-1008
Safety/Regulatory/Policy Concern – UJ8A - JOURNEY AVIATION, LLC - FAA Inspector approved OPSS A097 with missing data or information	Open	19-May-21		VSRP-1009
Safety/Regulatory/Policy Concern – AOQA - Executive Fliteways, Inc. - FAA Inspector approved OPSS A097 with missing data or information	Open	19-May-21		VSRP-1010
Safety/Regulatory/Policy Concern – KKVA - Jet Aviation Flight Services, Inc. - FAA Inspector approved OPSS A097 with missing data or information	Open	19-May-21		VSRP-1011
Safety/Regulatory/Policy Concern – A8OA - FlightWorks, Inc.- FAA Inspector approved OPSS A097 with missing data or information	Open	19-May-21		VSRP-1012
Safety/Regulatory/Policy Concern - FOMA - EXECUTIVE AIR CHARTER OF BOCA RATON - The FAA appears to have approved and issued Operations Specification paragraph A097 contrary to FAA Notice 8900.551	Open	26-May-21		VSRP-1030
Safety/Regulatory/Policy Concern - WH6A - White Cloud Charter LLC - The FAA appears to have approved and issued a Passenger and Baggage Weight Program Operations Specification paragraph contrary to FAA Notice 8900.551	Open	26-May-21		VSRP-1031
Safety/Regulatory/Policy Concern - ZH9A - Chantilly Air Inc. - The FAA appears to have approved and issued a Passenger and Baggage Weight Program Operations Specification paragraph contrary to FAA Notice 8900.551	Open	26-May-21		VSRP-1032

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OSC File DI-20-000536 (Weight and Balance)
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Safety/Regulatory/Policy Concern - 4DUA - DUMONT AIRCRAFT CHARTER LLC - The FAA appears to have approved and issued a Passenger and Baggage Weight Program Operations Specification paragraph contrary to FAA Notice 8900.551	Open	26-May-21		VSRP-1033
Safety/Regulatory/Policy Concern - CDNA - East Coast Jets, Inc - The FAA appears to have approved and issued a Passenger and Baggage Weight Program Operations Specification paragraph contrary to FAA Notice 8900.551	Open	26-May-21		VSRP-1034
Safety/Regulatory/Policy Concern - QMLA - Air Methods Corp. - The FAA appears to have approved and issued a Passenger and Baggage Weight Program Operations Specification paragraph contrary to FAA Notice 8900.551	Open	26-May-21		VSRP-1035
Safety/Regulatory/Policy Concern - AAWA - Skybird Aviation, Inc. - The FAA appears to have approved and issued a Passenger and Baggage Weight Program Operations Specification paragraph contrary to FAA Notice 8900.551	Open	26-May-21		VSRP-1036
Safety/Regulatory/Policy Concern - OZTA - TALON AIR, LLC - The FAA appears to have approved and issued a Passenger and Baggage Weight Program Operations Specification paragraph contrary to FAA Notice 8900.551	Open	26-May-21		VSRP-1037
Safety/Regulatory/Policy Concern - 4JUA - JET UP AVIATION LLC - The FAA appears to have approved and issued a Passenger and Baggage Weight Program Operations Specification paragraph contrary to FAA Notice 8900.551	Open	26-May-21		VSRP-1038
Safety/Regulatory/Policy Concern - XQJA - JET-A LLC - The FAA appears to have approved and issued a Passenger and Baggage Weight Program Operations Specification paragraph contrary to FAA Notice 8900.551	Open	26-May-21		VSRP-1039
Safety/Regulatory/Policy Concern - GQRA - Air 7 LLC - The FAA appears to have approved and issued a Passenger and Baggage Weight Program Operations Specification paragraph contrary to FAA Notice 8900.551	Open	26-May-21		VSRP-1040
Safety/Regulatory/Policy Concern - YC7M - Yucaipa Companies L L C - The FAA appears to have approved and issued a Passenger and Baggage Weight Program Letter of Authorization with empty cells.	Open	26-May-21		VSRP-1041

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Safety/Regulatory/Policy Concern - CVGA - Wheels Up Private Jets LLC - The FAA appears to have approved and issued a Passenger and Baggage Weight Program Operations Specification paragraph with an empty cell.	Open	26-May-21		VSRP-1042
Safety/Regulatory/Policy Concern - LEUA - Travis County EMS - The FAA appears to have approved and issued a Passenger and Baggage Weight Program Operations Specification paragraph contrary to FAA Notice 8900.551	Open	26-May-21		VSRP-1043
Reported to AFS-200 Leadership I discovered several recently approved A099 Operations Specification paragraphs which appear to show inconsistent CDC/NHANES Standard Average Weights.	Open	06-Jun-21		
Safety/Regulatory/Policy Concern-DRFA - Mach One Air Charters, Inc. - FAA Inspector approved OPSS A097 with empty tables and or inaccurate information	Open	07-Jun-21		FHIS-0044188
Safety/Regulatory/Policy Concern-FAA Approved OPSS A099 paragraphs which show inconsistent CDC/NHANES Standard Average Weights	Open	14-Jun-21		FHIS-0044335
Safety/Regulatory/Policy Concern-Possible Commercial Operations-related to over 80 Approved Weight and Balance Programs that have not been revised per Notice 8900.551	Open	14-Jun-21		FHIS-0044337
Safety/Regulatory/Policy Concern- the FAA may have approved Airline Weight and Balance Operations Specifications without having the male/female survey data to accurately determine average passenger weight for the listed M/F ratio	Open	14-Jun-21		FHIS-0044353
Report date- 15 June 2021				

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Airlines still approved by the FAA to use average passenger or baggage weights that no longer reflect the U.S. population

FAA Notice 8900.551 showed that “AC 120-27 was updated because, over time, the weight information provided for the W&B control program approvals and acceptances no longer reflected the average passenger or baggage weights of the U.S. population”.

The Notice requested all certificate holders provide the FAA a plan that demonstrates the operator’s willingness and ability to gain approval of their updated WBP by June 12, 2021.

In addition, the Notice also stated “after June 12, 2021, operators that have not received the amended OpSpecs/MSpecs/LOAs should use actual weights when determining W&B”.

The table below shows a list of certificate holders who after the June 12, 2021 deadline are still using the old archived OPSS paragraph template that was revised in 2020 to acknowledge significant changes in passenger and baggage weights.

Name	CFR	Part	Rev /	Amdt	Effective	Title	Template Status	Document Status
JetBlue Airways Corporation	121	A099	01b	17	4/22/2021	Large Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
AIR WISCONSIN AIRLINES LLC	121	A098	01a	7	3/30/2021	Medium Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
United Airlines, Inc.	121	A099	01b	51	3/31/2021	Large Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Eastern Airlines, LLC	121	A099	01b	23	11/20/2020	Large Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Sun Country, Inc.	121	A099	01b	8	10/29/2020	Large Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Alaska Airlines, Inc. and/or Virgin America, Inc.	121	A099	01b	17	7/11/2019	Large Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Horizon Air Industries, Inc.	121	A099	01b	11	2/19/2020	Large Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
SkyWest Airlines, Inc.	121	A098	01a	7	3/30/2021	Medium Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.

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SkyWest Airlines, Inc.	121	A099	01b	6	3/30/2021	Large Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Delta Air Lines, Inc.	121	A099	01b	37	3/17/2021	Large Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
CARIBBEAN SUN AIRLINES INC	121	A099	01b	4	1/31/2020	Large Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
TEM Enterprises	121	A099	01b	15	4/18/2021	Large Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Miami Air International, Inc.	121	A099	01b	13	6/10/2020	Large Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA
Seaborne Virgin Islands, Inc.	121	A097	01a	1	5/2/2019	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Seaborne Virgin Islands, Inc.	121	A098	01a	2	5/2/2019	Medium Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
EXPRESSJET AIRLINES LLC	121	A098	01a	20	5/28/2020	Medium Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Frontier Airlines, Inc.	121	A099	01a	12	4/5/2019	Large Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old NonMandatory	Active - FAA & Ind.
VIA AIRLINES	121	A098	10	2	11/9/2017	Medium Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old NonMandatory	Active - FAA & Ind.
Piedmont Airlines, Inc.	121	A098	01a	6	5/6/2019	Medium Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
National Air Cargo Group, Inc.	121	A099	01b	24	10/9/2020	Large Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Elite Airways LLC	121	A098	01a	4	5/9/2019	Medium Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Hillwood Airways, LLC	121	A099	01b	4	12/19/2019	Large Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Omni Air International, LLC	121	A099	01b	21	1/5/2021	Large Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Ameristar Air Cargo, Inc.	121	A099	01b	6	5/28/2019	Large Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Atlas Air Inc	121	A099	01b	45	5/27/2021	Large Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.

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Envoy Air Inc.	121	A098	01a	8	6/11/2020	Medium Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Envoy Air Inc.	121	A099	01a	0	10/16/2015	Large Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old NonMandatory	Active - FAA & Ind.
Hawaiian Airlines, Inc.	121	A099	01b	31	4/21/2020	Large Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Swift Air, L.L.C.	121	A099	01b	18	5/10/2021	Large Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Mesa Airlines, Inc.	121	A098	10	10	4/30/2015	Medium Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old NonMandatory	Active - FAA & Ind.
Mesa Airlines, Inc.	121	A099	01b	14	11/4/2020	Large Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
GoJet Airlines, LLC	121	A098	01a	2	10/23/2019	Medium Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
PARALLEL EXPRESS INC	125	A099	01a	2	7/12/2019	Large Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
ELAN EXPRESS INC	125	A099	01a	12	7/16/2019	Large Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
ARAMCO Associated Company	125	A099	01a	5	10/29/2019	Large Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Trego/Dugan Aviation, Inc.	135	A097	01a	9	1/2/2020	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Richmor Aviation, Inc.	135	A097	01a	23	3/24/2021	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
VOYAGER JET CENTER LLC	135	A097	01a	23	12/17/2019	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Jet Access Aviation, LLC	135	A097	01a	38	5/12/2021	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Thunderun Aviation Corporation	135	A097	10	1	6/7/2018	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old NonMandatory	Active - FAA & Ind.
Taughannock Aviation Corp.	135	A097	01a	27	4/30/2020	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Flight Options LLC	135	A097	01a	27	11/13/2020	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.

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Elite Jets Charter, LLC	135	A097	10	57	5/31/2018	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old NonMandatory	Active - FAA & Ind.
Flexjet, LLC	135	A097	01a	18	8/20/2020	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Altius Aviation, LLC	135	A097	01a	22	1/3/2020	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Jet Aviation Flight Services, Inc.	135	A097	01a	74	6/9/2021	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Gama Aviation LLC	135	A097	01a	47	1/28/2021	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Jet Logistics, Inc.	135	A097	01a	11	1/25/2020	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Planemasters, Ltd.	135	A097	01a	29	1/28/2020	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Coleman Jet, LLC	135	A097	01a	100	3/1/2021	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Northern Illinois Flight Center, Inc.	135	A097	01a	19	2/11/2021	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Priester Aviation, LLC	135	A097	01a	110	3/16/2021	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
AeroCare Medical Transport System, Inc.	135	A097	01a	28	1/26/2021	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Chicago Jet Group, LLC	135	A097	01a	24	5/20/2021	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Gary Jet Center, Inc.	135	A097	01a	27	4/20/2021	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Executive Jet Management, Inc.	135	A097	01a	35	4/29/2021	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
NetJets Aviation, Inc.	135	A097	01a	22	9/24/2020	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Aviation Concepts, Inc.	135	A097	01a	16	10/23/2019	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.

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IFL Group, Inc.	135	A097	01a	0	6/9/2021	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
HANTZ AIR, L.L.C.	135	A097	01a	0	6/10/2021	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
DELUX PUBLIC CHARTER LLC	135	A098	01a	6	1/7/2020	Medium Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Summit Aviation, Inc.	135	A097	01a	3	1/8/2020	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Keystone Aviation, LLC	135	A097	01a	20	4/14/2020	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Global Aviation, Inc.	135	A097	01a	15	12/31/2019	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Airbrock Management & Charter Services, Inc.	135	A097	01a	0	2/28/2020	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Volusia County Sheriff's Office	135	A097	10	5	11/14/2012	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old NonMandatory	Active - FAA
RR INVESTMENTS INC	135	A097	01a	0	6/11/2021	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
MEREGRASS, INC.	135	A097	01a	0	6/11/2021	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
MEREGRASS, INC.	135	A098	01a	0	6/11/2021	Medium Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Trans Executive Airlines of Hawaii	135	A098	01a	2	9/18/2019	Medium Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
AVIATION CONSULTANTS INC.	135	A097	01a	2	5/20/2020	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
ADVANCED AIR LLC	135	A098	01a	0	12/18/2019	Medium Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
TRANS-EXEC AIR SERVICE INC	135	A097	01a	2	2/12/2020	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA
Flight Options LLC	091K	A097	01a	17	4/7/2020	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.

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Flexjet, LLC	091K	A097	01a	16	8/20/2020	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
NetJets Aviation, Inc	091K	A097	01a	23	9/24/2020	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Key Lime Air Corporation	121/135	A097	01a	3	8/28/2019	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Key Lime Air Corporation	121/135	A098	01a	5	7/28/2020	Medium Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
KaiserAir, Inc.	121/135	A097	01a	10	12/4/2020	Small Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
KaiserAir, Inc.	121/135	A099	01a	7	5/30/2019	Large Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
CONOCOPH ILLIPS ALASKA INC	125M	A099	00a	4	4/20/2020	Large Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Cummins Inc.	125M	A098	00a	1	9/10/2019	Medium Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA
MONTEX DRILLING COMPANY	125M	A098	0	0	9/13/2017	Medium Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old NonMandatory	Active - FAA & Ind.
THE DOW CHEMICAL COMPANY	125M	A099	00a	0	2/11/2021	Large Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Swiflite Aircraft Corporation	125M	A099	00a	1	9/23/2019	Large Cabin Aircraft Passenger and Baggage Weight Program	Archived - Old Revision	Active - FAA & Ind.
Report Date- 15 June 2021								

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FAA Safety Recommendations

The pattern of the Aviation Safety (AVS) organization slowly permitting our safety analysis/alerting systems to degrade and rejecting or not even addressing safety recommendations in a timely manner may be an indication of a poor safety culture. Linked below are Annual Reports to Congress³⁷ from the FAA which contain some of my previous Whistleblower or Hotline submissions. These public reports (and other internal records) should be reviewed in an effort to understand the safety culture within the FAA.

Please note the Agency Report shows that the FAA did not investigate the gross mismanagement allegation. If the FAA would have conducted a proper investigation they would have easily discovered several FAA Safety Recommendations that I have submitted related to the allegations.

I do my best to help the FAA address known safety concerns but it is very frustrating when the FAA Office of Accident Investigation & Prevention (AVP) regularly dismisses the recommendations I submit. The FAA Safety Recommendation Program web site³⁸ lists another recommendations related to the topics within this submission.

