ROYAL AIR FREIGHT, INC.
GENERAL OPERATIONS MANUAL
BUHA 637C

[redacted]
WATERFORD, MICHIGAN 48327

APR [redacted]
ACCEPTED [redacted]
AGL - DETROIT FSDO
Principal Operations
Inspector

ROYAL AIR FREIGHT, INC.
GENERAL OPERATIONS MANUAL
RECORD OF REVISIONS

Revisions to this manual will be issued as required by changes in regulations, company policies or company procedures.

The "Log of Effective Pages" (Page III) will detail each revision.

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Principal Airworthiness Inspector

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11-20-95		5-6-97 5-27-97	
11-21-95		7-9-97	
1-26-96		9-10-97	
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LOG OF EFFECTIVE PAGES

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I	ORIGINAL	1/20/1995	8-0	ORIGINAL	1/20/1995
II	ORIGINAL	1/20/1995	8-1	ORIGINAL	1/20/1995
III	REV. 35	10/17/2012	9-0	ORIGINAL	1/20/1995
IV	REV. 20	9/10/1997	9-1	REV. 30	9/15/2008
V	ORIGINAL	1/20/1995	9-2	REV. 19	5/6/1997
TOC-1	REV. 29	8/1/2008	9-3	REV. 19	5/6/1997
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TOC-3	REV. 33	11/15/2011	9-5	REV. 23	5/11/2004
1-0	ORIGINAL	1/20/1995	9-6	ORIGINAL	1/20/1995
1-A	ORIGINAL	1/20/1995	9-7	ORIGINAL	1/20/1995
1-B	REV. 28	4/08/2008	9-8	ORIGINAL	1/20/1995
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1-3	REV. 29	8/1/2008	9-11	ORIGINAL	1/20/1995
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1-6	REV. 29	8/1/2008	9-14	REV. 22	9/1/1999
2-0	ORIGINAL	1/20/1995	9-15	REV. 22	9/1/1999
2-1	REV. 23	5/11/2004	9-16	REV. 27	3/25/2008
2-2	ORIGINAL	1/20/1995	9-17	REV. 27	3/25/2008
2-3	REV. 25	3/01/2007	9-18	REV. 30	9/15/2008
2-4	REV. 25	3/01/2007	9-19	REV. 30	9/15/2008
2-5	ORIGINAL	1/20/1995	10-0	REV. 20	9/10/1997
2-6	ORIGINAL	1/20/1995	10-1	REV. 26	7/25/2007
2-7	ORIGINAL	1/20/1995	10-2	REV. 20	9/10/1997
2-8	ORIGINAL	1/20/1995	10-3	REV. 32	09/1/2010
2-9	ORIGINAL	1/20/1995	10-4	REV. 32	09/1/2010
2-10	ORIGINAL	1/20/1995	10-5	REV. 32	09/1/2010
2-11	REV. 32	09/1/2010	10-6	REV. 32	09/1/2010
2-12	REV. 25	3/01/2007	10-7	REV. 32	09/1/2010
3-0	RESERVED	9/10/1997	10-8	REV. 32	09/1/2010
4-0	ORIGINAL	1/20/1995	11-0	REV. 19	5/6/1997
4-1	ORIGINAL	1/20/1995	11-1	REV. 30	9/15/2008
4-2	ORIGINAL	1/20/1995	11-2	REV. 34	09/20/2012
5-0	ORIGINAL	1/20/1995	11-3	REV. 30	9/15/2008
5-1	ORIGINAL	1/20/1995	11-4	REV. 33	11/15/2011
5-2	ORIGINAL	1/20/1995	11-5	REV. 30	9/15/2008
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6-0	REV. 24	2/12/2007	11-10	REV. 31	3/16/2009
7-0	REV. 27	3/25/2008	11-11	REV. 31	3/16/2009
7-1	REV. 27	3/25/2008	11-12	REV. 31	3/16/2009
7-2	REV. 27	3/25/2008			
7-3	REV. 27	3/25/2008			

MANUAL REVISION PROCESS

The General Operations Manual Revision:

The revision process involves: Making the needed change to the affected page(s), updating the "Log of Effective Pages" (Page III).

