NATIONAL TRANSPORTATION SAFETY BOARD
Office of Aviation Safety
Washington, D.C. 20594
March 25, 1997

Group Chairman's Addendum and Errata

OPERATIONS/HUMAN PERFORMANCE

DCA97MA059

A. ACCIDENT

Operator:	Fine Airlines Inc.
Location:	Miami, Florida
Date:	August 7, 1997
Time:	1236 Eastern Daylight Time (EDT)[1]
Airplane:	Douglas DC-8-61, N27UA

B. OPERATIONS/HUMAN PERFORMANCE GROUP

Not applicable.

C. SUMMARY

On August 7, 1997 Fine Airlines Inc. (Fine Air) flight 101, a Douglas DC-8-61 freighter, crashed after departure from runway 27R at Miami International Airport (MIA) in Miami, Florida. The flight was operated under 14 Code of Federal Regulations (CFR) Part 121 as a Supplemental air carrier. There were three crewmembers and one security guard aboard. The airplane was destroyed by impact and a post crash fire. There were no survivors. One motorist was fatally injured on the ground. Visual meteorological conditions prevailed at the time of the accident.

D. ERRATA and ADDENDA

Errata: Page 6, footnote 13: Change ...5,980 pounds as reported.... to read ...5,960 pounds as reported....

Addenda: Various letters and documents from various parties to the investigation.

National Transportation Safety Board

FAX

Date: 7 October 1997

To: Raymundo Polanco
Aeromar Airlines

From: Evan Byrne
NTSB
Phone: [redacted]
Fax: 202-314-6359

Re: Request for additional information (2 pages)

Dear Mr. Polanco,

Thank you for your response to our previous request for information that accompanied your letter of 10 September 1997. In reviewing the material some additional questions and need for clarification have been raised.

1. On the loading pallet sheet for N-30UA dated 8/7/97 pallet "N" has the notation "Priority." Please explain what was on this pallet and the reason for the priority label on this pallet.

2. The time and attendance card covering the week of the accident for Mr. Soto was received. I would like clarification and confirmation that I am reading the card correctly.
   a. Did he arrive at work at 11:38 on 8/4 and leave at 20:45 on 8/4?
   b. Did he arrive at work at 20:15 on 8/5 and leave at 02:06 on 8/6?
   c. Did he arrive at work at 20:00 on 8/6 and not punch out before the accident?

3. Can you describe or document what Mr. Soto was doing at work from 20:00 on 8/6 until the loading of Fine Air Flight 101 started about 10:00 on 8/7

4. You indicated that Aeromar's security person picks up the weight distribution forms from Fine Air immediately before the loading of the airplane. Would Mr. Soto have picked up the weight distribution form at Fine Air or was the weight distribution form for Flight 101 faxed from Fine Air to Aeromar and he picked it up at Aeromar?

5. Would it be possible to obtain general information about Mr. Soto's activities at home in the days before the accident, starting Monday 8/4? Specifically, (a) when he may have gone to bed and woke up, (b) what his general activities were during his time not working; and (c) whether he had experienced any health problems? If Mr. Soto's next of kin would prefer to speak with me directly to provide this information please let me know.

5. I searched the packages you sent but could not locate the Aeromar Airlines organizational chart in the materials. Could you please send this information again?

6. Could you provide some operational and background information to augment the information that is on your Internet web page about Aeromar Airlines, including:
   (a) number of airplanes operated by Aeromar Airlines outside the United States.
   (b) number of personnel employed by Aeromar Airlines.
   (c) a copy of any approved loading plan that exists.

7. The proposal for charter letter to Levi's was received. Was a formal response ever sent by Levi's to Aeromar confirming acceptance of your proposal? There are no performance clauses in this proposal letter – does that mean there were no time contingencies or contractual date that the shipment was required to be in SDQ, load requirements (i.e., requirements that the entire load be shipped in whole), or penalties for nonperformance that accompanied the contractual relationship between Aeromar and Levi's

8. What was the original scheduled departure time for Flight 101? If it did not depart on schedule what was the reason that it was advanced or delayed?

Again, I look forward to your assistance in helping answer the above questions. Please contact me to clarify any request or question. My telephone number is 2[redacted] Information can be mailed to the address below or faxed to 202-314-6359:

Sincerely,

Evan Byrne
Human Performance Investigator

Evan Byrne
Office of Aviation Safety, AS-50
National Transportation Safety Board
490 L'Enfant Plaza, S.W.
Washington, DC 20594

AEROMAR AIRLINES

October 27, 1997

Mr. Evan Byrne.
Human Performance Investigator
Office of Aviation Safety, AS-50
National Transportation Safety Board
490 L'Efant Plaza, S.W.
Washington, D.C. 20594

Re: Aeromar Airlines crash of Fine Air Flight #101

Dear Mr. Byrne:

This letter is in response to each specifically numbered paragraph of your request for additional information dated October 7, 1997:

1. With respect to the loading pallet sheet for N-30UA dated August 07, 1997, wherein pallet "n" has the notation "Priority" please be advised that pallet N corresponds to position number 1. Ordinarily, the pallet placed in position number 1 is specially designed to leave enough room for the flight's engineer to walk through as he makes his final inspections and access to the cargo door, additionally this is the last pallet to be unloaded from the plane. However, with respect to flight 101, the entire shipment consisted of Levi-Strauss jeans, so the notation "Priority" was done merely as routine to ensure the placement of pallet N in position number 1.

2. The entries on Mr. Soto's time cards are confusing due, for the most part, to his own mistakes. With respect to your specific question, the answers are as follows:

(a) Mr. Soto arrived at work at 09:27 AM and left at 11:38 AM. He attended a security guards' meeting at Aeromar that day.

(b) Yes.

(c) Yes.

2460 N.W. 66th Avenue, Bldg. 701 • Miami Int'l Airport • Miami, Florida 33122
Mailing Address: P.O. Box 660475 • Miami Springs, Florida 33266-0475
Phone: (305) 871-1101 • Fax: (305) 871-1110 / (305) 871-6446

3. At all times, Mr. Soto was guarding the cargo of Flight 101.

4. Mr. Soto would have picked up the weight distribution form at Fine Air. It is neither customary nor usual for Fine Air to fax the weight distribution form to Aeromar or for Aeromar's security guards to pick up the weight distribution forms from Aeromar.