Whistleblower Submitted Safety Recommendations related to this topic

- **(Status- Not accepted)** - In an ongoing effort to continuously improve aviation safety, I recommend that AVS-1 and/or AFX-1 host an annual (on-site or virtual) organizational level Safety Stand Down (similar to ATO) with all employees to identify, discuss and resolve safety issues.
 - Note - AVP response to whistleblower stated in part *“having all of Flight Standards stand down for an entire day has no safety merit as a whole”*.
- **(Status- Not accepted)** - Within 90 days WebOPSS should provide the date of the most recent data input for all Standard and Custom reports and modules so that users can confirm that the data is up-to-date or reliable.
- **(Status- Unknown)** I recommend that the FAA revise FAA Order 8900.1 0, Volume 10 to provide risk matrix guidance and definitions similar to ...
- **(Status- Closed Acceptable Action)** 18.069- Within 30 days, the FAA should revise this AC to update the standard average weights.

³⁷ https://www.faa.gov/about/plans_reports/congress/

³⁸ https://my.faa.gov/org/linebusiness/avs/offices/avp/faq_safety_rec.html

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- **(Status- Closed Acceptable Action)** 18.070-Within 30 days, the FAA should revise this AC to update the personal item average weights.
- **(Status- Closed Acceptable Action)** 18.071-Within 30 days, FAA Guidance including this AC should be revised to provide clear instructions for a certificate holder to follow when 50 percent of passengers are NOT male and/or 50 percent of passengers are NOT female.
- **(Status- Closed Acceptable Action)** 18.072-Within 30 days, FAA Guidance including this AC should be revised to provide clear instructions for certificate holders who are not able to ensure exactly one third of the passengers meet each condition above.
- **(Status- Not accepted)** Several recommendations related to concern with FAA Information Technology (IT) and the potential impact on Aviation Safety
- **(Status- Not accepted)** I recommended that each overdue SPAS flag with an exclamation mark be acknowledged by an assigned Principal Inspectors (Proxy) in accordance with FAA Order 8900.1, Volume 1, Chapter 1, Section 4.
- **(Status- Not accepted)** I recommended that the FAA should consider revising FAA Order 8900.1, Volume 1, Chapter 1, Section 4 to reflect changes to SPAS and FAA oversight.
- **(Status- Not accepted)** I recommended that the FAA should modernize SPAS to provide ALERTS or FLAGS highlighting potential problem areas identified within the Safety Assurance System (SAS) Data. In SPAS, a flag is a visual symbol that indicates how a certificate holder is performing in a specific performance or safety area at a specific point in time.
- **(Status- Not accepted)** I recommended that the FAA should modernize SPAS to provide ALERTS or FLAGS highlighting potential problem areas identified within other FAA Data.
- **(Status- Not accepted)** I recommended that the FAA should modernize SPAS to provide SAS data and Other Performance Measures that compares the performance of a certificate holder to the performance of similar certificate holders, to itself, and/or to preset limits.
- **(Status- Not accepted)** I recommended that FSIMS publish or provide a complete Revision Control or List of Effective Pages similar to what the FAA requires of certificate holders.

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- **(Status- Not accepted)** I recommended that the FAA should clearly mark all inactive FSIMS documents currently available on a public web site.
- **(Status- Not accepted)** I recommended that The FAA should not continue to post inactive documents on a public internet site unless each document is clearly marked as inactive.
- **(Status- Not accepted)** I recommended that FAA Order 8900.1 should be revised to reflect the current QMS Process.
- **(Status- Not accepted)** I recommended that FAA Order 8900.1 should be revised to reflect the current internal/external links to FSIMS.
- **(Status- Not accepted)** I recommended that FAA Order 8900.1 should address the delay from the date new/revised policy has been signed (effective date) and the time it was posted in FSIMS (available date).
 - My safety concern is that it appears inspectors (and public) are expected to use guidance or policy that may not be technically the most current?
- **(Status- Not accepted)** I recommended that the FAA should revise QMS process AFS 002-103 paragraph 4.2 to define “within the allotted time”.
- **(Status- Not accepted)** I recommended that the FAA should revise QMS process AFS 002-103 to add a new Process Measure showing the time between the effective date and when the policy is made available on FSIMS for Aviation Safety Inspectors and members of the public.
- **(Status- Not adopted)** - 20.076 I recommended that FAA National Policy should be revised to require assigned inspectors to validate (at the certificate level) all OPSPECS/MSPECS/TSPECS/LOAs paragraph information at least once every 12 months.
- **(Status- Not adopted)** - 20.076 I recommended that FAA Automation should be revised to require assigned inspectors to validate (at the certificate level) all OPSPECS/MSPECS/TSPECS/LOAs paragraph information at least once every 12 months.
- **(Status- Not adopted)** - 20.075 I recommended that FAA National Policy should be revised to require assigned inspectors continuously monitor all OPSPECS/MSPECS/TSPECS/LOAs to ensure they are accurate and current.
- **(Status- Not adopted)** - 20.076 I recommended that FAA Automation should be modified to alert (at the certificate level) assigned inspectors, managers and analyst about coming due and overdue validation date(s).

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- **(Status- Not adopted)** - 20.076 I recommended that FAA Automation should be modified to alert (at the certificate level) assigned inspectors, managers and analyst about coming due and overdue dates referenced in the various OPSS documents.
- **(Status- Not adopted)** - 20.076 I recommended that WebOPSS should provide the date(s) of the most recent data input for all Standard and Custom reports and modules so that users can confirm that the data is up-to-date or reliable.
- **(Status- Not accepted)** I recommended that FAA identify the FAA office with responsibility for conducting formal review of the FAA Hotline System/Program to ensure the Agency has the tools and resources necessary to address the growing gap between the number of open and closed cases.
- **(Status- Not accepted)** I recommended that FAA identify the office with responsibility for continuously reviewing FHIS and related Information Technology (IT) system data for hazards and emerging trends.
- **(Status- Not accepted)**I recommended that FAA identify the FAA office with responsibility for developing a written process to determine the root cause(s) related to all substantiated and/or partially substantiated Safety, Hotline & Whistleblower allegations and develop strategies to prevent reoccurrence.
- **(Status- Not accepted)** I recommended that FAA identify the FAA office with responsibility for to providing the FAA Executive Leadership Team a written summary each quarter showing at a minimum all open, extended and overdue FAA Hotline/Safety and Whistleblower Cases.
- **(Status- Not accepted)** I recommended that FAA identify the FAA office with responsibility for providing the FAA Executive Leadership Team an annual briefing about FAA Hotline System/Program, cases and trends.
- **(Status- Not accepted)** I recommended that FAA identify the FAA office with responsibility for providing FAA employees an Annual Report summarizing all internal/external FAA Hotline/Safety and Whistleblower Cases/Trends for the previous FY.
- **(Status- Not accepted)** I recommended that FAA provide formal initial training for persons who investigate or support the investigation of FAA Hotline/Safety and Whistleblower Submissions.
- **(Status- Not accepted)** I recommended that FAA provide formal recurrent training or workshops for persons who investigate or support the investigation of FAA Hotline/Safety and Whistleblower Submissions.

Because of previous (substantiated) and ongoing whistleblower retaliation by FAA Management Officials the **WHISTLEBLOWER DOES NOT CONSENT** to name or other identifying information from being released into the public information files.

OSC File DI-20-000536 (Weight and Balance)
Whistleblower Response to Agency Report
June 18, 2021

- **(Status- Not accepted)** I recommended that the Flight Standards Service (AFX) External Whistleblower Investigative Process be created or revised to require and ensure the reporting individual (when contact information is provided or available) was contacted before a final Report of Investigation (ROI) is sent to the FAA Office of Audit and Evaluation (AAE).
- **(Status- Not accepted)** I recommended that the Flight Standards Service (AFX) Hotline Complaint Investigative Process be created or revised to require and ensure the reporting individual (when contact information is provided or available) was contacted before a final Investigative Results Report (IRR) is sent to the FAA Office of Audit and Evaluation.
- **(Status- Not accepted)** I recommended that the Flight Standards Service (AFX) External Whistleblower Investigative Process be created or revised to require and ensure the reporting individual contact information (if known) is included in the final Report of Investigation (ROI) before it is sent to the FAA Office of Audit and Evaluation (AAE).
- **(Status- Not accepted)** I recommended that the Flight Standards Service (AFX) Hotline Complaint Investigative Process be created or revised to require and ensure the reporting individual contact information (if known) is included in the final
- **(Status- Open)** 21.070 -I recommended that FAA create or revise policy to prevent an FAA Inspector from issuing an A097 OPSS paragraph with missing data and/or information.
- **(Status- Open)** 21.071 I recommended that FAA modify WebOPSS Automation to prevent FAA Inspectors from issuing and/or approving A097 OPSS paragraphs that are missing data and/or information.
- **(Status- Open)** 21.072 I recommended that FAA modify WebOPSS Automation to alert FAA Inspectors, Managers or Analysts if the A097 OPSS paragraph is missing data and/or information.
- **(Status- Open)** 21.073 I recommended that FAA modify Safety Performance Analysis System (SPAS) Automation to alert FAA Inspectors, Managers or Analysts if the A097 OPSS paragraph is missing data and/or information.
- **(Status- Open)** 21.074 I recommended that FAA modify Safety Assurance System (SAS) Automation to alert FAA Inspectors, Managers or Analysts if the A097 OPSS paragraph is missing data and/or information.

Because of previous (substantiated) and ongoing whistleblower retaliation by FAA Management Officials the **WHISTLEBLOWER DOES NOT CONSENT** to name or other identifying information from being released into the public information files.

OSC File DI-20-000536 (Weight and Balance)
Whistleblower Response to Agency Report
June 18, 2021

- **(Status- Open)** 21.075 I recommended that FAA direct AFS-200 (or the appropriate office) to review all existing A097 OPSS Paragraphs to identify those that were approved with missing data and/or information.
- **(Status- Open)** 21.076 I recommended that FAA direct AFS-200 (or the appropriate office) to work with the appropriate office to correct any A097 OPSS Paragraphs that were approved with missing data and/or information.
- **(Status- Unknown)** I recommended that FAA create or revise FAA Policy to prevent an FAA Inspector from issuing an A099 Operations Specifications Letter of Authorization with missing data and/or information.
- **(Status- Unknown)** I recommended that FAA modify WebOPSS Automation to prevent FAA Inspectors from issuing and/or approving A099 Operations Specifications Letter of Authorization that are missing data and/or information.
- **(Status- Unknown)** I recommended that FAA modify WebOPSS Automation to alert FAA Inspectors, Managers or Analysts if the A099 Operations Specifications Letter of Authorization is missing data and/or information.
- **(Status- Unknown)** I recommended that FAA modify Safety Performance Analysis System (SPAS) Automation to alert FAA Inspectors, Managers or Analysts if the A099 Operations Specifications Letter of Authorization is missing data and/or information.
- **(Status- Unknown)** I recommended that FAA modify Safety Assurance System (SAS) Automation to alert FAA Inspectors, Managers or Analysts if the A099 Operations Specifications Letter of Authorization is missing data and/or information.
- **(Status- Unknown)** I recommended that FAA direct AFS-200 (or the appropriate office) to review all existing A099 Operations Specifications Letter of Authorization to identify those that were approved with missing data and/or information.
- **(Status- Unknown)** I recommended that FAA direct AFS-200 (or the appropriate office) to work with the appropriate office to correct any A099 Operations Specifications Letter of Authorization that were approved with missing data and/or information.

Because of previous (substantiated) and ongoing whistleblower retaliation by FAA Management Officials the **WHISTLEBLOWER DOES NOT CONSENT** to name or other identifying information from being released into the public information files.

OSC File DI-20-000536 (Weight and Balance)
Whistleblower Response to Agency Report
June 18, 2021

- **(Status- Open)** 21.092- I recommended that FAA conduct tests to demonstrate how the increase in passenger weights above 170 pounds affect each seat or berth, and it's supporting structure.
- **(Status- Open)** 21.093- I recommended that FAA conduct tests to demonstrate how increased passenger weights above 170 pounds affect each seatbelt.
- **(Status- Open)** 21.094- I recommended that FAA review 14 CFR 25.785 (f) and determine if 170 pounds is adequate for today's population.
- **(Status- Open)** 21.095-I recommended that FAA review 14 CFR 25.562 (b) and determine if 170 pounds is adequate for today's population.
- **(Status- Open)** 21.096- I recommended that FAA review FAA Guidance and Advisory Circulars and determine if the passenger weight being referenced in certification documentation is adequate for today's population.
- Other Submitter **(Status- Unknown)** 18.105 - Helicopter Air Ambulance Operations - Aircraft Actual Weight

Because of previous (substantiated) and ongoing whistleblower retaliation by FAA Management Officials the **WHISTLEBLOWER DOES NOT CONSENT** to name or other identifying information from being released into the public information files.

Possible New Safety Hazards

1. **Regulations/Policy-** FAA regulations 14 CFR § 121.665 and 14 CFR §135.63 require airlines to report accurate weight and balance data, but the Agency has no definition or policy/legal interpretation for “accurate.”³⁹
2. **Exceed Maximum Design Weight-** Since then the aviation industry has changed greatly. Airlines passengers have experienced smaller seats, less leg room and charges for checked baggage. These changes added real weight to aircraft. Sometimes passengers and/or cargo were removed so not exceed the maximum Type Certificate weight for takeoff. The new weights being implemented by the airlines clearly show that passenger and baggage weights have changed. Since the FAA now acknowledges that its standard average passenger and bag weights assumptions do not accurately reflect individuals’ weights and baggage weights⁴⁰, the FAA should conduct a safety review of aircraft that may have exceeded the maximum design weight listed in the FAA Approved Airplane Flight Manual for takeoff, taxi or landing.
3. **Use of Nonstandard Standard-** FAA is using OPSS A097, A098 and A099 to approve weight and balance programs. A sampling of these approvals shows the use of Centers for Disease Control and Prevention (CDC)/NHANES Standard Average Weight for passengers. A review of these approvals show nonstandard weights and in one instance over a 30 pound difference was noted for each passenger using the same weight standard.
4. **Outdated Certification Standards-** Long ago the average weight of air travelers appears to have surpassed the weight of the dummies used to test each seat or berth, and it’s supporting structure. Current regulations⁴¹⁴² call for seats to be designed for an occupant weighing 170 pounds which has remained unchanged since at least 1949 when it was cited in the Civil Air Regulations, Part 03.390⁴³. After reviewing the Centers for Disease Control data⁴⁴ the FAA has started to acknowledge significant increases in male (200 lbs.) and female (171 lbs.) weights. These

³⁹

<https://www.oig.dot.gov/sites/default/files/FAA%20Oversight%20of%20Southwest%20Airlines%20Final%20Report%5E02.11.2020.pdf>

⁴⁰ FAA Notice 8900.551

⁴¹ 14 CFR 25.562 (b)

⁴² 14 CFR 25.785 (f)

⁴³ [CAR 3 Effective Date 11/01/1949](#)

⁴⁴ <https://www.cdc.gov/nchs/fastats/body-measurements.htm>

Because of previous (substantiated) and ongoing whistleblower retaliation by FAA Management Officials the **WHISTLEBLOWER DOES NOT CONSENT** to name or other identifying information from being released into the public information files.