The revision will then be submitted in duplicate to the FSDO office having jurisdiction.

Once the revision has been accecpted, one set will remain at the FSDO and the other will be returned to Royal Air Freight, inc.

As the revision is incorporated into each General Operations Manual at Royal Air Freight, the "Record of Revision" page 2 will be dated and initialed by the person inserting the revision.

Operations Specifications / M.E.L.

While the Operations Specifications and the M.E.L. are located in the back of this book they are not part of the General Operations Manual or it's revision process.

PREFACE

Royal Air Freight, Inc has been organized to supply specialized air transportation, on call, to serve the public. To accomplish this purpose, certain policies and procedures have been established to provide guidelines for all employees. Adherence to all Federal Air Regulations is necessary in this operation and flight safety is important.

In order that the above objectives may be met and that each employee will be aware of their duties and responsibilities, a copy of this manual, as applicable, with changes and/or additions will be made available to:

1. Flight Crew Members
2. Ground Operations Personnel
3. Maintenance Personnel
4. Detroit FSDO of the Federal Aviation Administration

It is the responsibility of each employee to read and be familiar with applicable portions of this manual. Each manual holder is required and will be responsible for keeping appropriate parts of the manual updated as revisions are furnished to them.

Appropriate parts of this manual shall be carried aboard each aircraft when away from the principle operations base and must be made available for use by ground or flight personnel. The Director of Operations is responsible for revisions of each manual assigned to company aircraft. Each Pilot-In-Command is responsible to insure the required manual is on board.

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GENERAL OPERATIONS MANUAL
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ROYAL AIR FREIGHT, INC.
GENERAL OPERATIONS MANUAL
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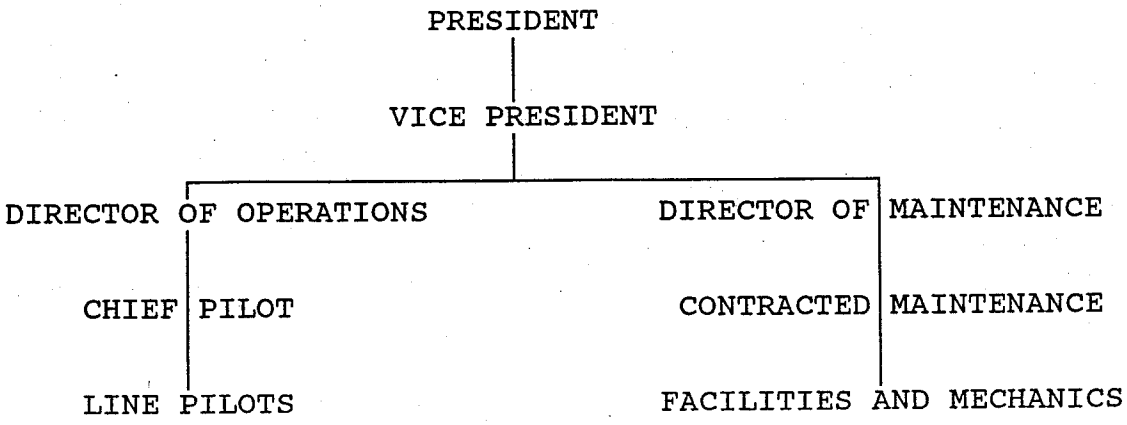
SECTION 1
COMPANY ORGANIZATION

ORGANIZATION CHART



NAMES, ADDRESSES AND TELEPHONE NUMBERS OF EXECUTIVE PERSONNEL:

PRESIDENT:

William Kostich

[redacted]

VICE PRESIDENT:

Kirt Kostich

[redacted]

DIRECTOR OF OPERATIONS:

Kirt Kostich

[redacted]

CHIEF PILOT:

Ronald Birnie

[redacted]

DIRECTOR OF MAINTENANCE:

Scott Ingersoll

[redacted]

[redacted]

RESPONSIBILITIES OF EXECUTIVE PERSONNEL:

PRESIDENT:

The President is responsible for the management of the company in its entirety, for the coordination of all departments, for the selection of department heads, for issuing all orders to department heads concerning their duties. The President is responsible for execution of the company's policies, compliance with all laws, rules and regulations governing Air Carrier Operations as applicable to the company equipment, property, personnel, etc.