5. According to Mr. Soto's fiancee [redacted] with whom he was cohabiting as of date of the accident, there was nothing unusual or abnormal about Mr. Soto's sleep habits during the period starting Monday, August 04, 1997 and ending on the date of the accident. Mr. Soto rested and carried out his normal activities while he was not working. He stayed at the Hamaca Beach Hotel in Santo Domingo on July 30-31 at company expense to rest after working hours. Enclosed you will find a copy of hotel's invoice. You may contact [redacted] Hialeah, Florida 33016, Tel.# (305)[redacted]

6. An organization chart was included in our previous submission. Enclosed you will find another copy.

7. (a) None. Aeromar is an indirect cargo carrier. It does not operate any airplanes outside the United States.

(b) As of August 7, 1997, and under normal operations, Aeromar has 141 employees, 54 in Miami and 87 in Santo Domingo.

(c) None. Aeromar relies on Fine Air's loading plan.

(d) None. Levi-Strauss never sent a formal response to Aeromar confirming acceptance of Aeromar's proposal. Levi's acceptance was verbal and went into effect upon Aeromar's first shipment of Levi's goods to Santo Domingo. Moreover, Aeromar's proposal does not acknowledge, promise or bind Aeromar to any performance clauses, time contingencies and/or contractual dates. Levi's did not and presently does not impose any requirements that its entire load of goods be shipped in whole. Nor are there any stipulated penalties for non-performance that accompany the contractual relationship between Aeromar and Levi's.

8. 11:30 AM (1 hour delay). The reason for the delay was a change of planes by Fine Air.

We hope that this information fully responds to your most recent inquiry. If additional information is desired, we will of course be happy to submit it.

Sincerely,

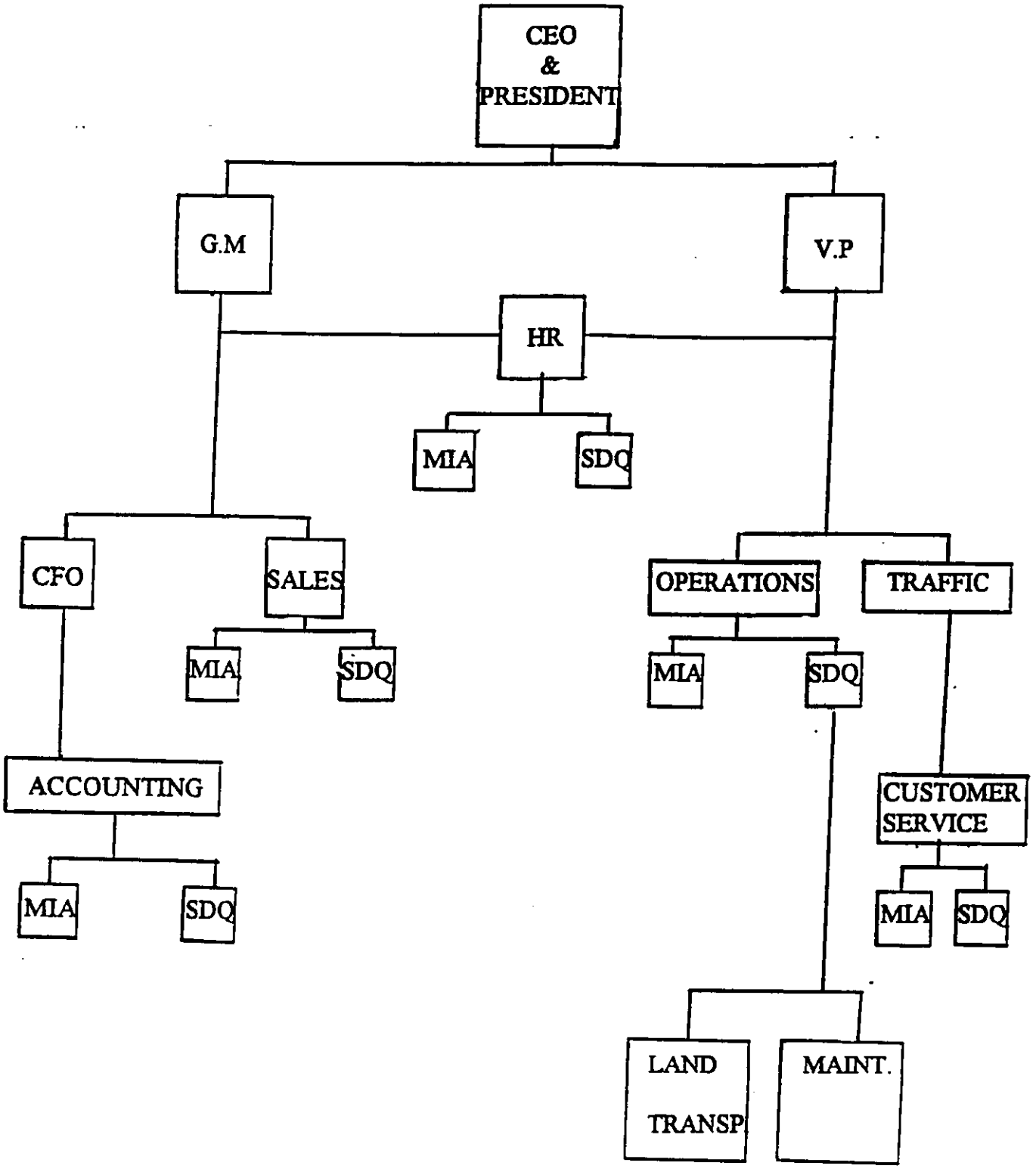
[redacted]

Raymundo Polanco, Jr.
Vice President
Aeromar Airlines, Inc.

AEROMAR AIRLINES

AEROMAR AIRLINES

ORGANIZATIONAL CHART



ORDER: 8300.10

APPENDIX: 4

BULLETIN TYPE: Flight Standards Information Bulletin (FSIB) for Airworthiness (FSAW)

BULLETIN NUMBER: FSAW 97-21

BULLETIN TITLE: Acceptable Means of Maintaining Cargo Containers, Pallets, and Netting Installed on Transport Category Aircraft

EFFECTIVE DATE: 09-05-97

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1. SUBJECT. This Flight Standards Information Bulletin (FSIB) outlines the Federal Aviation Administration's (FAA) national policy regarding the acceptable means of dealing with cargo containers, pallets, and netting installed in transport category aircraft.