OSC File DI-20-000536 (Weight and Balance)
Whistleblower Response to Agency Report
June 18, 2021

increases have required mandatory changes to the certificate holders approved weight and balance programs. It is time for the FAA to also review their aircraft certification standards to address passenger weight increases.

5. **Mixed Message From FAA-** The Agency Report states “*the new circular also does not “encourage” the use of SAWs, addressing another NTSB concern...*”. A review of Web Based Operations Safety System (WebOPSS) on June 17, 2021 show over 200 certificate holders have been approved to use the A097, A098 and/or A099 Operations Specification paragraphs. These paragraphs permit the certificate holder to use standard average weights (SAW).
6. **Approval of Standard weight without having gender data-** The FAA may have approved Airline Weight and Balance Operations Specifications (A097, A098 & A099) without having the male/female survey data to accurately determine average passenger weight for the listed M/F ratio.
7. **Incomplete Policy-** FAA Guidance does not offer policy for airline and/or inspectors to follow when the FAA Approved M/F Ratio(s) listed in the approved Operations Specifications do not align exactly with the operational situation of each flight.
8. **Incomplete Policy-** FAA Guidance does not offer policy for airline and/or inspectors to follow for the identification of male/female and/or gender neutral persons for the W&B/load manifest.
9. **Incomplete Policy-** Airlines may be operating aircraft with M/F ratios other than those approved by the FAA.
10. **Lack of Training-** The Agency Report discusses the benefits of curtailment however fails to mention the lack of formal initial/recurrent training related to oversight and approval of certificate holders weight and balance programs.
11. **Lack of Training-**The Agency Report discusses the benefits of curtailment however fails to mention the lack of formal initial/recurrent training related to oversight and approval of curtailment.
12. **Lack of Training/Guidance-** The Agency Report discusses the benefits of curtailment for certificate holders who utilize standard average weights. The report fails to recognize that certificate holders who are approved to use actual weight may also experience passenger/fuel/crew similar weight shifts in flight.

Because of previous (substantiated) and ongoing whistleblower retaliation by FAA Management Officials the **WHISTLEBLOWER DOES NOT CONSENT** to name or other identifying information from being released into the public information files.

Other- Department of Transportation

Memo from AAE-1 to DOT General Counsel

In an internal memo dated September 24, 2018 from AAE-1 to the DOT Assistant General Counsel for General Law the FAA stated “*The lengthy revision process associated with AC 120-27 did not constitute a substantial or specific danger to public safety. During the revision process, FAA inspectors continually monitored and evaluated industry weight and balance procedures, finding that **operators routinely add sufficient “pads” to their weight and balance calculations.***”

- **Important Note-** FAA regulations 14 CFR § 121.665 and 14 CFR §135.63 require airlines report accurate weight and balance data. **Did this memo acknowledge that both the DOT and FAA know that airlines do not report accurate weight and balance data when they add “sufficient pads”?**

Office of Inspector General

On March 9, 2015, the Federal Aviation Administration (FAA) established requirements for air carriers to implement a formal, top down approach to identifying and managing safety risks, known as safety management systems (SMS). However, recent events have raised concerns about FAA’s safety oversight, particularly for Southwest Airlines, one of the largest passenger air carriers in the United States. In early 2018, our office received a hotline complaint regarding FAA’s oversight of Southwest Airlines and a number of operational issues at the carrier. Then, in April 2018, Southwest Airlines Flight 1380 suffered an engine failure that resulted in the first U.S. passenger fatality in over 9 years. We initiated an audit to assess FAA’s oversight of Southwest Airlines’ systems for managing risk.

The DOT-OIG review identified a number of concerns regarding FAA’s safety oversight of Southwest Airlines. First, Southwest Airlines continues to fly aircraft with unresolved safety concerns. For example, **FAA learned in 2018 that the carrier regularly and frequently communicated incorrect aircraft weight and balance data to its pilots**—a violation of FAA regulations and an important safety issue⁴⁵.

As of June 15, 2021 the DOT-OIG still classifies the following weight and balance recommendation as Open⁴⁶.

⁴⁵ [DOT-OIG Report FAA Has Not Effectively Overseen Southwest Airlines’ Systems for Managing Safety Risks](#)

⁴⁶ <https://www.oig.dot.gov/library-item/37731>

Because of previous (substantiated) and ongoing whistleblower retaliation by FAA Management Officials the **WHISTLEBLOWER DOES NOT CONSENT** to name or other identifying information from being released into the public information files.

OSC File DI-20-000536 (Weight and Balance)

Whistleblower Response to Agency Report

June 18, 2021

- Ensure Southwest Airlines complies with regulatory requirements to provide accurate weight and balance information to pilots, or grant an exemption that justifies the non-compliance being in the public interest.

Because of previous (substantiated) and ongoing whistleblower retaliation by FAA Management Officials the **WHISTLEBLOWER DOES NOT CONSENT** to name or other identifying information from being released into the public information files.

OSC File DI-20-000536 (Weight and Balance)
Whistleblower Response to Agency Report
June 18, 2021

Closing

It is important that the American public understand that Whistleblowers perform a vital role in today's world. Federal Aviation Administration (FAA) Whistleblowers such as myself have (following established processes) alerted management officials and others to violations of law, rule, or regulation; gross mismanagement; gross waste of funds; an abuse of authority; or substantial and specific danger to public health or safety.

While FAA employees who report safety and other concerns (Whistleblowers) including myself have been ignored, ostracized, retaliated against for our professionalism and unwavering commitment to aviation safety. The Department of Transportation (DOT)/FAA senior leadership continues to ignore the valuable contributions of Whistleblowers.

For example, when I reported that many FAA Employees were receiving improper locality pay, the FAA initiated an investigation. The FAA investigation substantiated the allegations and reported that *“a conservative estimate showed that the potential overpayments for these employees could easily exceed \$1 million per year.”*⁴⁷

The DOT/FAA Leadership could not even mutter a simple Thank You for raising this concern and saving the taxpayers money.

If this negative safety culture is not reversed, FAA employees and contractors who discover hazards or wrongdoing may remain silent and not report their concern(s) for risk of whistleblower retaliation.

“Failure can be useful if we learn from our mistakes.

Failure can be fatal if we do not.”

Your Loyal Servant,

{Whistleblower}, Aviation Safety Inspector

⁴⁷ https://www.faa.gov/about/plans_reports/congress/media/2017_aae_annual_report.pdf

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OSC File DI-20-000536 (Weight and Balance)
Whistleblower Response to Agency Report
June 18, 2021

AVS Briefing – September 2011

Because of previous (substantiated) and ongoing whistleblower retaliation by FAA Management Officials the **WHISTLEBLOWER DOES NOT CONSENT** to name or other identifying information from being released into the public information files.

Weight and Balance

Advisory Circular 120-27

Standard Average Weights: a Critical Safety Issue

Presented to: AVS-1

By: AFS-200 W&B Workgroup

Date: September 2011



Federal Aviation
Administration



Background

- AFS-200 establishes W&B WG in April 2010
- WG includes Operations, Maintenance, Cabin Safety, and Dispatch inspector specialties from AFS-200, AfS-300, AfS-900, AFS-20, and the Academy
- Draft mark-up of AC 120-27 completed October 2010, except for standard average weights for passengers, carry-on bags, and personal items



The Problem

- The WG believes that the existing standard average weight for passengers, carry-on bags, and personal items (16 lb) is no longer valid.
- Passenger weights based upon data from 1999
- Carry-on bag and personal item weights based upon data prior to 2005. This is before airlines began charging for checked bags.
- Charging for checked bags has resulted in passengers bringing more and heavier carry-on bags and personal items on board to avoid paying checked bags fees.



Why the Standard Average Weights Must Be Updated Now

- **CFR Part 121.153(b) and Operations Specification A099, A098, and A097 specify air carriers may use the standard average weights published in AC 120-27.**
- **21 passengers and crew killed at Charlotte on January 8, 2003. NTSB determined that loading resulted in a CG 5% aft of rear limit**
- **AC 120-27 states the FAA will revise the AC and update the weights if they change more than 2%**



Why the Standard Average Weights Must Be Updated Now (cont)

- **Open Safety Recommendations**
 - NTSB A-04-018 “FAA should periodically sample passenger weights”
 - NTSB A-04-019 “FAA should establish a program to review Part 121 weight and balance data”
 - FAA SR 09.327 “FAA should conduct a survey or series of surveys to verify standard average weights in AC 120-27”
 - FAA SR 09.362 “PIs must ensure that their operators review and develop revised loading schedules that ensure that the aircraft are properly loaded and that the CG remains within limits”
 - FAA SR 09.363 “Based upon current baggage fees, PIs must ensure their operators consider the impact to their weight and balance program and either impose actual weight determination procedures or reassess their current AC 120-27E derived weight and balance program”
 - FAA SR 09.364 “AFS-200 needs to review and update the guidance and weights included in AC 120-27E”



Why the Standard Average Weights Must Be Updated Now (cont)

- The average standard weights from AC 120-27 are used under OpSpecs A097, A098, or A099 to compute the weight and balance calculations required in CFR 121.153 (b) before each flight
- FAA system safety / risk management principles dictate that when a serious safety risk is identified that risk must be analyzed and either mitigated or accepted. If these standard average weights are not updated the FAA must accept the risk.



Determining / Verifying Accurate Standard Average Weights

- The WG suggests a two phase process
- **Phase One**
 - WG or contractor weigh enough bags to verify extent of the problem
 - Bags weighed immediately after going through security scanning
 - Passenger participation voluntary
 - Determine if phase two required
- **Phase two**
 - AFS-20 determines the number of carry-on bags and personal items to be weighed to ensure scientifically valid results
 - Verify AC 120-27 assumptions
 - One-third of passengers bring both a carry-on bag and personal items
 - One third of passengers bring either a carry-on bag or personal items
 - One third of passengers carry nothing on board
 - This may require collecting data at different airports and different types of flights, e.g. Commuter, Domestic, and International)



Bottom Line

- The WG believes that many flights are being with inaccurate CG calculations
- Some flights may be operated over the maximum allowable weight.
- This is a critical safety problem that needs to be mitigated or the FAA accepts the risk



OSC File DI-20-000536 (Weight and Balance)
Whistleblower Response to Agency Report
June 18, 2021

AIPO Reports

Because of previous (substantiated) and ongoing whistleblower retaliation by FAA Management Officials the **WHISTLEBLOWER DOES NOT CONSENT** to name or other identifying information from being released into the public information files.



FAA
Aviation Safety

2012

Review of Standard Average Passenger Weight - Update



Photo: Air Midwest Flight 5481

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NTSB Report: <http://www.nts.gov/doclib/reports/2004/aar0401.pdf>

Flight Standards Service
Analysis and Information
Program Office
AFS-900

8/20/2012

FINAL DRAFT

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Executive Summary

The increase in the weight of adults aged 13 years and over warrants a revision to Advisory Circular 120-27E. The Federal Aviation Administration should amend its guidance governing the weight and balance of passenger aircraft. The average American aged 13 years and over weighs significantly more than the assumed average weight per person utilized in current guidance. Updating the guidance to more accurately reflect today's average weight per person will maintain intended safety levels by taking this weight increase into account. A review of the current Advisory Circular 120-27E identifies the increase in weight of individuals in the United States is trending upwards. The guidance of Advisory Circular 120-27E states that an increase in weight of more than two percent requires a revision. The adult weight has increased 2.16 percent or 4.1 pounds, and necessitates an increase to the corresponding tables. The Standard Average Passenger Weight for an adult increases to 195 lbs (summer) and 200 lbs (winter). The data utilized in the current version was obtained more than ten years ago. The criticality of the weight and balance program with respect to the safety of flight warrants that Advisory Circular 120-27E be reviewed on a biannual basis to coincide with the release of the National Health and Nutrition Examination Survey data from the Centers for Disease Control and Prevention.

Problem Statement

The weight of the United States population has grown significantly since 1960. The figures released by the Centers for Disease Control and Prevention (CDC) show that the average weight for men aged 20-74 years rose from 166.3 pounds in 1960 to 191 pounds in 2002, while the average weight for women the same age increased from 140.2 pounds in 1960 to 164.3 pounds in 2002. This is a striking 25 pound difference for the male population.

Background

The CDC information has been utilized to create weight standards across industry. In the aviation industry, Federal Aviation Administration (FAA) AC 120-27E (Advisory Circular 120-27E) provides weight and balance data. Table 2-1 in AC 120-27E currently states that the average adult passenger weight is 190 pounds (summer [May 1 to October 31]), and 195 pounds (winter [November 1 to April 30]). This average is calculated through averaging a 200 pound male (summer), and a 179 pound female (summer), as well as a 205 pound male (winter), and a 184 pound female (winter). These figures assume a 21 pound allowance for carry-on items (16 pounds) and clothing (5 pounds summer / 10 pounds winter).

These figures for weight averages are not consistent with the National Health Statistics Report dated October 22, 2008. The report lists the male, age 20 and over, average as 194.7 pounds and the female, age 20 and over, average as 164.7 pounds. These weights were provided in a clinical setting with the subject population wearing only socks, undergarments, and hospital gown.

In a period of twelve years there has been a continued increase in the weight of the population. Some information is collected in more than one survey and estimates of the same statistic may vary among surveys because of different survey methodologies, sampling frames, questionnaires, definitions, and tabulation categories. The statistics gathered for AC 120-27E are from the NHANES (National Health and Nutrition Examination Survey) 1999-2000 report.

The CDC reports that “obesity is common, serious, and costly. In 2009, about 2.4 million more adults were obese than in 2007.” There is however a distinction between the overweight and obese individual and the weight standards of a passenger. Unless an overweight/obese individual exceeds the FAA standard average passenger weight, that individual is not a factor in calculations.

The perception of overweight/obese individuals providing an increase to weight figures, and the implementation of revised weight standards in other transportation sectors has prompted Flight Standards to exam the current weight standards provided through AC 120-27E.

Methodology

The methodology, employed in the manner given, was dictated in AC 120-27E. The 1999-2000 NHANES data set was utilized to re-verify the computations used to generate the figures in AC 120-27E.

The methodology for the original analysis, dated July 25, 2011, introduced weighted calculations as a mean for determining means and standard deviation. This form of calculation was chosen in lieu of the inability to find the method utilized in the current AC 120-27E calculations. The weighted figures provide a truer representation of the

study population when compared to a straight average calculation. Since the original analysis, the methodology utilized in the original study has been provided to the author.

Data sets were obtained from the NHANES 2009-2010 Demographics File, and the NHANES 2009-2010 Examination File. The records in each data set were matched using the variable “SEQN” in each data set. The weight and age data were extracted from each SEQN and analyzed. The analysis of the data was in accordance with the methodology of AC 120-27E. The analysis was conducted on the overall population, and segments of the population with respect to age and gender. Calculations were compiled and reviewed on children aged 2 through 12, and on male and female individuals over the age of 12.