VICE PRESIDENT:

The Vice President is responsible for the management of the company when the President is not available to make decisions for operation of the company.

DIRECTOR OF OPERATIONS:

The Director of Operations is directly responsible to the President, in exercising operation control in the interest of flying safety. He shall meet the requirement of F.A.R. 119.71a The Director of Operations will coordinate with the Chief Pilot and Director of Maintenance to insure the maintenance items are being noted in accordance with this manual and the F.A.R.'s and that the maintenance activities are being performed in a timely manner.

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Principal Airworthiness
Inspector

RESPONSIBILITIES OF EXECUTIVE PERSONNEL:

CHIEF PILOT:

The Chief Pilot will meet the requirement of FAR 119.71C The Chief Pilot is responsible to the Director of Operations for the management of the flight department. He shall act as liaison between the company and the Federal Aviation Administration (FAA) in all matters pertaining to flight operations. He will see that no person is employed as a pilot for the company unless that person meets or exceeds the proper FAA standards through a careful analysis of the applicant's previous experience. He is responsible for seeing that pilots are knowledgeable on the General Operations Manual and that they conduct all flights in accordance with the procedures of the manual and the current FAR's. This function will be accomplished through Initial and Recurrent ground schools given by the Chief Pilot or designated representative to assure compliance with company requirements and current FAR's.

He is responsible for ensuring that flight crew members receive current aircraft manufacturer operating information. When new operating information is issued he will coordinate with the principle operations inspector to determine if a change is necessary to the initial and recurrent training programs and determine if additional training should be issued to each flight crew member and documented.

He is responsible for pilots' records and pilot training programs. In addition, the Chief Pilot will be custodian of company records, and perform other duties as may be assigned to him by the Director of Operations. He will coordinate with the Director of Maintenance to insure that no aircraft departs the home station with an inspection due, overdue or that will become due prior to its return.

He is responsible for ensuring that a list of all current and qualified flight crew members is maintained and available to the dispatch department. Should any flight crew member become unqualified for any reason he shall inform dispatch of the change of status.

LINE PILOTS:

CAPTAIN:

The Captain is responsible to the Chief Pilot for safe and efficient flight operations. The Chief Pilot designates the Captain as Pilot-In-Command in accordance with FAR 135. The Captain will insure that each flight under his command is conducted in a safe manner. He is solely responsible for the professional demeanor of his crew in the accomplishment of their duties. The Captain will perform other duties as may be assigned by the Chief Pilot. It shall also be the responsibility of the Captain of all flights to:

1. Insure that no required inspection will become overdue on any flight.
2. Assure that all discrepancies noted during the flight are listed on the Aircraft Daily Record Sheet, and that the aircraft book is either given to the Director of Maintenance or his/her representative or placed in the Aircraft Requiring Maintenance File.
3. Assure that all discrepancies from the previous Aircraft Daily Record Sheet have had corrective action and are signed off.
4. Assure that any equipment that has been placed on the MEL, has not timed out, and that the aircraft still meets the requirements for the proposed flight.
5. Assure that for all away from home inspections and/or maintenance that the Director of Maintenance is fully informed and has approved all such actions including the return to service.
6. Assure that at the completion of each flight assignment the Aircraft Daily Record Sheet is completed.
7. Assure that a copy of the Aircraft Daily Record Sheet remains in his/her individual file so that the pilot flight time in sufficient detail to determine compliance is available until the pilot transfers the pertinent information to the Weekly Flight and Rest Requirement Form.
8. Assure that near the end of each month, totals from the Weekly Flight and Rest Requirement Form are transferred and added to The Flight and Duty Yearly record form and assure compliance with flight time limitations, rest requirements and recent flight experience.
9. Assure that you carry the appropriate and current airman certificates and copies of your current or new certificates are on file in company records.

NOTE: New medical certificates must be on file with company at least five days prior to the end of the month. Non-compliance may result in removal from flight ready status.