2. BACKGROUND. During routine surveillance aviation safety inspectors (ASI) have increasingly observed what may be unserviceable cargo containers, pallets, netting, and other restraint devices loaded into air carrier aircraft. In many cases, the restraint systems identified above and cargo loading personnel are provided by a freight forwarding company under a lease agreement. This has caused some confusion and concerns about who is responsible for the restraint systems and the training of the cargo loaders. Further, questions have arisen regarding the services provided by the freight forwarding company being considered contract maintenance.

A. Title 14 of the Code of Federal Regulations (14 CFR) part 121, section 121.153(a)(2) provides that each certificate holder must operate civil aircraft in an airworthy condition. The airworthiness of the aircraft, includes cargo containers, pallets, and any other restraint system installed on the aircraft.

B. Section 121.363 holds each certificate holder responsible for the airworthiness of the aircraft, including airframes, aircraft engines, propellers, appliances, and parts thereof. Parts thereof include Type Certificate (TC) or Supplemental Type Certificate (STC) cargo containers, pallets, and restraint systems.

C. The air carrier is ultimately responsible for training their personnel to the requirements of their manual. Section 121.135(a)(1) requires the air carrier to provide instructions and information (manuals) necessary to allow personnel to perform their duties and responsibilities with a high degree of safety.

D. Ground support equipment and cargo loading personnel should not be considered contract maintenance. 14 CFR part 1 defines maintenance as; inspection, overhaul, repair, preservation, and replacement of aircraft parts. The service traditionally provided by a freight forwarding company does not lend itself to any of these foregoing activities.

3. ACTION. Consistent with the foregoing discussion and as part of their normal surveillance, principal inspectors should ensure that adequate procedures are in place in the operator's manual to ensure cargo restraint equipment conform to proper standards and are in condition to perform their intended function.

A. If maintenance is required on any of the TC or STC cargo containers or restraint devices, it must be accomplished in accordance with appropriate regulations.

B. Geographic inspectors, performing air carrier surveillance, should follow handbook guidance and report discrepancies in cargo handling/restraint devices through the program tracking and reporting system (PTRS) for follow-up action by the principal inspector.

4. INQUIRIES. This FSIB was developed by AFS 300. Questions regarding this information bulletin should be directed to AFS-330 at (202) 267-3440.

5. EXPIRATION DATE. This bulletin will expire on 09-30-98.

/s/
Leo Weston
Acting Manager,
Aircraft Maintenance Division

ORDER: 8300.10 And 8400.10

APPENDIX: 3

BULLETIN TYPE: Joint Flight Standards Handbook Bulletin for Airworthiness (HBAW) and Air Transportation (HBAT)

BULLETIN NUMBER: HBAW 97-12 and HBAT 97-12

BULLETIN TITLE: Special Emphasis Surveillance of Part 121 Air Carrier Cargo Loading Procedures

EFFECTIVE DATE: 09-05-97

TRACKING NUMBER: N/A

NOTE: THIS BULLETIN REQUIRES SPECIFIC PTRS INPUT. SEE ITEM #5

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1. PURPOSE. This bulletin has two specific purposes. The first purpose is to reemphasize and expand current policy and guidance concerning weight and balance control procedures, cargo loading procedures, and loading schedules and instructions. The second purpose is to validate compliance with those currently approved procedures to include the surveillance of cargo loading operations aboard an aircraft. This validation process will be accomplished by the completion of a special emphasis ramp check on all Title 14 of the Code of Federal Regulations (14 CFR) part 121 air carriers that currently conduct any type of cargo loading operation, to include the loading of passenger bags or company material aboard any air carrier aircraft.

2. BACKGROUND.

A. Part 121, section 121.665 states that the certificate holder is responsible for the preparation and accuracy of a load manifest form before each takeoff. In addition, the load manifest form must be prepared and signed for each flight by employees of the certificate holder who have the duty of supervising the loading of aircraft and

preparing the load manifest forms. If these duties are accomplished by other than the certificate holder's employees, then those individuals must be qualified and authorized by the certificate holder.

NOTE: In addition to that stated in section 121.665, the Federal Aviation Administration's (FAA) policy is that the certificate holder must ensure that those individuals, who are not the certificate holder's employees, are directly supervised, during the performance of their duties, by an appropriately qualified supervisor employed by the certificate holder.

B. Part 119, section 119.53 outlines the requirements for wet leasing of aircraft and other arrangements for transportation by air. Upon receiving a copy of the wet lease, the Administrator determines which party to the agreement has operational control of the aircraft. Once that determination is made, the appropriate principal inspector issues amendments to the operations specifications of each party to the agreement, as needed. In making that determination, weight and balance control procedures are considered relevant factors in determining operational control.

NOTE: Principal inspectors shall review and approve all weight and balance control procedures that will be accomplished during all wet leasing arrangements. It is imperative that any outsourced personnel used for cargo loading are qualified and authorized by the certificate holder to perform these functions. In addition, the FAA's policy is that the certificate holder must ensure that those individuals, who are not the certificate holder's employees, are directly supervised, during the performance of their duties, by an appropriately qualified supervisor employed by the certificate holder.

C. Part 121, section 121.135 requires each certificate holder to prepare and keep a current manual for the use and guidance of ground personnel. That manual must contain, among other items, information on the methods and procedures for maintaining the aircraft weight and center of gravity within approved limits.

D. Currently, part 121, section 121.400 prescribes the requirements applicable to each certificate holder for establishing and maintaining a training program for crewmembers, aircraft

dispatchers, and other operations personnel. While the term "other operations personnel" is not currently defined in this subpart, it is evident that employees of a certificate holder who have the duty to supervise the loading of an aircraft or who qualify and authorize

other persons to perform this function, must be trained on the certificate holder's procedures. Principal inspectors are encouraged to review any training program their certificate holder accomplishes for personnel who supervise the loading of aircraft, prepare load manifest forms, or qualify and authorize other persons to accomplish these requirements.