2009-2010 NHANES Data

The 2009-2010 NHANES data was calculated using the original methodology for AC120-27E. The 2009-2010 data set consisted of 10,253 subjects. There were 333 subjects reported to have been wearing clothing other than gown and socks, and therefore were deleted from the population set. From the remaining subjects, 715 subjects aged 0 to 1 were removed. From the remaining set, 88 were deleted due to lack of weight information. The data was further divided into two sets; one set for ages 2 to 12 consisting of 2,204 subjects, and the remaining ages 13 and over containing 6,913 subjects. The subjects aged 13 and over were again split into male and female groups after calculations.

Results

Tables 1 and 2 provide an analysis for calculating a weight difference between the current AC 120-27E figure and the weight figure calculated in this analysis.

Table 1

Summer Weights

Source	Plus Carry-On and Clothing		Current AC 120-27E Figure	Difference
	LB	LB		
Adult	173.11	194.11	190	4.11
Males	185.99	206.99	200	6.99
Females	160.22	181.22	179	2.22
Child (Age 2 to 12)	62.10	83.10	82	1.10

Table 2

Winter Weights

Source	Plus Carry-On and Clothing		Current AC 120-27E Figure	Difference
	LB	LB		
Adult	173.11	199.11	195	4.11
Males	185.99	211.99	205	6.99
Females	160.22	186.22	184	2.22
Child (Age 2 to 12)	62.10	88.10	87	1.10

Table 3 and 4 compare the difference to a maximum value that can not be exceeded without requiring a change to the figure provided in Table 2-1 of AC 120-27E. The maximum exceed value is that calculated as two percent of weight per passenger provided in Table 2-1 of AC 120-27E.

Table 3

Summer Weights

Source	Difference	Maximum Exceed	Requires Table 2-1 Change
		Value	
	LB	LB	
Adult	4.11	3.80	Yes
Males	6.99	4.00	Yes
Females	2.22	3.58	No
Child (Age 2 to 12)	1.10	1.64	No

Table 4

Winter Weights

Source	Difference	Maximum Exceed Value	Requires Table 2-1 Change
Adult	4.11	3.90	Yes
Males	6.99	4.10	Yes
Females	2.22	3.68	No
Child (Age 2 to 12)	1.10	1.74	No

Table 5 depicts the proposal for the changed Table 2-1 of AC 120-27E.

Table 5

Proposed Table 2-1 Change

Standard Average Passenger Weight	Weight per Passenger
Summer Weights	
Average adult passenger weight	195 lb
Average adult male passenger weight	207 lb
Average adult female passenger weight	181 lb
Child weight (2 years to less than 13 years of age)	83 lb
Winter Weights	
Average adult passenger weight	200 lb
Average adult male passenger weight	212 lb
Average adult female passenger weight	186 lb
Child weight (2 years to less than 13 years of age)	88 lb

Discussion

The standard average passenger weights provided in AC 120-27E Tables 2-1 and 2-2 were established based on data from U.S. Government health agency surveys. The standard average passenger weights in AC 120-27E Tables 2-1 and 2-2 include 5 pounds for summer clothing, 10 pounds for winter clothing, and a 16 pound allowance for personal items and carry-on bags. Where no gender is given, the standard average passenger weights are based on the assumption that 50 percent of passengers are male and 50 percent of passengers are female.

The United States Coast Guard has released a discussion in the Federal Register (Vol. 76, No. 67) in which they address the increase weight of the average. The increase in weight has prompted the Coast Guard to initiate a total revamping of the boating industry to recalculate all of their data. The Coast Guard has been using a figure of 140 lbs as the Assumed Average Weight Per Person (AAWPP) since 1960 and has determined that the AAWPP revised figure is 185 lbs.

The Department of Transportation, Federal Transit Administration (FTA) has addressed the increases of weight in the U.S. population. The bus industry has been utilizing figures that understate the weights of individuals as well as the girth of individuals. The Federal Register (Vol. 76, No. 49) indicates that the current figure of 150 lbs was instituted in 1971. The current revision is based upon the figures derived from the Anthropometric Reference Data for Children and Adults: United States, 2003-2006 provided in the NHANES from the CDC. This data comes from one of the same source utilized by the FAA. The FTA has proposed that the weight used be increased to 175 lbs, as well as increasing the free floor space of a standing passenger from 1.5 square feet to 1.75 square feet to accommodate the increase in passenger girth.

The United States Air Force provides guidance in Technical Order AFI11-2C-5V3ADD-A which places an allowance for passengers at 175 lbs each, plus 70 lbs for each piece of passenger baggage.

AC 120-27E addresses the computations used to create the Standard Average Passenger Weight. AC 120-27E states that the subjects weights were computed allowing for a reduction in clothing. This is in concurrence to the NHANES report which indicates that all the subjects were weighed in hospital gowns and socks. This weight of hospital

attire would be minimal, as compared to a fully clothed individual. The FAA currently makes weight allowances for clothing of 5 pounds in the summer, and 10 pounds in the winter.

Conclusion

A compilation of data from various NHANES sources was utilized to determine the Standard Average Passenger Weights per AC 120-27E. The analysis concluded that the data from the 2009-2010 NHANES data provided a different average adult weight of 195 lbs (summer) and 200 lbs (winter) using the same computational method found in the AC 120-27E. AC 120-27E dictates that “If the FAA finds that the data from NHANES indicates a weight change of more than 2 percent, the FAA will revise this AC to update the standard average weight.”

There is difference in the Adult Standard Average Passenger Weight and the Male Standard Average Passenger Weight; however, there is no significant change increase to the Female Standard Average Passenger Weight or the Child Standard Average Passenger Weight. The current Adult Standard Average Passenger Weight listed in AC 120-27E Table 2-1 is 190 lbs (summer) and 195 lbs (winter). The current Male Standard Average Passenger Weight listed in AC 120-27E Table 2-1 is 179 lbs (summer) and 184 lbs (winter). Based upon the data provided in the 2009-2010 NHANES, the Standard Average Passenger Weight for an Adult increases to 200 lbs (summer) and 205 lbs (winter). This is an increase of 2.2 percent from the 1999-2000 NHANES data set used for AC 120-27E.

Recommendations

The increase in the Adult Standard Average Passenger Weight and the Male Standard Average Passenger Weight warrants a revision to Table 2-1 Standard Average Passenger Weights, and Table 2-2 Average Passenger Weights for Operators with a No-Carry-On Bag Program. The revised tables would become thus:

TABLE 2-1. STANDARD AVERAGE PASSENGER WEIGHTS

Standard Average Passenger Weight	Weight Per Passenger
Summer Weights	
Average adult passenger weight	195 lbs
Average adult male passenger weight	207 lbs
Average adult female passenger weight	181 lbs
Child weight (2 years to less than 13 years)	83 lbs
Winter Weights	
Average adult passenger weight	200 lbs
Average adult male passenger weight	212 lbs
Average adult female passenger weight	186 lbs
Child weight (2 years to less than 13 years)	88 lbs

TABLE 2-2. AVERAGE PASSENGER WEIGHTS FOR OPERATORS WITH A NO-CARRY-ON BAG PROGRAM

Standard Average Passenger Weight	Weight Per Passenger
Summer Weights	
Average adult passenger weight	189 lbs
Average adult male passenger weight	201 lbs
Average adult female passenger weight	175 lbs
Child weight (2 years to less than 13 years)	77 lbs
Winter Weights	
Average adult passenger weight	194 lbs
Average adult male passenger weight	206 lbs
Average adult female passenger weight	180 lbs
Child weight (2 years to less than 13 years)	82 lbs

The Federal Aviation Administration should amend its guidance governing the weight and balance of passenger aircraft. The average American weighs significantly

more than the assumed average weight per person utilized in current guidance. Updating the guidance to more accurately reflect today's average weight per person will maintain intended safety levels by taking this weight increase into account. It is recommended that the weights used for AC 120-27E be reviewed on a biannual basis that coincides with the release of the NHANES data from the CDC.

Paragraph 211 of AC 120-27E requires that the standard deviation formula be corrected to include the numerator and denominator under the square root sign as a singular equation instead of as depicted with the square root computed separately for the numerator and denominator.

A thorough study should be conducted on the Carry-on baggage program. This study should focus on the weight of the items that are being carried aboard the aircraft. Since the implementation of fees for checked baggage, there is a substantial increase in the size, number, and weight of carry-on articles.

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Appendices

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Appendix A

Federal Register

April 7, 2011

Passenger Weight and Inspected

Vessel Stability Requirements

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Appendix B

Federal Register

March 14, 2011

Bus Testing: Calculations of Average

Passenger Weight and Test Vehicle Weight

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Appendix C

United States Air Force

Technical Order AF11-2C-5V3ADD-A

Table 4.1

Standard Weight Information

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Appendix D

[Federal Aviation Administration](#)

[Advisory Circular 120-27E](#)

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Flight Standards Service
Analysis and Information
Program Office


8/20/2012

Final Draft



FAA
Aviation Safety

2013

Review of Standard Average Passenger Weight - Updated



Photo: Air Midwest Flight 5481

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NTSB Report: <http://www.ntsb.gov/doclib/reports/2004/aar0401.pdf>

Flight Standards Service
Analysis and Information
Program Office
AFS-900

2/20/2013

FINAL DRAFT

Review of Standard Average Passenger Weight

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Review of Standard Average Passenger Weight

Executive Summary

The increase in the weight of children aged 2 to 12 years, and adults warrants a revision to Advisory Circular 120-27E. The Federal Aviation Administration should amend its guidance governing the weight and balance of passenger aircraft. The average American child aged 2 to 12 years and adults weigh significantly more than the assumed average weight per person utilized in current guidance. Updating the guidance to more accurately reflect today's average weight per person will maintain intended safety levels by taking this weight increase into account. A review of the current Advisory Circular 120-27E identifies the increase in weight of individuals in the United States is trending upwards. The guidance of Advisory Circular 120-27E states that an increase in weight of more than two percent requires a revision. The current female weight and child weight has not been exceeded in the 2009 - 2010 data, though it has historically and is on the increase. The data utilized in the current version of Advisory Circular 120-27E was obtained more than ten years ago. The criticality of the weight and balance program with respect to the safety of flight warrants that Advisory Circular 120-27E be reviewed on a biannual basis to coincide with the release of the National Health and Nutrition Examination Survey data from the Centers for Disease Control and Prevention.

Problem Statement

The weight of the United States population has grown significantly since 1960. The figures released by the Centers for Disease Control and Prevention (CDC) show that the average weight for men aged 20-74 years rose from 166.3 pounds in 1960 to 191 pounds in 2002, while the average weight for women the same age increased from 140.2 pounds in 1960 to 164.3 pounds in 2002. This is a striking 25 pound difference for the male population.

Background

The CDC information has been utilized to create weight standards across industry. In the aviation industry, Federal Aviation Administration (FAA) AC 120-27E (Advisory Circular 120-27E) provides weight and balance data. Table 2-1 in AC 120-27E states that the average adult passenger weight is 190 pounds (summer [May 1 to October 31]), and 195 pounds (winter [November 1 to April 30]). This average is calculated through averaging a 200 pound male (summer), and a 179 pound female (summer), as well as a 205 pound male (winter), and a 184 pound female (winter). These figures assume a 21 pound allowance for carry-on items (16 pounds) and clothing (5 pounds summer / 10 pounds winter).

These figures for weight averages are not consistent with the National Health Statistics Report dated October, 2012. The report lists the male, age 20 and over, average as 195.5 pounds and the female, age 20 and over, average as 166.2 pounds. These weights were provided in a clinical setting with the subject population wearing only socks, undergarments, and hospital gown.

Review of Standard Average Passenger Weight

In a period of twelve years there had been a continued increase in the weight of the population. Some information is collected in more than one survey and estimates of the same statistic may vary among surveys because of different survey methodologies, sampling frames, questionnaires, definitions, and tabulation categories. The statistics gathered for AC 120-27E are from the NHANES (National Health and Nutrition Examination Survey) 1999-2000 report.

The CDC reports that “obesity is common, serious, and costly. In 2009, about 2.4 million more adults were obese than in 2007.” A September 2012 CDC report indicates that an estimated 33.0% of U.S. adults aged 20 and over are overweight, 35.7% are obese, and 6.3% are extremely obese. There is however a distinction between the overweight and obese individual and the weight standards of a passenger. Unless an overweight/obese individual exceeds the FAA standard average passenger weight, that individual is not a factor in calculations.

The perception of overweight/obese individuals providing an increase to weight figures, and the implementation of revised weight standards in other transportation sectors has prompted Flight Standards to examine the current weight standards provided through AC 120-27E.

Methodology

The methodology, employed in the manner given, was dictated in AC 120-27E. The 1999-2000 NHANES data set was utilized to re-verify the computations used to generate the figures in AC 120-27E.

The methodology for the original analysis, dated July 25, 2011, introduced weighted calculations as a mean for determining means and standard deviation. This form

Review of Standard Average Passenger Weight

of calculation was chosen in lieu of the inability to find the method utilized in the current AC 120-27E calculations. The weighted figures provide a truer representation of the study population when compared to a straight average calculation. Since the original analysis, the methodology utilized in the original study has been provided to the author.

The original study data sets were obtained from the NHANES 2007-2008 Demographics File, and the NHANES 2007-2008 Examination File. The revised study utilizes data sets were obtained from the NHANES 2009-2010 Demographics File, and the NHANES 2009-2010 Examination File. The records in each data set were matched using the variable “SEQN” in each data set. The weight and age data were extracted from each SEQN and analyzed. The analysis of the data was in accordance with the methodology of AC 120-27E. The analysis was conducted on the overall population, and segments of the population with respect to age and gender. Calculations were compiled and reviewed on children aged 2 through 12, and on male and female individuals over the age of 12.

1999-2000 NHANES Data

The 1999-2000 NHANES data provides a total sample population of 9,965 subjects. Only 9,197 subjects provided weight data. The remaining 768 subjects with no weight data were removed from the data set. 692 subjects ages 0 – 1 were removed from the data set. The remaining data set of 8,505 subjects was divided into two sets; subjects aged 2 through 12, and aged 13 and over. The age 2 – 12 data set provided 2,138 subjects. The age 13 and over data set provided 6,367 subjects.

AC 120-27E states that the standard deviation of the sample set was 47 pounds. This can not be duplicated with various configurations of the data set.

Review of Standard Average Passenger Weight

The standard deviations were calculated for the various populations as provided in Tables 1 through 4.

Table 1

Total Weight Subjects

Descriptive Statistics	N	Standard Deviation
	9197	65.91

Table 2

Population of Interest

Descriptive Statistics	N	Standard Deviation
	8505	59.90

Table 3

Age 2 to 12

Descriptive Statistics	N	Standard Deviation
	2138	35.46

Table 4

Ages 13 and Over

Descriptive Statistics	N	Standard Deviation
	6367	44.27

The FAA does not specify in AC 120-27E the type of analysis process utilized to calculate the standard average passenger weights. Appendix 2 (1.c.) of AC 120-27E provides a simplistic methodology in determining the weights. The simplistic analysis tools available in IBM's SPSS Statistics 19.0 software are utilized in this report. There are more complex tools available in SPSS, but they are not afforded to the analyst in the current version. Calculations outside of SPSS were accomplished by creating the formulas and inserting them into Microsoft Excel.