SECOND-IN-COMMAND:

The Second-In-Command is responsible to the Captain for the performance of those duties assigned to him/her by the Captain. The Chief Pilot designates the Second-In-Command in accordance with FAR 135. The Second-in-Command will also comply with item number 7,8 and 9 above with respect to flight record requirements and certificates.

ESPONSIBILITIES OF EXECUTIVE PERSONNEL:

DIRECTOR OF MAINTENANCE:

The Director of Maintenance (DOM) is directly responsible to the President and supervises all company mechanics and other maintenance personnel as directed by the President. The Director of Maintenance is responsible for aircraft and engine records and for compliance with all current Federal Aviation Regulations (FAR's).He has full authority to accept or reject any contract work.

He serves as maintenance liaison between the company and the Federal Aviation Administration (FAA) in matters pertaining to Maintenance. It is also the duty of the Director of Maintenance:

1. To insure that the aircraft files include, but not limited to, all pertinent airframe, powerplant and component data, such as installation dates, total airframe time at component replacement, component serial number and part number, etc.
2. To assure that no aircraft departs the home station with an inspection due, overdue, or that will knowingly become due prior to its return in accordance with existing FAR's.
3. To see that all forms and records are properly executed by the responsible party, as per the instructions on each form and/or records.
4. To provide the necessary technical data, including overhaul manuals, service instructions, A.D. Notes, etc., for the airframe, engines and components undergoing maintenance.
5. To provide necessary training and assistance to personnel to assure that the proper procedures, methods and practices are employed during inspection and maintenance.
6. To determine which, if any, maintenance discrepancies may be deferred in accordance with the aircraft approved minimum equipment list and carried on the deferred maintenance list.
7. To prepare and forward service difficulty reports as required by FAR 135.415.
8. To generate a monthly mechanical interruption summary report pursuant to FAR 135.417. If said report contains no interruptions, then "None" shall be recorded.
9. To maintain the official list of the company aircraft as per FAR 135.419 (h)
10. To schedule and supervise the Primary, Interim, Special Inspections, all major repairs and alterations, so as to maintain all assigned aircraft in airworthy condition.
11. To assure the total operating time, serial number, Airworthy Directives, etc. are properly recorded.
12. To prepare the appropriate inspection forms as inspections come due.

ASSISTANT DIRECTOR OF MAINTENANCE:

The Assistant director of Maintenance is directly responsible to the Director of Maintenance and directly supervises all maintenance personnel as directed by the Director of Maintenance.

It is also the duty of the Assistant Director of Maintenance:

1. Review each completed work deck to ensure it is correctly completed.
2. Monitor all maintenance in progress to improve quality.
3. Arrange hanger stack for maintenance.
4. Assist the Director of Maintenance in keeping hanger clean and organized.
5. Monitor the calibrated tools to assure all are within calibration.

ROYAL AIR FREIGHT, INC.
GENERAL OPERATIONS MANUAL

SECTION 2

COMPANY PROCEDURES AND POLICIES

AIRCRAFT OPERATING INFORMATION:

The following materials must be on board a company aircraft in current and appropriate form, accessible to the pilot, at the pilot station and the pilot must use them.

1. A cockpit checklist.
2. For multiengine aircraft or for aircraft with retractable landing gear, an emergency cockpit checklist.
3. Pertinent aeronautical charts.
4. For IFR operations, each pertinent navigational enroute, terminal area, and approach and letdown charts.
5. For multiengine aircraft, one-engine-inoperative climb performance data and if the aircraft's approved for use in IFR or over-the-top operations, that data must be sufficient to enable the pilot to determine compliance with 135.181 (a) (2).

Each checklist required by 1 and 2 above must contain procedures as specified by 135.83.

WEATHER REPORTING:

No pilot operating under Part 135 may begin an instrument approach procedure to an airport unless - That airport has a weather reporting facility operated by the U.S. National Weather Service, a source approved by the Administrator; and The latest weather report issued by that weather reporting facility indicates that weather conditions are at or above the authorized IFR landing minimums for that airport.

USE OF AWOS-3

Pilots may use AWOS-3 for approved weather reporting provided the following conditions are met:

1) The airport using AWOS-3 must be listed in the current U.S. Government Flip, Airport/Facility Directory.
2) The following elements of the report must be available and not reported missing: Date/Time Group; Altimeter Setting; Visibility; Wind; and Cloud Height (Cloud Height required only when the ceiling is specified as part of a landing or takeoff minimum).