3. DISCUSSION.

A. Airworthiness inspectors shall review existing guidance material located in FAA Order 8300.10, Airworthiness Inspector's Handbook:

(1) Vol. 3, Chapter 1, Introduction to Aircraft and Equipment
(2) Vol. 3, Chapter 3, Conduct Ramp Inspection of Operator's Aircraft
(3) Vol. 3, Chapter 4, Conduct Cockpit En Route Inspection
(4) Vol. 2, Chapter 74, Evaluate FAR Part 121/135 (10 or more Turbine Powered Aircraft) Operator's Weight and Balance Control Program
(5) Vol. 2, Chapter 84, FAR Part 121/135 Operations Specifications, Part E: Paragraph E96
(6) FSAW 97-21, Acceptable Means of Maintaining Cargo Containers, Pallets, and Netting Installed on Transport Category Aircraft

B. Operations inspectors shall review existing guidance material located in FAA Order 8400.10, Air Transportation Operations Inspector's Handbook:

(1) Vol. 3, Chapter 6, paragraph 1159
(2) Vol. 3, Chapter 6, paragraph 1189
(3) Vol. 3, Chapter 15, paragraph 2133
(4) Vol. 3, Chapter 15, paragraph 2147

NOTE: The existing guidance material recognizes that Airworthiness and Operations inspectors possess various degrees and types of expertise and experience in the area of load manifests, cargo loading procedures, and weight and balance programs. Any inspector who needs additional information or guidance should coordinate with personnel experienced in that particular specialty. An effective weight and balance program will require the knowledge and skills provided by both Operations and Airworthiness inspectors.

C. Both Operations and Airworthiness inspectors shall review Advisory Circular (AC) 120-27C, Aircraft Weight and Balance. This document provides guidance to certificate holders that are required to have an approved weight and balance program by part 121.

4. ACTION.

A. Upon receipt of this bulletin, principal inspectors are to review their assigned air carrier's weight and balance control procedures. This review shall include the subject areas discussed in this bulletin, along with the appropriate air carrier's manuals, operations specifications, and wet lease agreements.

B. Within 60 days of the date of this bulletin, principal operations inspectors (POI) and principal maintenance inspectors (PMI) are to ensure that two additional special emphasis ramp checks are completed on their assigned air carrier(s). This means that a total of four (two Operations, two Airworthiness) special emphasis ramp checks shall be completed on all part 121 air carriers, that currently conduct any type of cargo loading operation, to include the loading of passenger bags or company material aboard any air carrier aircraft.

NOTE: The locations of these special emphasis ramp checks are at the discretion and judgment of the respective principal inspector. However, the location should be representative of the air carrier's typical area of operations.

5. PROGRAM TRACKING and REPORTING SYSTEMS (PTRS) INPUT.

A. Special emphasis ramp checks are to be conducted in order to validate the current state of weight and balance control procedures and cargo loading operations. The attached PTRS Data Sheets have been modified in order to focus inspector surveillance and inspection activities, and are to be used to report the inspector's findings.

NOTE: The use of the modified forms are not intended to limit an inspector's surveillance or inspection activity, but merely to focus on certain aspects of cargo loading operations.

B. There are two special emphasis ramp check forms attached to this bulletin. Activity number 1638 is to be used by Operations inspectors and activity number 3623 is to be used by Airworthiness inspectors. Section I of the modified form contains standard transmittal information. Section IV of the modified form contains specific inspection items. There are five mandatory inspection items and ten optional inspection items. During the special emphasis ramp check, inspectors need to ensure that ALL five mandatory inspection items have been accomplished and then select at LEAST five of the ten optional inspection items to report on as the situation warrants.

C. Inspectors shall complete Section I of the form and the Section IV "Opinion Code" for each of the Mandatory and at least five Optional Inspection Items. The "Opinion Code" summarizes the inspector's impressions about the activity. There are three opinion codes:

"I" Information, "P" Potential, "U" Unacceptable

D. Mandatory Inspection Items. Any mandatory inspection item considered "acceptable" DOES NOT require the completion of an "Opinion Code" for that inspection item. However, any mandatory inspection item coded "I, P, or U" needs to be explained with appropriate comments following the specific inspection item.

E. Optional Inspection Items. Inspectors shall pick at least five optional inspection items from the list of ten items. The optional inspection items are to be chosen by the inspector as the situation and events require. Any optional inspection item considered "acceptable" DOES NOT require the completion of an "Opinion Code" for that inspection item. However, any optional inspection item coded "I, P, or U" needs to be explained with appropriate comments following the specific inspection item.

NOTE: Any inspection item that the inspector finds as unacceptable shall be brought to the attention of the appropriate pilot-in-command or air carrier supervisor prior to the movement of that aircraft.

6. INQUIRIES. This bulletin was developed by AFS-300 and AFS-200. Any questions or comments concerning its content should be directed to Dick Berg (AFS-300) at (202) 267-3786 or Kent Stephens (AFS-200) at (703) 661-0571.

7. LOCATION. This bulletin will remain in effect until incorporated into FAA Order 8300.10, Airworthiness Inspector's Handbook; Volume 2, Chapter 74 and FAA Order 8400.10, Air Transportation Operations Inspector's Handbook; Volume 4, Chapter 2, Section 2. Inspectors should make a note of this bulletin in the margin of the affected chapters.

/s/
Gary E. Davis
Acting Manager,
Air Transportation Division

ATTACHMENTS

PROGRAM TRACKING AND REPORTING SUBSYSTEM DATA SHEET
(One PTRS Record Required for Each Unit of Work as defined in the PPM)

SECTION I - Transmittal **SPECIAL EMPHASIS RAMP CHECK: CARGO LOADING OPERATIONS**

Inspector Name Code:		
Record ID:	Activity Number: 3623	14 CFR: 121
Start Date:	Status (POC):	Callup Date:
Designator:	Results (ACEFISTX):	Closed Date:
Aircraft Reg #:	Loc/Departure Point:	Flight #:
Make-Model-Series:		
Non-Cert Activity Name/Company:		

SECTION IV - INSPECTION ITEMS

Primary Area	Key Word	Opinion Code	**INSPECTION ITEMS (Mandatory Items)**
A	613		1a. The load manifest form is prepared and signed by employees of the certificate holder who have the duty of supervising the loading of aircraft and preparing the load manifest form.
A	899		1b. The load manifest form is prepared and signed by other qualified persons authorized by the certificate holder who have the duty of supervising the loading of aircraft and preparing the load manifest form.
A	767		2. Cargo carried in an approved cargo rack, bin, or compartment.
A	603		3. Cargo secured by means approved by the Administrator.
F	801		4. Cargo is properly secured by an appropriate tiedown having enough strength to eliminate the possibility of shifting under all normally anticipated flight and ground conditions.
F	625		5. Cargo does not impose any load on the floor structure that exceeds the load limitation of that floor structure.
			(Optional Items) Choose at least 5 of the 10 items to report)
A	515		1. General condition of ramp area (FOD, fuel/oil spills, etc.)
H	853		2. Cargo compartment structural damage, liners free of tears/punctures, etc.
H	826		3. Cargo compartment fire detection/protection for its classification
H	852		4. Cargo door free of fluid leaks and structural damage
F	825		5. Loading systems (main deck and lower deck) serviceability
H	803		6. Forward, aft, and side restraints serviceability
H	851		7. Roller assemblies secure with no missing or broken rollers
H	810		8. "9G" forward restraint net serviceability (SRM Chapter 51 limits)
A	816		9. Unit Load Devices (ULD) serviceability
A	501		10. Current calibration of cargo scales