Using the "simplistic" FAA version of conducting the Standard Average Passenger Weight (SAPW) analysis, the computed weights for the 1999-2000 NHANES

Review of Standard Average Passenger Weight

data set provides a different set of computations as listed in AC 120-27E, and shown in Table 5.

Table 5

1999-2000 Child Mean

Descriptive Statistics	N	Mean
		LB
	2138	68.05

This mean plus the additional 21 pound allowance (summer) equates to 89 pounds (rounded). The 89 pound calculation exceeds the computation provided in AC 120-27E of 82 pounds. The average weight of a child based on AC 120-27E without baggage or clothing, such as in a clinical setting would be 61 pounds.

Before accounting for standard deviation, the age 13 and over mean equates to 165.99 illustrated in Table 6.

Table 6

1999-2000 Age 13 and Over Mean

Descriptive Statistics	N	Mean
		LB
	6367	165.99

Computing the SAPW using the standard deviation of 47 pounds provided in AC 120-27E and multiplying it by 2 equates to 94 pounds. These figures provide a calculated mean of 161.36 shown in Table 7.

Table 7

Mean at 47 Pound Standard Deviation

Descriptive Statistics	N	Mean
		LB
	6126	161.36

Review of Standard Average Passenger Weight

Computing the SAPW using the standard deviation of 44.27 pounds provided in this report and multiplying it by 2 equates to 88.54 pounds. These figures provide a calculated mean of 160.77 provided in Table 8.

Table 8

<i>Mean at 44.27 Pound Standard Deviation</i>		
Descriptive Statistics	N	Mean
		LB
	6079	160.77

The addition of 21 pounds (summer) to the two computations finds that the SAPW in the AC 120-27E method is 182.36, and the non-AC method provided a computation of 181.77. These two figures rounded equate to 182 pounds for the SAPW (summer).

AC 120-27E states that the SAPW (summer) should be 190 pounds. In the winter months, 5 additional pounds are added to the summer weights.

AC 120-27E indicates that from this remaining data set, the male and female average weights were calculated. Tables 9 and 10 provide the means for male and female subjects.

Table 9

<i>Male Mean at 44.27 Pound Standard Deviation</i>		
Descriptive Statistics	N	Mean
		LB
	2867	169.24

Table 10

<i>Female Mean at 44.27 Pound Standard Deviation</i>		
Descriptive Statistics	N	Mean
		LB
	3212	153.21

Review of Standard Average Passenger Weight

The addition of 21 pounds (summer) to these figures provides that the male weight is 190 pounds, and the female weight is 174 pounds.

Using a weighted population method

The arithmetic mean is not the same as the weighted mean. The arithmetic simply adds all the numbers in a column together and divides by the number count. This method is generally referred to as the average. The weighted mean however provides a weighted value to each of the numbers in a column. In this instance the population will have subjects that have subjects of a particular weight. There will be more subjects at one particular weight than there are subjects at another particular weight. The weighted mean takes this into account mathematically.

Weighted Mean

$$=SUMPRODUCT(C_{2F}:C_{2L},C_{1F}:C_{1L})/SUM(C_{1F}:C_{1L})$$

Weighted Variance

$$=SUMPRODUCT((C_{2F}:C_{2L} - SUMPRODUCT(C_{2F}:C_{2L},C_{1F}:C_{1L})/SUM(C_{1F}:C_{1L}))^2,C_{1F}:C_{1L})$$

Weighted Standard Deviation

$$=SQRT(SUMPRODUCT((C_{2F}:C_{2L} - SUMPRODUCT(C_{2F}:C_{2L},C_{1F}:C_{1L})/SUM(C_{1F}:C_{1L}))^2,C_{1F}:C_{1L})/(SUM(C_{1F}:C_{1L})-1))$$

Utilizing data from the 1999-2000 NHANES

The weighted mean for the population study is 172.34.

The weighted standard deviation for the population is 45.44.

The weighted mean for the population study after the removal of all points more than two standard deviations above and below the weighted mean indicates a new mean of 167.21

Utilizing data from the 2007-2008 NHANES

The weighted mean for the population study is 176.15.

Review of Standard Average Passenger Weight

The weighted standard deviation for the population is 47.01.

The weighted mean for the population study after the removal of all points more than two standard deviations above and below the weighted mean indicates a new mean of 171.01.

Results - July 25, 2011 Study

2007-2008 NHANES Data

The 2007-2008 data set consisted of 10,149 subjects. From this set, 2,590 were deleted due to lack of weight information. From the remaining subjects, 745 subjects aged 0 to 1 were removed. The data was further divided into two sets; one set for ages 2 to 12, and the remaining ages 13 and over. The subjects aged 13 and over were again split into male and female groups.

The age 13 and up subjects were computed as to the Arithmetic Mean, the Weighted Mean (WTINT2YR), and the Weighted Mean (WTMEC2YR). The standard deviation was computed for STDEV, STDEV A, STDEV P, STDEV PA, the weighted STDEV WTINT2YR, and weighted STDEV WTMEC2YR. It is noted that STDEV and STDEV A, and, STDEV P and STDEV PA provided the same values, and are further addressed solely as STDEV and STDEV P. Each of these were multiplied by two in order to provide two standard deviations.

A minimum and a maximum value were calculated for the Arithmetic Mean, the Weighted Mean (WTINT2YR), and the Weighted Mean (WTMEC2YR) by subtracting the standard deviation from the mean for the minimum, and adding the standard deviation and the mean for the maximum.

The minimum and maximum standard deviations were utilized as a cutoff point for the weight figures. Those figures below the minimum were eliminated, and those

Review of Standard Average Passenger Weight

above the maximum were removed. The remaining groups of numbers were used to calculate the matrix of weights.

Tables 11, 12, and 13 provide a matrix for the various computations that may be derived from three types of means, and four types of standard deviation.

Table 11

Adult

Source	Arithmetic Mean	Weighted Mean (WTINT2YR)	Weighted Mean (WTMEC2YR)
	LB	LB	LB
STDEV	168.81	170.99	170.97
STDEV P	168.81	170.99	170.97
STDEV WTINT2YR	168.83	171.01	170.99
STDEV WTMEC2YR	168.83	171.01	170.99

Table 12

Males

Source	Arithmetic Mean	Weighted Mean (WTINT2YR)	Weighted Mean (WTMEC2YR)
	LB	LB	LB
STDEV	179.32	183.65	183.65
STDEV P	179.32	183.65	183.65
STDEV WTINT2YR	179.38	183.65	183.83
STDEV WTMEC2YR	179.38	183.65	183.99

Table 13

Females

Source	Arithmetic Mean	Weighted Mean (WTINT2YR)	Weighted Mean (WTMEC2YR)
	LB	LB	LB
STDEV	158.84	159.37	159.37
STDEV P	158.84	159.37	159.37
STDEV WTINT2YR	158.84	159.42	159.42
STDEV WTMEC2YR	158.84	159.42	159.42

Table 14 provides the mean weights for children. There is no adjustment for standard deviation.

Review of Standard Average Passenger Weight

Table 14

<i>Child (Age 2 to 12)</i>	
Source	LB
Arithmetic Mean	64.65
Weighted Mean (WTINT2YR)	66.01
Weighted Mean (WTMEC2YR)	65.88

Table 15 provides a weighted mean of the means. These computations are the resultant of calculating the weighted means of those found in Tables 11, 12, 13, and 14.

Table 15

<i>Weighted Mean of Means</i>		
Source	Plus Carry-On	
	LB	LB
Adult	170.27	191.27
Males	182.26	203.26
Females	159.20	180.20
Child (Age 2 to 12)	65.51	86.51

Tables 16 and 17 provide the weight as the weighted mean of the means plus an additional 16 pounds for carry-on baggage plus 5 pounds for summer clothing, and 10 pounds for winter clothing. This figure is compared to the figure provided for in AC 120-27E, and the resulting difference is given.

Table 16

<i>Summer Weights</i>				
Source	Plus Carry-On		Current AC 120-27E Figure	Difference
	LB	LB		
Adult	170.27	191.27	190	1.27
Males	182.26	203.26	200	3.26
Females	159.20	180.20	179	1.20
Child (Age 2 to 12)	65.51	86.51	82	4.51

Review of Standard Average Passenger Weight

Table 17

Winter Weights

Source	Plus Carry-On		Current AC 120-27E Figure	Difference
	LB	LB		
Adult	170.27	196.27	195.00	1.27
Males	182.26	208.26	205.00	3.26
Females	159.20	185.20	184.00	1.20
Child (Age 2 to 12)	65.51	91.51	87.00	4.51

Table 18 and 19 compare the difference to a maximum value that can not be exceeded without requiring a change to the figure provided in Table 2-1 of AC 120-27E. The maximum exceed value is that calculated as two percent of weight per passenger provided in Table 2-1 of AC 120-27E.

Table 18

Summer Weights

Source	Difference	Maximum Exceed	Requires Table 2-1 Change
		Value	
	LB	LB	
Adult	1.27	3.80	No
Males	3.26	4.00	No
Females	1.20	3.58	No
Child (Age 2 to 12)	4.51	1.64	Yes

Table 19

Winter Weights

Source	Difference	Maximum Exceed	Requires Table 2-1 Change
		Value	
Adult	1.27	3.90	No
Males	3.26	4.10	No
Females	1.20	3.68	No
Child (Age 2 to 12)	4.51	1.74	Yes

Table 20 depicts the proposal for the changed Table 2-1 of AC 120-27E.

Review of Standard Average Passenger Weight

Table 20

Proposed Table 2-1 Change (2011)

Standard Average Passenger Weight	Weight per Passenger
Summer Weights	
Average adult passenger weight	190 lb
Average adult male passenger weight	200 lb
Average adult female passenger weight	179 lb
Child weight (2 years to less than 13 years of age)	87 lb
Winter Weights	
Average adult passenger weight	195 lb
Average adult male passenger weight	205 lb
Average adult female passenger weight	184 lb
Child weight (2 years to less than 13 years of age)	92 lb

Results - February 15, 2013 Revision Study

2009-2010 NHANES Data

The 2009-2010 NHANES data was calculated using the original methodology for AC120-27E and applied the same as the July 25, 2011 study. The 2009-2010 data set consisted of 10,253 subjects. There were 333 subjects reported to have been wearing clothing other than gown and socks, and therefore were deleted from the population set. From the remaining subjects, 715 subjects aged 0 to 1 were removed. From the remaining set, 88 were deleted due to lack of weight information. The data was further divided into two sets; one set for ages 2 to 12 consisting of 2,204 subjects, and the remaining ages 13 and over containing 6,913 subjects. The subjects aged 13 and over were again split into male and female groups after calculations.

Tables 21 and 22 provide an analysis for calculating a weight difference between the current AC 120-27E figure and the weight figure calculated in this analysis.

Review of Standard Average Passenger Weight

Table 21

Summer Weights

Source	Plus Carry-On and Clothing		Current AC 120-27E Figure	Difference
	LB	LB		
Adult	173.11	194.11	190	4.11
Males	185.99	206.99	200	6.99
Females	160.22	181.22	179	2.22
Child (Age 2 to 12)	62.10	83.10	82	1.10

Table 22

Winter Weights

Source	Plus Carry-On and Clothing		Current AC 120-27E Figure	Difference
	LB	LB		
Adult	173.11	199.11	195	4.11
Males	185.99	211.99	205	6.99
Females	160.22	186.22	184	2.22
Child (Age 2 to 12)	62.10	88.10	87	1.10

Table 23 and 24 compare the difference to a maximum value that cannot be exceeded without requiring a change to the figure provided in Table 2-1 of AC 120-27E. The maximum exceed value is that calculated as two percent of weight per passenger provided in Table 2-1 of AC 120-27E.

Table 23

Summer Weights

Source	Difference	Maximum Exceed	Requires Table 2-1
		Value	Change
	LB	LB	
Adult	4.11	3.80	Yes
Males	6.99	4.00	Yes
Females	2.22	3.58	No
Child (Age 2 to 12)	1.10	1.64	No

Review of Standard Average Passenger Weight

Table 24

Winter Weights

Source	Difference	Maximum Exceed Value	Requires Table 2-1 Change
Adult	4.11	3.90	Yes
Males	6.99	4.10	Yes
Females	2.22	3.68	No
Child (Age 2 to 12)	1.10	1.74	No

Table 25 depicts the proposal for the changed Table 2-1 of AC 120-27E.

Table 25

Proposed Table 2-1 Change (2013)

Standard Average Passenger Weight	Weight per Passenger
Summer Weights	
Average adult passenger weight	195 lb
Average adult male passenger weight	207 lb
Average adult female passenger weight	181 lb
Child weight (2 years to less than 13 years of age)	83 lb
Winter Weights	
Average adult passenger weight	200 lb
Average adult male passenger weight	212 lb
Average adult female passenger weight	186 lb
Child weight (2 years to less than 13 years of age)	88 lb

Discussion

The standard average passenger weights provided in AC 120-27E Tables 2-1 and 2-2 were established based on data from U.S. Government health agency surveys. The standard average passenger weights in AC 120-27E Tables 2-1 and 2-2 include 5 pounds for summer clothing, 10 pounds for winter clothing, and a 16 pound allowance for personal items and carry-on bags. Where no gender is given, the standard average passenger weights are based on the assumption that 50 percent of passengers are male and 50 percent of passengers are female.

Review of Standard Average Passenger Weight

The United States Coast Guard has released a discussion in the Federal Register (Vol. 76, No. 67) in which they address the increase weight of the average. The increase in weight has prompted the Coast Guard to initiate a total revamping of the boating industry to recalculate all of their data. The Coast Guard has been using a figure of 140 lbs as the Assumed Average Weight Per Person (AAWPP) since 1960 and has determined that the AAWPP revised figure is 185 lbs.

The Department of Transportation, Federal Transit Administration (FTA) has addressed the increases of weight in the U.S. population. The bus industry has been utilizing figures that understate the weights of individuals as well as the girth of individuals. The Federal Register (Vol. 76, No. 49) indicates that the current figure of 150 lbs was instituted in 1971. The current revision is based upon the figures derived from the Anthropometric Reference Data for Children and Adults: United States, 2003-2006 provided in the NHANES from the CDC. This data comes from one of the same source utilized by the FAA. The FTA has proposed that the weight used be increased to 175 lbs, as well as increasing the free floor space of a standing passenger from 1.5 square feet to 1.75 square feet to accommodate the increase in passenger girth.

The United States Air Force provides guidance in Technical Order AFI11-2C-5V3ADD-A which places an allowance for passengers at 175 lbs each, plus 70 lbs for each piece of passenger baggage.

AC 120-27E addresses the computations used to create the Standard Average Passenger Weight. AC 120-27E states that the subjects weights were computed allowing for a reduction in clothing. This is in concurrence to the NHANES report which indicates that all the subjects were weighed in hospital gowns and socks. This weight of hospital

Review of Standard Average Passenger Weight

attire would be minimal, as compared to a fully clothed individual. The FAA currently makes weight allowances for clothing of 5 pounds in the summer, and 10 pounds in the winter.