Provided the above conditions are met, all pilots using AWOS-3 for IFR arrivals will monitor the AWOS-3 frequency as to comply 135.225 A,B,C. All pilots using AWOS-3 for IFR departures will monitor the AWOS-3 frequency as to comply with 135.225 F,G,H. Pilots may also use AWOS-3 to comply with 135.219 and 135.221 provided that they receive the report through flight service station or call the AWOS-3 themselves.

LOWER THAN STANDARD IFR TAKEOFF MINIMUMS:

Only those pilots that have been trained and who have passed the Air Taxi Instrument Proficiency check required by FAR 135.297 within Seven months preceding the flight are authorized to use lower than Standard minimums as derived from the operations specifications.

COCKPIT MANAGEMENT:

Federal Aviation Regulations require that a checklist be used during all flight operations. The airplane manufacturer has the expanded, short lists and emergency checklist that should be on board the aircraft. It is not a substitute for thorough knowledge of the aircraft systems and procedures. Checklists are to serve as a written aid in accomplishing a flight person or flight crew's activities. The checklist helps insure that the pilot or crew have the proper configuration for that phase of the flight.

Single pilot will use a checklist during all flight operations to ensure proper configuration/procedures are followed for different phases of the flight.

Aircraft requiring two pilots will use the challenge/response method. Both pilots will insure the action they were looking for happens.

Effective checklist use is enhanced by proper pacing. Many pilots have a specified point during the flight profile to initiate the checklist. This will allow adjustment to unforeseen circumstances such as high density traffic, marginal weather, aircraft malfunctions, fatigue and stress. Don't be forced into a situation that will put you behind the aircraft. When faced with an abnormal or emergency situation, first fly the aircraft, second identify the problem, perform memory items, if any, and locate the proper checklist.

For aircraft requiring two crew, it is recommended that each pilot have their own set of approach charts while conducting instrument approaches under Part 135. Normal cockpit management during instrument approaches calls for the non-flying pilot to set up for the approach. After this is complete the flying pilot shall give control of the aircraft to the non-flying pilot, allowing him to verify the set-up is correct. Then the flying pilot takes the controls and continues the approach checklist. Any discrepancy found during verification should be discussed with the other crew member. This verification procedure shall occur whether or not one or two sets of approach charts are aboard the aircraft. If only one set is available, it should be positioned during the approach such that both crew members have access to it.

OBSTACLE CLEARANCE (LARGE TRANSPORT TURBINE)

The Pilot in command will assure that an aircraft's takeoff performance will be equal to or greater than the minimum required for any given airport in relation to terrain and obstacle clearance (as required by 135.379 D) by computing the takeoff performance for that aircraft using the authorized aircraft flight manual performance charts.

When an airport uses NON-standard instrument departure minimums or specifies a minimum climb gradient in the departure procedure, the pilot must determine the required climb gradient.

OPERATIONS DURING GROUND ICING CONDITIONS

When aircraft are operated during ground deicing conditions it is required that a visual pretakeoff check be performed within five minutes prior to beginning takeoff. Ground deicing conditions are defined as any time conditions are such that frost, ice, or snow may reasonably be expected to adhere to the airplane.

A visual inspection will be performed from outside the aircraft prior to beginning the BEFORE START checklist. This inspection will ascertain that all of the aircraft wings, tail, and control surfaces are free from surface contamination. If surface contamination is found during this inspection, the aircraft will be deiced prior to taking off.

If more time than five minutes passes from the time that the outside visual inspection or deicing (whichever was performed last) has occurred, another visual inspection will be performed from either outside or (at the discretion of the pilot in command) inside the aircraft. The outside inspection will be the same as the one described in the preceding paragraph. The interior visual inspection will be conducted from inside the aircraft as follows:

King Air - Visually inspect the tops and leading edges of both wings, both ailerons, both nacelles, the nose and windshields. If necessary the horizontal stabilizer and flaps may be observed From the passenger windows.