Date: **Originator:** **Office:**

Inspector Signature: **Supervisor Initials:**

PROGRAM TRACKING AND REPORTING SUBSYSTEM DATA SHEET
(One PTRS Record Required for Each Unit of Work as defined in the PPM)

SECTION I - Transmittal **SPECIAL EMPHASIS RAMP CHECK: CARGO LOADING OPERATIONS**

Inspector Name Code:		
Record ID:	Activity Number: 1638	14 CFR: 121
Start Date:	Status (POC):	Callup Date:
Designator:	Results (ACEFISTX):	Closed Date:
Aircraft Reg #:	Loc/Departure Point:	Flight #:
Make-Model-Series:		
Non-Cert Activity Name/Company:		

SECTION IV - INSPECTION ITEMS

Primary Area	Key Word	Opinion Code	**INSPECTION ITEMS**
			(Mandatory Items)
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A	899		1b. The load manifest form is prepared and signed by other qualified persons authorized by the certificate holder who have the duty of supervising the loading of aircraft and preparing the load manifest form.
A	767		2. Cargo carried in an approved cargo rack, bin, or compartment.
A	603		3. Cargo secured by means approved by the Administrator.
F	801		4. Cargo is properly secured by an appropriate tiedown having enough strength to eliminate the possibility of shifting under all normally anticipated flight and ground conditions.
F	625		5. Cargo does not impose any load on the floor structure that exceeds the load limitation of that floor structure.
			(Optional Items) Choose at least 5 of the 10 items to report)
A	515		1. General condition of ramp area (FOD, fuel/oil spills, etc.)
A	721		2. Pallet locks checked by load supervisor to ensure locks are in locked position
A	609		3. Cargo weights furnished by freight forwarders are spot checked for accuracy
A	711		4. Cargo loaded in accordance with the air carrier's approved policies and procedures
H	809		5. All compartments and other loading stations are properly marked and the identification used corresponds with the instructions established for computing weight and balance of the aircraft
A	605		6. Flightcrew has either properly computed actual weight and balance of aircraft prior to takeoff or has received this information through approved means.
A	105		7. Contract personnel load the aircraft in accordance with air carrier's approved procedures
A	621		8. Information relative to maximum capacities and other pertinent limitations affecting the weight or balance of the aircraft is provided and known by the flightcrew.
A	517		9. Cargo doors and loading equipment secured prior to aircraft movement
A	641		10. Review load manifest for hazardous cargo procedures (report discrepancies to appropriate FAA PSI)

Date: **Originator:** **Office:**

Inspector Signature: **Supervisor Initials:**

U.S. Department of Transportation
Federal Aviation Administration

Memorandum

Subject: **INFORMATION:** NTSB Accident/Incident Investigation Support Request 97-114; AAI-200 route slip dated 9/3/97

Date: OCT 7 1997

From: Acting Director, Flight Standards Service, AFS-1

Reply to Attn. of:

To: Director of Accident Investigation, AFI-1
ATTN: Manager, Recommendation and Analysis Division, AAI-200

The following information is in response to the subject request concerning Aeromar, Inc.

Question 1. The Safety Board understands that, as a Dominican carrier, Aeromar was not permitted to operate in the United States because of the Category III (unacceptable) rating given by the FAA to the Dominican Republic. Please confirm whether this understanding is correct. Are there any additional reasons why Aeromar would not be permitted to operate in the United States.

FAA Response. Your understanding is correct. The Dominican Republic was assessed for compliance with International Civil Aviation Organization (ICAO) standards during January 1993. During the first public announcement of assessment results, the Dominican Republic was released as a Category III, not meeting ICAO standards. They remain in Category III at this time.

This is assuming no Category III ban.

Aeromar was last evaluated by the Miami International Field Office (IFO) in June 1993. At that time, although the DGAC had made some progress in its oversight capabilities, Aeromar was found to be far from meeting any of the ICAO requirements. In order for Aeromar to operate in the U.S., it would have to show that they had first undergone a certification process according to ICAO requirements and then they would have to be authorized to conduct operations to the U.S. under 14 CFR Part 129.

wouldn't this be assumed under a re-assessment of the country to accepted?

Question 2. The Safety Board understands that Aeromar "wet leased" the accident airplane from Fine Air (a U.S. operator) for the purpose of carrying its (Aeromar's) cargo from the U.S. to the Dominican Republic, and that the preparation, weighing, and loading of the cargo was accomplished by Aeromar employees. Aeromar may also have scheduled the departure time of the accident airplane. Given these circumstances, and any others that the FAA is aware of, did Aeromar's action in any way violate the prohibition against Aeromar conducting operations in the United States?

Aeromar did not "operate" the flight.

FAA Response. Aeromar does not hold FAA authorization to conduct operations in the United States. To date, the FAA is not aware that Aeromar conducted any operation contrary to FAA requirements.

Question 3. What are the underlying policy reasons for prohibiting operations to the U.S. by carriers from countries that have received Category III ratings?

FAA Response. The FAA established the International Aviation Safety Assessment Program (IASA) through public notice in August 1992. The FAA's foreign assessment program focuses on a country's ability, not the individual air carrier, to adhere to international standards and recommended practices for aircraft operations and maintenance established by the United Nation's technical agency for aviation, ICAO.

In mid-1991, FAA began to formulate a program to address these concerns. This program included visits to 12 countries with airlines seeking authority to operate to and from the United States. After a trial period our findings convinced us of the need to formally establish the IASA Program. Notice of our new policy was published in mid-1992 (Federal Register, Vol. 57, No. 164, August 24, 1992). The purpose of the IASA is to ensure that all foreign air carriers that operate to or from the United States are properly licensed and with safety oversight provided by a competent Civil Aviation Authority in accordance with ICAO standards.