Conclusion

A compilation of data from various NHANES sources was utilized to determine the Standard Average Passenger Weights per AC 120-27E. The analysis concluded that the data from the 2009-2010 NHANES data provided a different average adult weight of 195 lbs (summer) and 200 lbs (winter) using the same computational method found in the AC 120-27E. AC 120-27E dictates that “If the FAA finds that the data from NHANES indicates a weight change of more than 2 percent, the FAA will revise this AC to update the standard average weight.”

There is difference in the Adult Standard Average Passenger Weight and the Male Standard Average Passenger Weight; however, there is no significant change increase to the Female Standard Average Passenger Weight or the Child Standard Average Passenger Weight. The current Adult Standard Average Passenger Weight listed in AC 120-27E Table 2-1 is 190 lbs (summer) and 195 lbs (winter). The current Male Standard Average Passenger Weight listed in AC 120-27E Table 2-1 is 179 lbs (summer) and 184 lbs (winter). Based upon the data provided in the 2009-2010 NHANES, the Standard Average Passenger Weight for an Adult increases to 200 lbs (summer) and 205 lbs (winter). This is an increase of 2.2 percent from the 1999-2000 NHANES data set used for AC 120-27E.

Recommendations

The increase in the Adult Standard Average Passenger Weight and the Male Standard Average Passenger Weight warrants a revision to Table 2-1 Standard Average Passenger Weights, and Table 2-2 Average Passenger Weights for Operators with a No-Carry-On Bag Program. The revised tables would become thus:

TABLE 2-1. STANDARD AVERAGE PASSENGER WEIGHTS

Standard Average Passenger Weight	Weight Per Passenger
Summer Weights	
Average adult passenger weight	195 lbs
Average adult male passenger weight	207 lbs
Average adult female passenger weight	181 lbs
Child weight (2 years to less than 13 years)	83 lbs
Winter Weights	
Average adult passenger weight	200 lbs
Average adult male passenger weight	212 lbs
Average adult female passenger weight	186 lbs
Child weight (2 years to less than 13 years)	88 lbs

TABLE 2-2. AVERAGE PASSENGER WEIGHTS FOR OPERATORS WITH A NO-CARRY-ON BAG PROGRAM

Standard Average Passenger Weight	Weight Per Passenger
Summer Weights	
Average adult passenger weight	189 lbs
Average adult male passenger weight	201 lbs
Average adult female passenger weight	175 lbs
Child weight (2 years to less than 13 years)	77 lbs
Winter Weights	
Average adult passenger weight	194 lbs
Average adult male passenger weight	206 lbs
Average adult female passenger weight	180 lbs
Child weight (2 years to less than 13 years)	82 lbs

The Federal Aviation Administration should amend its guidance governing the weight and balance of passenger aircraft. The average American weighs significantly

Review of Standard Average Passenger Weight

more than the assumed average weight per person utilized in current guidance. Updating the guidance to more accurately reflect today's average weight per person will maintain intended safety levels by taking this weight increase into account. It is recommended that the weights used for AC 120-27E be reviewed on a biannual basis that coincides with the release of the NHANES data from the CDC.

Paragraph 211 of AC 120-27E requires that the standard deviation formula be corrected to include the numerator and denominator under the square root sign as a singular equation instead of as depicted with the square root computed separately for the numerator and denominator.

A thorough study should be conducted on the Carry-on baggage program. This study should focus on the weight of the items that are being carried aboard the aircraft. Since the implementation of fees for checked baggage, there is a substantial increase in the size, number, and weight of carry-on articles. A 2009 study conducted for the European Aviation Safety Agency (EASA) identified that the mean mass of carry-on luggage for all passengers was 13.44 pounds (6.1 kg).

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Review of Standard Average Passenger Weight

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Passenger Weight and Inspected Vessel Stability Requirements. (2011). 76 Fed. Reg. 19275.

Appendices

Review of Standard Average Passenger Weight

Appendix A

[Federal Register](#)

[April 7, 2011](#)

[Passenger Weight and Inspected](#)

[Vessel Stability Requirements](#)

Appendix B

[Federal Register](#)

[March 14, 2011](#)

[Bus Testing: Calculations of Average](#)

[Passenger Weight and Test Vehicle Weight](#)

Appendix C

United States Air Force

Technical Order AF11-2C-5V3ADD-A

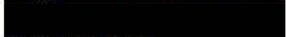
Table 4.1

Standard Weight Information

Appendix D

[Federal Aviation Administration](#)

[Advisory Circular 120-27E](#)





FAA
Aviation Safety

2016

Review of Standard Average Passenger Weight

NHANES Data Sets

1999-2014



For Official Use Only

Flight Standards Service
Analysis and Information
Program Office (AFS-900)

Prepared by:

3/9/2016

Draft v.1

Executive Summary

The increases in the weight of the American population warrants a revision to Advisory Circular 120-27E. This review examines the weight data provided in the biannual *National Health and Nutrition Examination Survey* data from 1999 to 2014. The average American weighs significantly more than the average weight per person utilized in current guidance. Updating the guidance to more accurately reflect today's average weight per person will maintain intended safety levels by taking this weight increase into account. A review of the current *National Health and Nutrition Examination Survey* data from the Centers for Disease Control and Prevention identifies the weight of individuals in the United States is trending upwards. The guidance of Advisory Circular 120-27E states that an increase in weight of more than two percent requires a revision. The data utilized in the current version of Advisory Circular 120-27E was obtained more than ten years ago. The criticality of the weight and balance program with respect to the safety of flight warrants that Advisory Circular 120-27E be reviewed on a biannual basis to coincide with the release of the National Health and Nutrition Examination Survey data from the Centers for Disease Control and Prevention.

Problem Statement

The weight of the United States population has grown significantly since 1960. The figures released by the Centers for Disease Control and Prevention (CDC) show that the average weight for men aged 20-74 years rose from 166.3 pounds in 1960 to 191 pounds in 2002, while the average weight for women the same age increased from 140.2 pounds in 1960 to 164.3 pounds in 2002. This is an increase of 25 pounds for the male population and 24 pounds for the female population.

Background

The CDC information has been utilized to create weight standards across industry. In the aviation industry, Federal Aviation Administration (FAA) Advisory Circular 120-27E (AC 120-27E) provides weight and balance data. Table 2-1 in AC 120-27E states that the average adult passenger weight is 190 pounds during the summer months (May 1 to October 31), and 195 pounds during the winter months (November 1 to April 30). These figures assume a 21 pound allowance for carry-on items (16 pounds) and clothing (5 pounds summer / 10 pounds winter).

These figures for weight averages are not consistent with the National Health Statistics Report dated October, 2012. The report lists the male, age 20 and over, average as 195.5 pounds and the female, age 20 and over, average as 166.2 pounds. These weights were provided in a clinical setting with the subject population wearing only socks, undergarments, and hospital gown.

In a period of sixteen years there had been a continued increase in the weight of the population. Some information is collected in more than one survey and estimates of the same statistic may vary among surveys because of different survey methodologies, sampling frames,

questionnaires, definitions, and tabulation categories. The statistics gathered for AC 120-27E are from the National Health and Nutrition Examination Survey (NHANES) 1999-2000 report.

The CDC reports that “obesity is common, serious, and costly. In 2009, about 2.4 million more adults were obese than in 2007”. A September 2012 CDC report indicates that an estimated 33.0% of U.S. adults aged 20 and over are overweight, 35.7% are obese, and 6.3% are extremely obese. A November 2015 CDC report indicates an increase in adult obesity to a level of 36.3%. There is however a distinction between the overweight and obese individual and the weight standards of a passenger. Unless an overweight/obese individual exceeds the FAA standard average passenger weight, that individual is not a factor.

The perception of overweight/obese individuals providing an increase to weight figures, and the implementation of revised weight standards in other transportation sectors, as well as a biannual review of NHANES data has prompted the Analysis and Information Program Office (AFS-900) to examine the current weight standards provided through AC 120-27E.

Methodology

The methodology, employed in the manner given, was dictated in AC 120-27E. The 1999-2014 NHANES data sets were utilized to generate the figures in this review. AC 120-27E explains that:

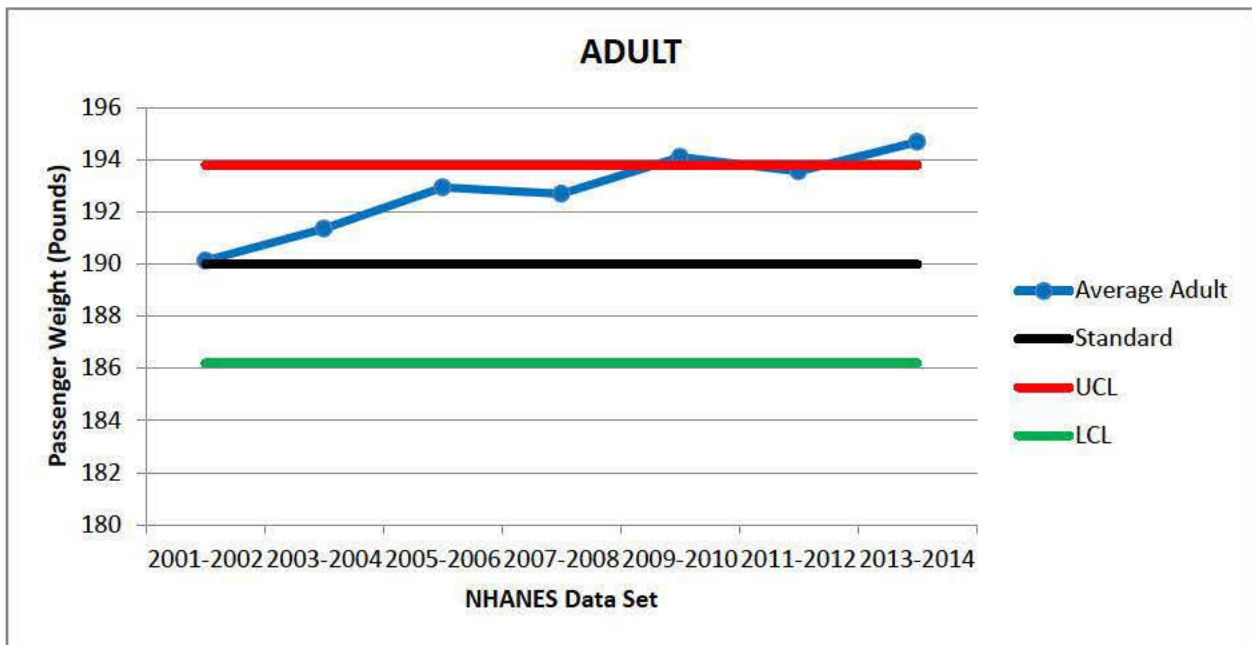
The FAA used the most recent NHANES data set available from surveys conducted in 1999 and 2000 to calculate the standard average passenger weights used in this advisory circular (AC). From this data set, the FAA separated out a separate data set of individuals who had not yet reached their 13th birthday to determine average child weight. From the remaining adult data set, the FAA removed all weight data that indicated the subject was clothed during the weighing and removed all data points more than two standard

deviations from the mean. The FAA then calculated the average weights for males and females in the remaining data set.

This same process was used throughout this review to maintain commonality amongst the results.

Adult

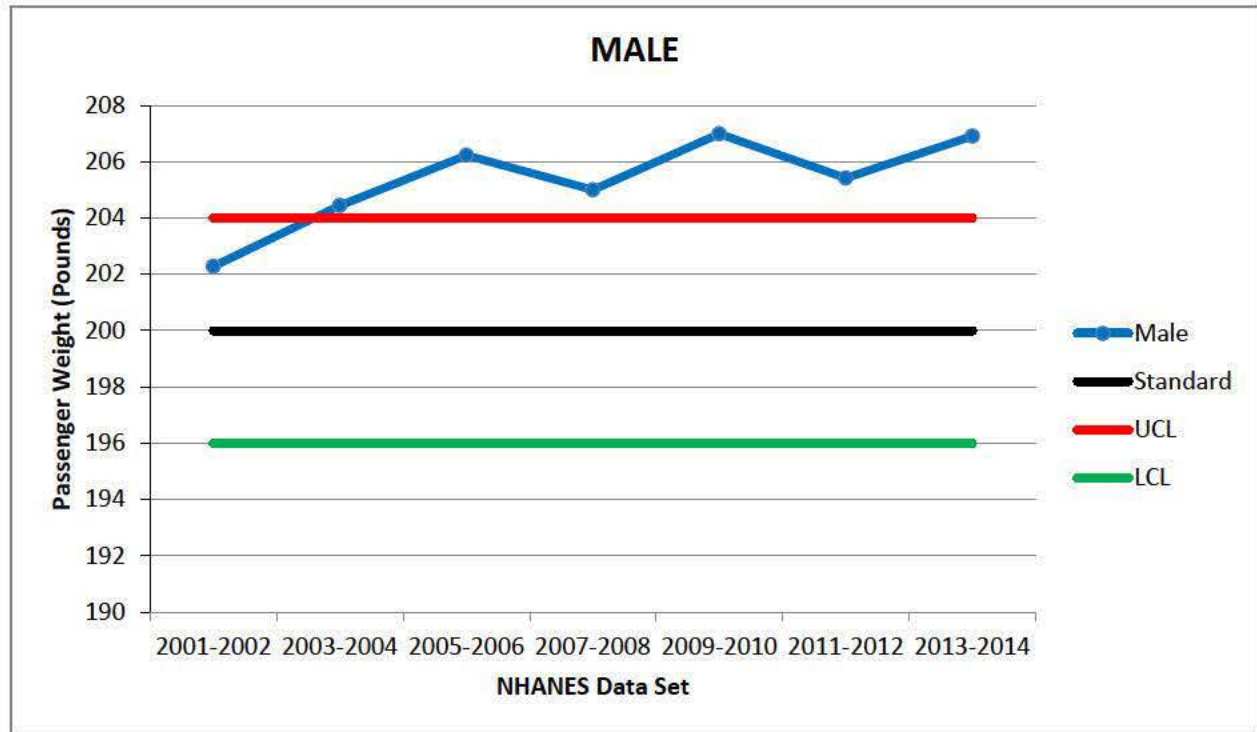
The standard average passenger weight for an adult is 190 pounds. AC 120-27E provides that if there is a change in weight of more than 2 percent, there will be a revision conducted. For an adult a revision would need to be accomplished if the weight exceeded either the upper control limit (UCL) of 193.8 pounds or the lower control limit (LCL) of 186.2 pounds.



The 2013-2014 NHANES data analysis indicates that the standard average passenger weight for an adult is currently 194.68 pounds. The current adult weight exceeds the UCL by 0.68 pounds and is an increase of slightly more than 2.463 percent from the standard, and therefore warrants a revision to AC 120-27E.