Question 4. The Safety Board understands that the FAA has examined or is examining the corporate and/or contractual relationships between Fine Air and Aeromar. What relationships, if any, existed between those two entities at the time of the accident?

FAA Response. Currently, the FAA is evaluating the most recently received Wet Lease Agreement between Fine Air and Aeromar to ensure it meets the established guidelines. The most important requirement is determining who has operational control of the aircraft and related functions. At the time of the accident, a Wet Lease Agreement between the two companies was in the process of review and evaluation. This lease, that was submitted prior to the expiration date of its predecessor, required revision to conform to recent regulatory changes. Therefore, at the time of the accident an evaluation of the Wet Lease Agreement between Fine Air and Aeromar had not been completed by the Miami Flight Standards District Office and the FAA's legal office. The only relationship between the two companies that we are aware of is the Wet Lease Agreement.

Question 5. (4 parts)

Part 1: What federal standards or requirements, if any, apply to the preparation, weighing, and loading of cargo onto flights being operated in the United States?

FAA Response. The following is a list of documents that contain information on the preparation, weighing, and loading of cargo onto flights being operated in the United States.

Advisory Circular 120-27C addresses weight and balance and loading procedures for air carriers.

FAA order 8300.10, Airworthiness Inspector's Handbook, requires approved weight and balance control procedures as the only means for an operator/applicant to authorize the use of other than known weights for crew, passengers, baggage, or cargo. The weight and balance control program, including loading schedules and charts, are approved on operations specifications by the principal maintenance inspector. This program must be included in the operator/applicant's policies and procedures manual.

B. The operator/applicant may develop and submit for approval any method or procedure by which it can show that an aircraft:

- *Is properly loaded according to approved configuration (loading schedules or charts).
- *Will not exceed authorized weight and balance limitations during all ground and flight operations.
- *Will be periodically reweighed and its data reevaluated.
- *Will have its data recalculated, if changes necessitate.

C. The operator/applicant's weight and balance control procedures may either be an independently controlled document which includes all the instructions and procedures for maintenance, operations, and baggage/cargo control, or it may be included in the manual.

FAA Order 8400.10, Air Transportation Inspector's Handbook, states that the approval of weight and balance procedures is granted in paragraph E96 of the operations specifications.

Reference to the operations specifications may be made in the General Operations Manual; however, the reference may not be used instead of a detailed description of the procedures to be used by flight operations, ground handling, and flightcrew personnel. POI's must ensure that the information and guidance in the operator's General Operating Manual (GOM) is consistent with that in the General Maintenance Manual (GMM).

The weight and balance procedures described in the operator's manuals should normally address the following topics:

- *Procedures for complying with weight and balance limitations for each type of aircraft.
- *For Part 135 operators that operate multiengine aircraft, procedures for ensuring that the empty weight and center of gravity of each multiengine aircraft is determined by actually weighing the aircraft within the preceding 36 months.
- *Procedures for determining the weight of passengers, crew, cargo, and baggage.
- *Procedures for making the center of gravity calculations including loading schedules or other approved methods, if applicable.
- *Procedures for the completion and disposition of load manifests and weight and balance records.
- * Procedures for loading the aircraft.

Part 2: Did Aeromar meet those standards and/or requirements at the time of the accident?

FAA Response. At the time of the accident, Aeromar did not have to meet the same requirements as an operator having operational control of the aircraft and related functions. In this case, Fine Air had

responsibility for operational control of the aircraft and related functions.

Parts 3 & 4: Do entities or individuals performing those functions have to be certified by the FAA? Are those functions or the individuals/entities performing those functions subject to any FAA oversight?

FAA Response. Persons performing the preparation, weighing, and loading of cargo do not have to be certified by the FAA to perform such tasks. However, the air operator having operational control has the responsibility to ensure that the persons performing such tasks are performing them in accordance with the approved policies and procedures contained in its GOM and GMM. At the time when these persons are performing various functions for an operator, they are subject to FAA inspection. This inspection would be to determine whether they are performing such tasks in accordance with the approved policies and procedures of the air operator responsible for operational control. Any irregularities discovered could result in an enforcement action and would be reported to the air operator for corrective action.

Question 6. Is Aeromar considered an operating air carrier? We have been told that it does not control any more operational aircraft. Can it then be responsible (in a regulatory sense) for correctly loading Fine Air flight 101?

FAA Response. The FAA does not consider Aeromar to be an operating air carrier because it does not hold 14 CFR part 129 operating authority issued by the FAA. There are no provisions in 14 CFR Part 121 for sharing or delegating responsibility for operational control. Therefore, it cannot be responsible for incorrectly loading Fine Air Flight 101. Fine Air is responsible, in accordance with 14 CFR part 121, for the proper loading of its aircraft.

If we can be of further assistance, please let us know.

[redacted]

for Thomas E. Stuckey

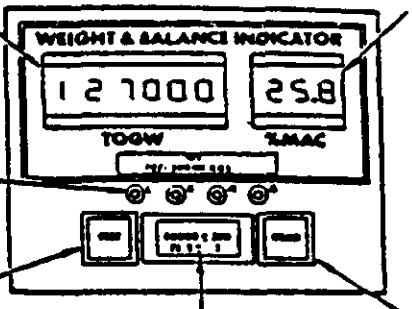
Weight and Balance, Controls and Indicators

WEIGHT AND BALANCE (STAN) SYSTEM

The STAN (Sum Total Aft and Nose) system provides on-board digital readout of weight and balance. Operational on the ground, pressure transducers convert main and nose gear shock strut air pressure to an electric signal that is read in the cockpit as gross weight and center of gravity. Total gross weight is determined by adding the three weight signals from the separate gear transducers. Center of gravity is determined from the ratio of weight on the nose gear to the total weight.

Failure or malfunction of the system is indicated by failure of the test switch to call up the correct placard response. The system is primarily used to verify that calculated weight and balance are within limits.

FLIGHT ENGINEER'S LOWER AUX PANEL



TAKEOFF GROSS WEIGHT INDICATOR
Provides digital indication airplane gross weight.

TEST JACKS
For use in maintenance check of the system.

TEST SWITCH PRESS
Preset test values displayed on gross weight and CG indicators.

CG POSITION INDICATOR
Provides center of gravity indication as a percent of MAC (Mean Aerodynamic Chord).

READ SWITCH PRESS
Actual gross weight and CG displayed in respective digital indicators.