Male

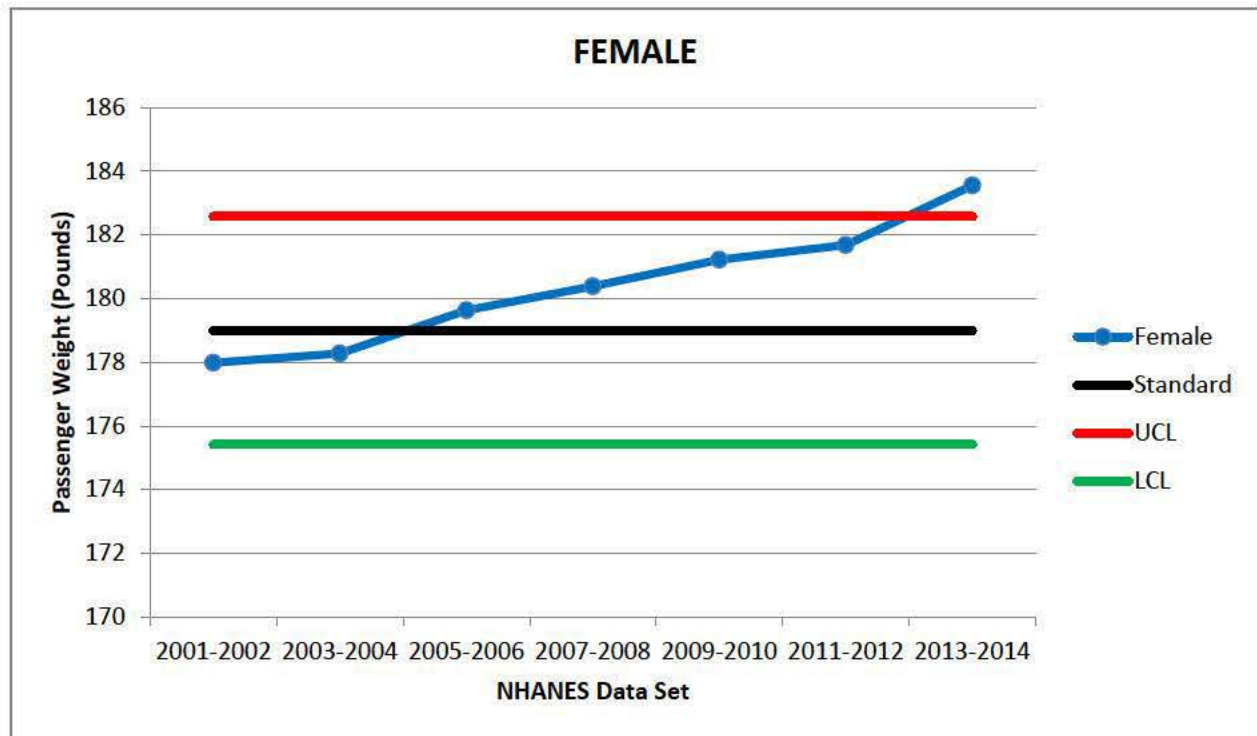
The standard average passenger weight for an adult male is 200 pounds. For an adult male a revision would need to be accomplished if the weight exceeded either the upper control limit (UCL) of 204.0 pounds or the lower control limit (LCL) of 196.0 pounds.



The 2013-2014 NHANES data analysis indicates that the standard average passenger weight for an adult male currently is 206.91 pounds. The current adult weight exceeds the UCL by 2.91 pounds and is an increase of 3.455 percent from the established standard. This increase from the standard indicates a revision to AC 120-27E is warranted.

Female

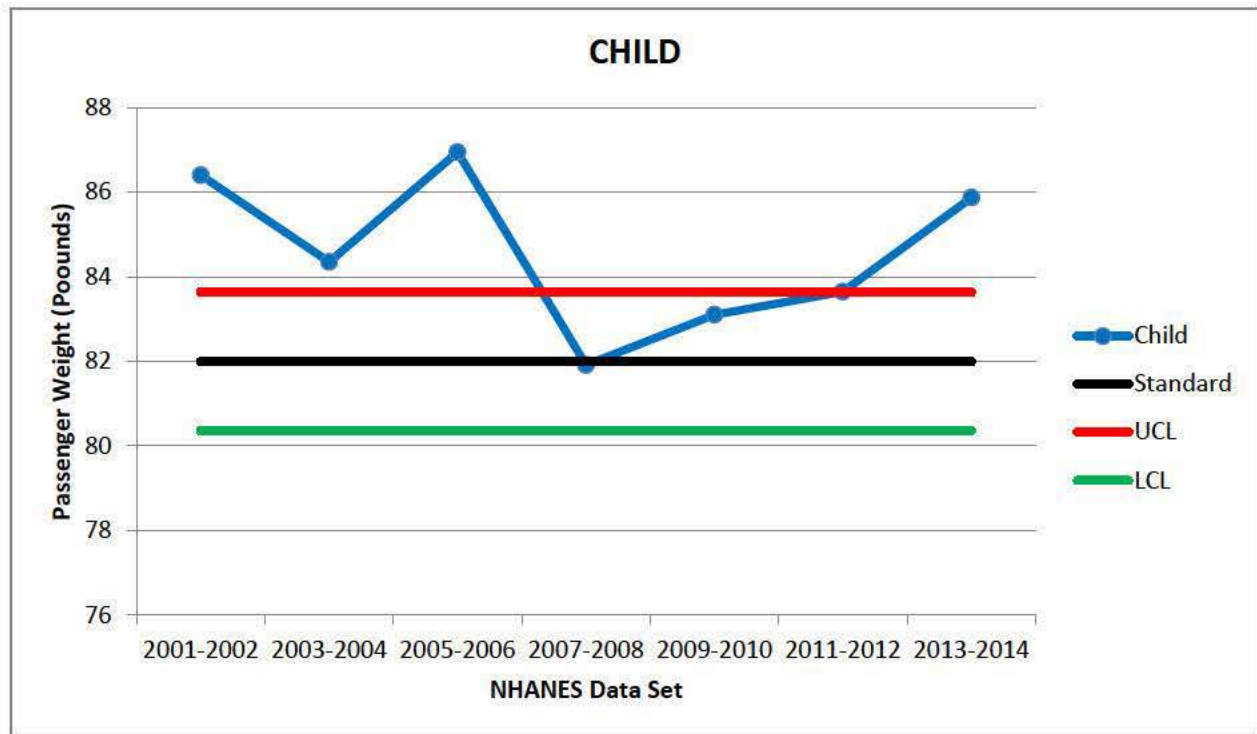
The standard average passenger weight for an adult female is 179 pounds. An adult female revision would need to be required if the weight exceeded either the upper control limit (UCL) of 182.58 pounds or the lower control limit (LCL) of 175.42 pounds.



A data analysis of the 2013-2014 NHANES indicates that the standard average passenger weight for an adult female is currently 183.56 pounds. The current adult female weight exceeds the UCL by 0.98 pounds and is an increase of slightly more than 2.547 percent. This increase over the UCL warrants a revision to AC 120-27E.

Child

The standard average passenger weight for a child aged 2 – 12 is 82 pounds. A revision of the weight would need to be required if the weight exceeded either the upper control limit (UCL) of 83.64 pounds or the lower control limit (LCL) of 80.36 pounds.



An analysis of the 2013-2014 NHANES data indicates that the standard average passenger weight for a child aged 2 – 12 is currently 85.87 pounds. The current weight of a child aged 2 – 12 exceeds the UCL by 2.23 pounds and is an increase of slightly more than 4.719 percent from the current standard. The increase over the UCL warrants a revision to AC 120-27E.

Recommendation

The Federal Aviation Administration should amend its guidance governing the weight and balance of passenger aircraft. The average American weighs significantly more than the assumed average weight per person utilized in current guidance. Updating the guidance to more accurately reflect today's average weight per person will maintain the intended safety levels by taking this weight increase into account. It is recommended that the weights used for AC 120-27E be reviewed on a biannual basis that coincides with the release of the NHANES data from the CDC. The current advisory circular, AC 120-27E, was initiated by AFS-200/AFS-300 and should be the responsible offices for addressing this issue.

A thorough study should be conducted on the carry-on baggage program. This study should focus on the weight of the items that are being carried aboard the aircraft. Since the implementation of fees for checked baggage, there is a substantial increase in the size, number, and weight of carry-on articles. A 2009 study conducted for the European Aviation Safety Agency (EASA) identified that the mean mass of carry-on luggage for all passengers was 13.44 pounds (6.1 kg).

OSC File DI-20-000536 (Weight and Balance)
Whistleblower Response to Agency Report
June 18, 2021

Memo to Administrator

Because of previous (substantiated) and ongoing whistleblower retaliation by FAA Management Officials the **WHISTLEBLOWER DOES NOT CONSENT** to name or other identifying information from being released into the public information files.



Federal Aviation Administration

Memorandum

Date: FEB 25 2014

To: [REDACTED] Administrator

From: [REDACTED], Director, Office of Audit and Evaluation, AAE-1

Subject: Report of Internal Whistleblower Contribution, Aircraft Weight and Balance Control, Advisory Circular 120-27E, AAE File Number AAE10-12-0024(C)

As required by the "FAA Modernization and Reform Act of 2012" (P.L. 112-95, Section 341.3a), this memorandum summarizes the investigative findings and recommendations related to a disclosure¹ made by [REDACTED], Manager, Analysis and Information Program Office (AIPO), Flight Standards National Field Office (AFS-900), concerning FAA Advisory Circular (AC) 120-27, Aircraft Weight and Balance Control, dated June 20, 2005. [REDACTED] alleged that the standard average weights (SAW) for passenger, carry-on baggage and personal items in the AC were inaccurate, necessitating revision. Additionally, he asserts that there was little to no action by AFS to revise the AC despite a Flight Standards (AFS) workgroup's findings and recommendations in 2010. In October 2012, the Office of Audit and Evaluation (AAE) initiated an investigation and [REDACTED] provided AAE written consent to disclose his identity.

Executive Summary

In 2008, most airlines instituted a checked baggage fee which significantly altered a passenger's travel profile by maximizing the use of carry-on baggage and personal items. In addition, nationally published information reflected that passenger body weights had increased. As a result of Safety Recommendations made by the National Transportation Safety Board (NTSB) in 2004 in response to a fatal accident in 2003, AFS examined standard average weights in AC120-27. To date, two recommendations related to standard average weights are still open. AFS has acknowledged the need to revise weight and balance guidance and published a draft revision to AC120-27 in November 2013. AFS is reviewing public comments prior to formal publication. The AC is designed to address the outstanding NTSB recommendation and [REDACTED] allegation.

¹ [REDACTED] disclosed several potential safety-related and non-safety-related violations of FAA policies, orders, rules, or regulations. This is the third memorandum issued by our office addressing [REDACTED] s disclosures. Findings of safety disclosures will be reported to you pursuant to P.L. 112-95, Section 341.3a. All non-safety disclosures will be reported to the responsible Line of Business or Staff Office.

Our investigation substantiated the allegation and found that AFS was slow to respond to the new information introduced by the inaccurate SAW, even though there was AFS leadership support for revising AC120-27 following the 2010 workgroup's findings and recommendations. However, the workgroup's methodology to analyze and document the safety hazard and report their findings was informal, and there were management changes that may have contributed to the long delay. An internal AFS Safety Management System (SMS) and Safety Risk Management (SRM) process is being developed, and once implemented, should account for processing safety hazards, such as that raised in this investigation, in a more reasonable timeframe. Therefore, our recommendations are intended to facilitate implementation of the draft AC as currently proposed.

Our investigative methodology is noted in Appendix A.

Background

Current Advisory Circular

Advisory Circular (AC) 120-27E, Aircraft Weight and Balance Control, in effect since June 2005, provides operators² with guidance on weight and balance control. The FAA is required to periodically review and update the AC should changes occur related to: a) the standard weight of the traveling public (variance of more than 2%), which is based on the National Health and Nutrition Examination Survey (NHANES)³; or b) regulatory requirements for carry-on bags or personal items. AC120-27E notes that the operator must be vigilant to ensure that their particular weight and balance control program reflects the reality of their aircraft loading operations. Ultimately, the operator is responsible for determining if the procedures described in AC120-27E are appropriate for use in its type of operation. FAA is responsible for overseeing an operator's weight and balance control program.

Accident History & NTSB Safety Recommendations

A fatal accident of an Air Midwest (d/b/a US Airways Express) regional commuter aircraft departing from Charlotte, North Carolina, in 2003 highlighted the significance of an accurate weight and balance program for passenger, carry-on baggage and personal item. The NTSB stated that a contributing factor to the accident was inaccurate weight assumptions in FAA's weight and balance program guidance at the time of the accident, and lack of oversight of the carrier's weight and balance program.

In 2004, the NTSB made seven recommendations (A-04-017 thru A-04-23) to the FAA concerning aircraft weight and balance, two of which remain open. The open recommendations were designed to ensure that regional, seasonal, demographic, aircraft, and route trends among carriers are validated, by requiring Part 121 air carriers to periodically sample passenger and baggage weights

² Aircraft operated under Title 14, Code of Federal Regulation (CFR) parts 91, 91(K), 121, 125 and 135. AC120-27 is also directly linked to an operator's Operations Specifications.

³ The FAA uses the most recent National Health and Nutrition Examination Survey (NHANES) data, conducted by the Centers for Disease Control, to calculate the standard passenger weights used in AC120-27E.

and determine appropriate statistical distribution characteristics (unless an actual weight program is developed and implemented) (A-04-018), and establishing a program for FAA to periodically review Part 121 air carrier weight and balance data (A-04-019). The NTSB insisted that in order to satisfy the recommendations, the FAA would have to establish a program that would include periodic review of air carrier weight and balance data to ensure its validity.

In January 2014, you advised the NTSB that the FAA is updating existing weight and balance guidance to incorporate Safety Recommendations and that of an FAA workgroup.

Findings and Details

Allegation: *An AFS workgroup found that the standard average weights (SAW) listed in AC120-27E is outdated in relation to passenger, carry-on baggage and personal item average weights because it was understated. However, AFS took minimal or no action to move forward and update the AC.*

Findings: This allegation was substantiated.

Details: In April 2010, a workgroup led by Air Transportation Division (AFS-200)⁴ was tasked to review and revise AC120-27E. The workgroup noted that the:

- 2005 AC was not significantly different from that published in 2004 and did not take into account updated NHANES technical data that reflected an increase in average adult weights;
- ratio of passengers to carry-on baggage and personal items had increased significantly,
- the airline business model had also significantly changed since 2005, as airlines began to charge for checked baggage, causing passengers to dramatically increase the use of carry-on baggage and personal items.

The workgroup also noted that in addition to the open NTSB Safety Recommendations associated with the 2003 accident, FAA's Office of Accident Investigation and Prevention (AVP) issued FAA Safety Recommendations addressing: standard average weight verification; aircraft center of gravity; impact of baggage fees to an operator's weight and balance program; and updating of AC120-27. The recommendations were accepted by AFS-200, but the workgroup noted they were not implemented.