TEST VALUES
Preset values to be observed on gross weight and CG indicators during test.

Weight and Balance STAN System

STAN SYSTEM

The STAN system provides a check on the Total Gross Weight and CG location. It does not replace the weight and balance manifest, and is not a required item for dispatch. It is only a convenient computed check.

The system is responsive to oleo strut pressures of the loaded aircraft, computed to produce a cockpit readout for actual gross weight and percent of MAC. Following a short taxi, set the flaps to the takeoff position, set the parking brakes, press TEST, prior to displaying a reading. Do not hold TEST during taxi. An improperly serviced strut will affect the accuracy of a reading.

Should a discrepancy between the weight and balance manifest and the STAN system exist that exceeds 3 tons or more than a 2% difference in MAC, the discrepancy must be resolved prior to takeoff by rechecking the manifests, provided that the STAN system tests within the placarded limitations. Caution should be exercised in the event of a higher gross weight reading that aircraft, runway or second segment structural limitations are not exceeded.

When a discrepancy exists between the flight release/weight and balance report and the STAN system, several considerations should be made. It would be desirable to use the heavier of the weights for V-speeds.

BOB BENSON
NTSB

DC8-COM-0009/MAH ATA: 8-103-3 DATE: 16MAR98

TO: ALL DC-8 OPERATORS AND ALL FIELD SERVICE REPRESENTATIVES

FROM: F. C. HAAS/M. A. HANSEN, C1-L32 /D035-0035/
BOEING COMMERCIAL AIRPLANE GROUP - LONG BEACH, CALIF

SUBJECT: CALCULATION OF CENTER OF GRAVITY DUE TO FUEL LOADING

REF: DC-8 WEIGHT AND BALANCE MANUAL

THIS COM TWX IS TO ALERT OPERATORS ON PROPER USE OF WEIGHT AND BALANCE DATA FOR DETERMINING THE FUEL LOAD CENTER OF GRAVITY (CG).

ONE DC-8 CARGO OPERATOR DISCOVERED AN ERROR WHEN CALCULATING A DC-8-61F CENTER OF GRAVITY, WHICH WAS AS MUCH AS THREE (3) PERCENT MEAN AERODYNAMIC CHORD (MAC). THE SOURCE OF THE ERROR WAS TRACED TO AN INCORRECT NOMOGRAM USED IN THE CALCULATION OF FUEL LOAD EFFECT ON THE DC-8-61F CG. THE ERROR WAS CORRECTED AND NEW LOAD AND TRIM SHEETS WERE PUBLISHED, WHICH CONFORMED TO THE APPROVED DOUGLAS WEIGHT AND BALANCE MANUAL.

TO ENSURE THE ACCURACY OF THE CG CALCULATION METHODS USED BY OTHER DC-8 OPERATORS, WE RECOMMEND THAT THE FOLLOWING EXAMPLES BE USED WITH THE OPERATOR'S METHOD, AND THE RESULTS COMPARED WITH RESULTS FROM THE DOUGLAS WEIGHT AND BALANCE MANUAL. FOR THOSE OPERATORS WHO MAY NOT HAVE A COPY OF THE APPROVED DOUGLAS WEIGHT AND BALANCE MANUAL, THE APPLICABLE USABLE FUEL WEIGHT LOADING DATA IS PROVIDED BELOW.

THE FOLLOWING USABLE FUEL WEIGHT LOADING IS FOR THE DC-8-30, -40, -50 AND -61 WING:

MAC: 275.9
LEMAC: 789.9
REFERENCE DATUM PLANE: 858.7

TANK	FUEL AT 6.8 LB/GAL	H-ARM /FUSELAGE STATION/
1 AND 4 MAIN	40,480	915.8
1 AND 4 ALT.	20,950	1045.8
2 AND 3 MAIN	35,210	785.2
2 AND 3 ALT.	25,100	842.0
TOTAL (8 TANK)	121,740	885.2
CENTER WING	28,310	767.3
TOTAL (9 TANK)	150,050	862.9
FORWARD AUX	9,015	697.5
TOTAL (10 TANK)	159,065	853.6

TOTAL FUEL AT 6.8 LB/GAL	H-ARM /FUSELAGE STATION/	
1,000	850.5	
10,000	846.4	
20,000	846.0	
30,000	849.2	
40,000	861.3	
50,000	870.2	
60,000	878.3	
70,000	886.6	
80,000	886.0	
90,000	885.6	
100,000	885.3	
110,000	885.0	
120,000	884.6	
8 TANK TOTAL 121,740		885.2
130,000	878.4	
140,000	870.5	
150,000	863.0	
9 TANK TOTAL 150,050		862.9
10 TANK TOTAL 159,065		853.6

THE FOLLOWING USABLE FUEL WEIGHT LOADING IS FOR THE DC-8-62 AND -63 WING:

MAC: 272.8
LEMAC: 795.8
REFERENCE DATUM PLANE: 858.7

TANK	FUEL AT 6.8 LB/GAL	H-ARM /FUSELAGE STATION/
1 AND 4 MAIN	39,966	915.5
1 AND 4 ALT.	22,316	1052.4
2 AND 3 MAIN	60,574	807.9
CENTER WING	28,454	768.3
FORWARD AUX	13,650	703.1
TOTAL (8 TANK)	165,075	851.5

TOTAL FUEL AT 6.8 LB/GAL	H-ARM /FUSELAGE STATION/
1,000	854.5
10,000	847.8
20,000	887.9
30,000	849.2
40,000	901.7
50,000	909.1
60,000	910.0
70,000	902.6

80,000	897.4	
90,000	893.7	
100,000	891.0	
110,000	888.6	
120,000	886.7	
130,000	881.4	
140,000	873.2	
150,000	866.0	
160,000	855.9	
8 TANK TOTAL 165,075		851.3

IF THE OPERATOR'S METHOD YIELDS A SIGNIFICANTLY DIFFERENT RESULT WHEN COMPARED TO THE RESULT USING THE ABOVE DATA, WE WILL REVIEW THE OPERATOR'S METHOD AND RECOMMEND ADJUSTMENTS OR A NEW METHOD.