The workgroup concluded that the SAWs for passenger, carry-on baggage, and personal items used in AC120-27E were no longer valid because they were understated for the reasons noted above and should be updated. The workgroup inferred that absent an update to the AC, operators (particularly regional carriers that operate smaller aircraft) were at risk of: exceeding maximum structural, takeoff, and landing weights; operating at less than required climb gradients in the event of an engine loss; operating at an increased fuel burn rate; and improperly calculating the aircraft's center of gravity.

⁴ The workgroup included subject matter experts from various AFS offices. We also note that there also appeared to be a different workgroup that reviewed AC120-17E in 2008 for the same purpose.

In 2010, the workgroup completed a draft revision of the AC, except for the SAWs. The workgroup briefed AFS leadership of its findings and provided recommendations for consideration in October 2010. The recommendations required AFS leadership approval and support to move forward.

In August 2011, the workgroup's team-lead elevated the workgroup's safety concerns to the (then) Director AFS-1 and Deputy Director of Flight Standards (AFS-2) because they had received no management guidance on the recommendations. AFS-1 acknowledged the need to address the matter and was supportive, but generally noted concerns about a potential "public relations impact." The workgroup developed a briefing for presentation by AFS leadership to the Associate Administrator for Aviation Safety (AVS-1). Thereafter, there is documented support from AFS executives to move forward with revising the AC, but there was a significant period with no defined corrective action or guidance on how to proceed.

On August 19, 2011, in response to NTSB Safety Recommendations A-04-018 and A-04-019, former Administrator Babbitt advised the NTSB that the FAA had decided to take a fresh review of the existing weight and balance guidance material and that a formal workgroup had been established to review and revise weight and balance guidance. The letter noted that to complete the AC revision, the workgroup planned to conduct a survey of actual carry-on and checked baggage weights in 2011 (consistent with the workgroups recommendations in October 2010).

In a May 5, 2012, letter to the NTSB, you stated that the workgroup did not submit its full list of recommendations until December 2011. The letter notes that the FAA was reviewing the workgroup's recommendations, which included revisions to the AC and other guidance, and after its review, the FAA would determine what revisions to the guidance were necessary, if any, and whether the FAA should conduct a survey on actual passenger and baggage weights.

However, in that same month, the matter was again briefed by the workgroup's team-lead to new AFS management which was supportive of proceeding with an update to the AC. However, there were differing opinions on the best method to proceed which led to misperception and inactivity by the workgroup's team-lead. Ultimately, in the later part of 2012, AFS initiated a significant modification to the AC to shift the responsibility to the operator and to use performance-based data. It appears that a number of management changes both within AFS and AFS-200 may have contributed to the overall confusion and lack of firm guidance or definitive goals to proceed with the project.

Corrective Action Initiated by Flight Standards

AFS acknowledged the need to update the AC and in anticipation of the proposed changes, AFS briefed industry representatives during quarterly industry meetings in mid-2013. In November 2013, AFS introduced performance-based requirements for operators to determine passenger and baggage calculations. The proposed revised AC removes the use of standard average and segmented weights. The AC is now designed to allow each operator to determine the individual SAWs specific to its operations, either by determining actual weights or conducting a survey for average weights, and then submitting a program for weight and balance control for evaluation and approval.

The revised AC notes that, each weight and balance program for a domestic/flag operator should be based on safety attributes and possesses a Safety Management System (SMS) to include guidance from FAA Order 8000.369. Each weight and balance program must include a risk management process and a safety assurance system.

Recommendations

Based upon the above information, we make the following recommendations to AFS:

1. AFS should provide training on the impact and implementation of the revised AC120-27 to PIs responsible for reviewing and approving weight and balance programs and other relevant staff, to include Operations Research Analyst (ORA) at the local, regional and AFS-900 AIPO level.
2. AFS should require Certificate Holding District Offices (CHDO) and Certificate Management Offices (CMO) and Principal Inspectors (PI) to collaborate with ORAs, at the local, regional and/or AFS-900 AIPO level, to review data provided by operators that elect to develop a weight and balance control program utilizing survey-derived average weights. ORAs should also assist CHDOs, CMOs and PIs to validate the operator's methodology and resultant data, prior to the PI's approval of the program's results.
3. Data derived from the survey's listed in Recommendation 2, should be provided to AFS-900 AIPO to be analyzed, from a national perspective, to aid in the identification of system-wide trends and patterns that represent potential safety hazards. Findings should be disseminated to the relevant AFS policy offices, CMO and CHDOs.
4. Include a finite and accelerated implementation date for the revised AC120-17.

P.L. 112-95, Section 341.4, requires that the Administrator respond in writing to the recommendations no later than 60 days after receipt of this memorandum. In addition, the law requires that records related to any further investigation or corrective action taken in response to the recommendation, are to be retained.

If you have any questions or need additional information, please contact [REDACTED], Manager, Audit and Analysis Branch, at 202-493-4949.

cc: [REDACTED] Associate Administrator for Aviation Safety, AVS-1
[REDACTED], Director – Flight Standards Service, AFS-1

Appendix A: Methodology

The investigation was conducted under the authority of the FAA Office of Audit and Evaluation (AAE), pursuant to Title 14 USC §106(t) and FAA Notice 1100.337. The investigative team analyzed records and documents obtained from the contributor and witnesses including, but not limited to, memorandums, emails, FAA guidance, policy, regulations, orders, and notices.

Office of Audit and Evaluation – Audit and Analysis Branch (AAE-100) – Investigation Members:

- [REDACTED] Whistleblower Coordinator,
- [REDACTED] Senior Investigator
- [REDACTED] Senior Investigator
- [REDACTED] Chief Investigator and Manager

OSC File DI-20-000536 (Weight and Balance)
Whistleblower Response to Agency Report
June 18, 2021

Memo from AAE-1 to DOT General Counsel

Because of previous (substantiated) and ongoing whistleblower retaliation by FAA Management Officials the **WHISTLEBLOWER DOES NOT CONSENT** to name or other identifying information from being released into the public information files.



Federal Aviation Administration

Memorandum

Date: September 24, 2018

To: [REDACTED], Assistant General Counsel for General Law, C-10

From: [REDACTED] Director, Office of Audit and Evaluation, AAE-1 *[Signature]*

Subject: Response to OSC Request for Information Resolution, Alleged FAA leadership failure to revise and update Advisory Circular (AC) 120-27, Aircraft Weight and Balance Control, DI-18-2728

The Federal Aviation Administration (FAA) is providing this summary of information in response to an informal referral from the U.S. Office of Special Counsel (OSC) on August 28, 2018. The referral contained allegations that FAA leadership has failed to revise and update Advisory Circular (AC) 120-27, Aircraft Weight and Balance Control, dated June 20, 2005, despite a recommendation from this office to do so on February 25, 2014. This long delay was alleged to be a substantial and specific danger to public safety. OSC requested that the matter be informally resolved.

Background

A fatal accident of an Air Midwest (d/b/a US Airways Express) regional commuter aircraft departing from Charlotte, North Carolina, in 2003 highlighted the significance of an accurate weight and balance program for passenger, carry-on baggage and personal items. The National Transportation Safety Board (NTSB) stated that a contributing factor to the accident was inaccurate weight assumptions in FAA's weight and balance program guidance at the time of the accident, and lack of oversight of the carrier's weight and balance program.

As a result, in 2004, the NTSB made recommendations to the FAA concerning aircraft weight and balance. The recommendations were designed to ensure that regional, seasonal, demographic, aircraft and route trends among carriers are validated, by requiring Part 121 air carriers to periodically sample passenger and baggage weights and determine appropriate statistical characteristics, (unless an actual weight program is devised and implemented), and establishing a program for FAA to periodically review Part 121 air carrier weight and balance data.

The FAA revised the AC in 2005. However, a working group formed in 2010 noted that the AC was not significantly different from that published in 2004, and did not take into account updated technical data that reflected an increase in average adult weights, or that the ratio of passengers to carry-on baggage and personal items had increased significantly, as the airline business model changed beginning in 2005 when airlines began charging for checked baggage, causing passengers to dramatically increase the use of carry-on baggage and personal items.

In October 2012, an FAA whistleblower alleged that the standard average weights (SAW) for passenger carry-on baggage and personal items in the 2005 AC were inaccurate, necessitating revision. Additionally the whistleblower asserted that there was little to no action by the Flight Standards Service (AFS) to revise the AC despite the working group's findings and recommendations in 2010.

In February 2014, this office issued a report of investigation which substantiated the whistleblower's allegations and recommended that AFS revise the AC. The Office of the Associate Administration (AVS) acknowledged the need to revise the weight and balance guidance. A draft revision to AC 120-27 was published in November 2013. After five drafts, the revision process is finally complete, and the expected publication date is January 15, 2019.

The revision process has been protracted because of extensive public comments submitted in response to each draft. The drafts were circulated for public comment as required by law. Each version was revised in response to public comments, and in each instance, multiple industry stakeholders requested an extension to the formal comment period. The federal rulemaking process mandates that regulatory agencies respond to all comments and delays are more often the rule than the exception.

The lengthy revision process associated with AC 120-27 did not constitute a substantial or specific danger to public safety. During the revision process, FAA inspectors continually monitored and evaluated industry weight and balance procedures, finding that operators routinely add sufficient "pads" to their weight and balance calculations.

The current AC provides guidance on how to develop and receive approval for a weight and balance program for aircraft operators. The AC presents recommendations for acceptable means, but not the only means, to develop and receive approval for a weight and balance control program. Additionally, there are various tools used by FAA and air carriers to monitor the accuracy of the weight and balance of an aircraft.

The AVS response to AAE's recommendation and OSC's informal referral is enclosed. If you have any questions, or need further assistance, please contact [REDACTED] Senior Technical Advisor, AAE, at (202)267-8585.

Attachments:

1. AVS Response to Informal Referral, DL-18-2728 (3 pages)

OSC File DI-20-000536 (Weight and Balance)
Whistleblower Response to Agency Report
June 18, 2021

OSC File DI-18-2728 Closure Letter

Because of previous (substantiated) and ongoing whistleblower retaliation by FAA Management Officials the **WHISTLEBLOWER DOES NOT CONSENT** to name or other identifying information from being released into the public information files.



U.S. OFFICE OF SPECIAL COUNSEL

1730 M Street, N.W., Suite 218
Washington, D.C. 20036-4505
202-804-7000

September 5, 2019

[REDACTED]

Via e-mail to: [REDACTED]

Re: OSC File No. DI-18-2728

Dear [REDACTED]:

The U.S. Office of Special Counsel (OSC) has completed its review of the information you referred to the Disclosure Unit. You alleged that employees at the U.S. Department of Transportation, Federal Aviation Administration (FAA), Washington, D.C., engaged in conduct that constituted a violation of a law, rule or regulation, gross mismanagement, and a substantial and specific danger to public health or safety.

OSC is authorized by law to determine whether a disclosure should be referred to the involved agency for investigation or review, and a report; however, OSC does not have the authority to investigate disclosures. OSC may refer allegations of violations of law, rule, or regulation; gross mismanagement; a gross waste of funds; an abuse of authority; or a substantial and specific danger to public health or safety. Disclosures referred to the agency for investigation and a report must include information sufficient for OSC to determine whether there is a substantial likelihood of wrongdoing.

You alleged that the FAA had failed to update and implement changes to FAA Advisory Circular (AC) 120-27 for the standard average weights for passengers, carry-on bags, and personal items. With your consent, we contacted the FAA to inquire about these allegations and identified you as the whistleblower.

On September 24, 2018, the FAA provided information about the revision process for the AC, which included multiple drafts and delays due to extensive public comments and industry requests for extensions. The agency indicated that during the revision process, the FAA utilized other tools to monitor the accuracy of aircraft weight and balance, such as the planned versus actual fuel burns and air carriers' safety assurance and safety management systems. The new AC was finalized and published on May 6, 2019. The FAA informed OSC that airlines must come into compliance with the circular within 12 months of its publication.

Based on communications received from the agency by our office in response to your allegations, it appears this matter has been addressed. Therefore, no further action by our office will be taken and we have closed this matter.

Mr. [REDACTED]
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Thank you for bringing this matter to the attention of the OSC. Should you wish to discuss this matter, please contact me at (202) 804-7099.

Sincerely,

A handwritten signature in black ink, appearing to be 'J. C. [REDACTED]', written in a cursive style.

[REDACTED]
Attorney, Disclosure Unit

OSC File DI-20-000536 (Weight and Balance)
Whistleblower Response to Agency Report
June 18, 2021

Internal Whistleblower (IWB) Memo

Because of previous (substantiated) and ongoing whistleblower retaliation by FAA Management Officials the **WHISTLEBLOWER DOES NOT CONSENT** to name or other identifying information from being released into the public information files.



Federal Aviation Administration


Memorandum

Date: March 11, 2021

To: [REDACTED] Aviation Safety Inspector

From: [REDACTED], Director, Office of Audit and Evaluation

Subject: Disclosures to the Office of Audit & Evaluation (AAE)

A handwritten signature in blue ink, appearing to read "C. Shum", is written over the "From:" and "Subject:" lines.

In June 2019, after unsuccessful attempts to report discrepancies, or organizational and operational vulnerabilities through various AVS reporting means, you recommended the FAA establish an “employee safety reporting program.” In response, I encouraged you to utilize the FAA Hotline for such reports. Since then, you have filed over 650 reports on varying systemic issues centric to the use of Flight Standards’ Web-Based Operations Safety Systems (WebOPPS) and currency of data collected and maintained therein. To date, substantiated reports clearly point to a systemic weakness with WebOPPS that appears to hinder optimal operator oversight by the certificate holding office. Therefore, please accept this memorandum as an acknowledgment of your disclosures related, to WebOPPS and data collected therein, which includes but is not limited to, Operation Specifications, Letters of Authorization, aircraft insurance, air carrier fitness citizenship, and other (non WebOPPS related) operational issues, such as active registration of destroyed aircraft.

As a result of the number of substantiated allegations, I have asked my Chief Investigator to assess and summarize the findings related to your disclosures and I will make appropriate recommendations to the Administrator, pursuant to the provisions of Title 14 USC Section 106(t)(3)(A)(iii) under case number IWB21802. We will note your identity and contributions in any memorandum prepared in this case, per your verbal consent. In addition to our efforts, Flight Standards’ Quality Control and Investigations (AFB-470) is engaged in analyzing the root cause that led to the discrepancies reported and are coordinating a corrective action plan with cognizant AFX stakeholders.

Going forward, new or pending disclosures of the nature described above, will be assigned as “Action as Appropriate” to Flight Standards. These assignments will include unresolved disclosures originally managed through Flight Standards’ Quality Management System and will now require attention through the hotline process. An investigative results report will not be required. Instead, to ensure accountability, the Hotline Brief will include a prominent instruction requiring the assigned responsible oversight office to document their receipt, assessment and corrective action in the appropriate Safety Assurance System (SAS) application.

While we continue to provide an avenue for you to report discrepancies, we believe these procedures will help address the individual reports more efficiently, while raising awareness of the overarching systemic issues and making significant recommendations for corrective action.