SHOULD ADDITIONAL INFORMATION BE REQUIRED, PLEASE SUBMIT YOUR INQUIRIES THROUGH YOUR LOCAL FIELD SERVICE REPRESENTATIVE, OR TO BOEING COMMERCIAL AIRPLANE GROUP - DOUGLAS PRODUCTS DIVISION, ATTN: TECHNICAL AND FLEET SUPPORT, STRUCTURES/ INTERIOR FURNISHINGS, P.O. BOX 1771, LONG BEACH, CA 90801, SITA: TOAMD7X, ARINC: LAXMDCR, TELEX: 674357, FAX: /562/ 593-7710, OR CALL /562/ 593-8114.

C. Y. YAMAGUCHI
SENIOR MANAGER
STRUCTURES/INTERIOR FURNISHINGS AND REPAIR DESIGN
TECHNICAL AND FLEET SUPPORT
SERVICE ENGINEERING
CUSTOMER DIVISION

F. C. HAAS
DIRECTOR
TECHNICAL AND FLEET SUPPORT
SERVICE ENGINEERING
CUSTOMER DIVISION

D. C. SHAPIRO
DIRECTOR
FLIGHT OPERATIONS

END/CR

FAX

16 March, 1998

TO: Ron Fox, C1

FROM: Steven Lund, C1-L70-D094-0025 (593-8363)

SUBJECT: Additional FineAir DC-8 CG Calculations for NTSB

Ron, per our telecon this morning, the NTSB requested 2 more points to be calculated:

1. Redo CASE 4D (listed below) with 250 -lbs added to each pallet.
2. Redo CASE 4D with 275-lbs added to each pallet

CASE #.	Description	ZFW	CG	%MAC	TOGW	CG	%MAC
Base*	FINEAIR	233,982	861.5	26.0	282,482	862.8	26.5
Base (rev)	DPD (rev)	234,082	861.8	26.1	282,582	863.0	26.6
1	Reverse pos. 13 & 17	234,082	852.7	22.9	282,582	855.5	23.9
2A	C1 with pos 14-16 aft 1 position	234,082	862.6	26.4	282,582	862.6	26.4
2B	C2A with pos 14-17 fwd 1 position	234,082	852.7	22.9	282,582	855.5	23.9
3A	C2A with pos 4 @ 90° & in pos 5	234,082	880.5	32.9	282,582	878.6	32.2
4A	C1 with 6950-lbs on pallet G	235,082	853.0	22.9	283,582	855.7	23.9
4B	C2A with 6950-lbs on pallet G	235,082	861.5	26.0	283,582	862.8	26.5
4C	C2B with 6950-lbs on pallet G	235,082	853.0	22.9	283,582	855.7	23.9
4D	C3A with 6950-lbs on pallet G	235,082	881.0	33.1	283,582	879.0	32.4
4E**	C4D with 250-lbs more on each pallet						
4F**	C4D with 275-lbs more on each pallet						

* The Base configuration is Pos. 1 full, Pos 2 empty, Pos. 3 full, Pos 4 & 5 have one pallet @ 90°; and all other positions are full.

** New calculations.

The NTSB Investigator In Charge of the FINE AIR case will be in plant this week and would like to discuss these calculations at our convenience. Please advise a schedule of completion of the new items.

Thank you.

SUMMARY
FINE DC-8-61F
NTSB SCENARIOS
88X108 PALLETS

CASE NO.	DESCRIPTION	ZFW	CG	% MAC	
Base	FINE AIR (as received)	233,982	863.1	26.6	
Base (rev)	FINE AIR (as revised by Boeing, DPD)	234,082	861.6	26.1	
1	Reverse position 13 & 17	234,082	852.6	22.8	
2A	Case 1 with position 14-16 aft 1 position	234,082	861.1	25.9	
2B	Case 2A with position 14-17 fwd 1 position	234,082	852.6	22.8	
3A	Case 2A with pos. 4 @ 90 deg & in pos 5	234,082	880.4	32.9	*
4A	Case 1 with 6950 lb on pallet G	235,082	852.8	22.9	
4B	Case 2A with 6950 lb on pallet G	235,082	861.3	26.0	
4C	Case 2B with 6950 lb on pallet G	235,082	852.8	22.9	
4D	Case 3A with 6950 lb on pallet G	235,082	880.9	33.0	*
4E	**Case 4D with 250 lb more on each pallet**	**239,082**	**881.8**	**33.4**	
4F	**Case 4D with 275 lb more on each pallet**	**239,482**	**881.9**	**33.4**	
5A	Case 1 with pos. 1 in pos 2	234,082	854.2	23.4	
5B	Case 2A with pos. 1 in pos 2	234,082	862.7	26.5	
5C	Case 2B with pos. 1 in pos 2	234,082	854.2	23.4	
5D	**Case 3A with pos. 1 in pos 2**	**234,082**	**881.9**	**33.4**	
5E	Case 4A with pos. 1 in pos 2	235,082	854.4	23.4	
5F	Case 4B with pos. 1 in pos 2	235,082	862.9	26.5	
5G	Case 4C with pos. 1 in pos 2	235,082	854.4	23.4	
5H	**Case 4D with pos. 1 in pos 2**	**235,082**	**882.4**	**33.6**	
6A	Case 1 with collapsed bear traps	234,082	855.9	24.0	
6B	Case 2A with collapsed bear traps	234,082	864.3	27.0	
6C	Case 2B with collapsed bear traps	234,082	855.9	24.0	
6D	**Case 3A with collapsed bear traps**	**234,082**	**883.5**	**34.0**	
6E	Case 4A with collapsed bear traps	235,082	856.1	24.1	
6F	Case 4B with collapsed bear traps	235,082	864.5	27.1	
6G	Case 4C with collapsed bear traps	235,082	856.1	24.1	
6H	**Case 4D with collapsed bear traps**	**235,082**	**884.0**	**34.2**	
6I	Case 5A with collapsed bear traps	234,082	857.4	24.5	
6J	Case 5B with collapsed bear traps	234,082	865.9	27.6	
6K	Case 5C with collapsed bear traps	234,082	857.4	24.5	
6L	**Case 5D with collapsed bear traps**	**234,082**	**885.0**	**34.6**	
6M	Case 5E with collapsed bear traps	235,082	857.7	24.6	
6N	Case 5F with collapsed bear traps	235,082	866.1	27.7	
6O	Case 5G with collapsed bear traps	235,082	857.7	24.6	
6P	**Case 5H with collapsed bear traps**	**235,082**	**885.5**	**34.7**	
6Q	**Case 6H with pos 1 ok**	**235,082**	**883.7**	**34.1**	

Note: boxed values are outside the cg limits (33.1%), * values are at or near the aft limit