C310/402 - Visually inspect the tops and leading edges of both wings, both ailerons, both nacelles, both horizontal stabilizers, both elevators, the vertical stabilizer and rudder (for the C402 the vertical and rudder will require opening the crew hatch) and the nose/windshield of the aircraft.

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OPERATIONS DURING GROUND ICING CONDITIONS cont'd

EMB-110 - Visually inspect the tops and leading edges of both wings, both ailerons, both nacelles and the nose/ windshield of the aircraft. (If cargo is not blocking access, it is feasible to observe both horizontal stabilizers from the cargo compartment, if deemed necessary.)

LR-JET - Visually inspect the outboard portions of the tops and leading edges of both wings and tops of the forward portions of each tip tank. If the cabin window areas are not covered with a cargo liner, the inboard portions of both upper wings, both ailerons, and both spoilers will be inspected.

Falcon Jet -Visually inspect the outboard portions of the tops and leading edges of both wings. Inspect the windshield area and portions of the nose that are visible. If necessary open the crew side window for further inspection.

If, during the course of this check it is determined that frost, ice, or snow has accumulated on the wings, tail, or control surfaces or it is apparent that there is a loss of effectiveness of the deicing/anti-icing fluid, the aircraft will be (re)deiced prior to takeoff. Some indications of a loss of effectiveness of deicing/anti-icing fluid are:

Progressive surface freezing or snow accumulation.

Random snow accumulation.

Dulling of surface reflectivity (loss of gloss) caused by the gradual deterioration of the fluid to slush.

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REFUELING PROCEDURES:

The Pilot-In-Command has the responsibility for the following items:

1. The proper fuel, grade and type of fuel.
2. Aircraft sumped as necessary to ensure contaminate free fuel.
3. No fueling or defueling should be done during electrical storms, unless necessary.
4. No smoking, fires or flames shall be permitted within fifty (50) feet of the aircraft being serviced.
5. No engines will be allowed to operate during refueling or defueling procedures.
6. No passengers on board during refueling or defueling procedures.
7. The aircraft and fueling unit will be adequately grounded.
8. Electrical equipment including radios will not be switched on or off, nor will radio transmitters be operated during the refueling operations.

Air Taxi Flights Defined:

Any flight in which persons other than employees of Royal Air Freight, Inc. and/or cargo not owned by Royal Air Freight, Inc. are transported for a fee in excess of the normal operating cost and expenses are recovered, shall be considered an Air Taxi Operation subject to the Air Taxi Requirements of this manual.

SECURING AIRCRAFT ACCESS DOORS AND CARGO:

The Pilot-In-Command shall determine, prior to starting engines, that all cargo compartments are properly loaded, restrained and all access doors are securely latched. A check must be made to determine all cargo and access door warning monitoring systems are functioning properly.

BRIEFING OF PASSENGERS BEFORE FLIGHT:

Before each takeoff the Pilot-In-Command or designated crew-member shall insure that all passengers have been orally briefed on:

1. Smoking.
2. Use of seat belts and child restraint systems.
3. The placement of seat backs in an upright position, arm rests, and tray tables are in their stowed positions for all takeoffs and landings.
4. Location and means for opening the passenger entry door and emergency exits.
5. Location of survival equipment (when carried).
6. If the flight involves extended over water operation, ditching procedures and the use of required flotation equipment.
7. If the flight involves above 12,000 feet MSL, the normal and emergency use of oxygen.
8. Location and operation of fire extinguishers.
9. Storage of carry-on baggage or cargo for takeoff and landing.
10. Stowage of food, beverages and passsenger service equipment, during aircraft movement on the surface takeoff and landing.

Each person who needs assistance, of another person, both must be briefed on how to evacuate the aircraft expeditiously. The briefing need not be given on subsequent legs of the flight, if there is no change of aircraft.

The oral briefing covered above shall be supplemented by printed cards for use of each passenger. Containing the following:

1. A diagram of and method of operating the emergency exits.
2. Other instructions necessary for the use of emergency equipment on board the aircraft.

Each card referred to must be carried in the aircraft in locations convenient for the use of each passenger and must contain information that is appropriate for the aircraft for which it is used.

Carriage of Personnel without compliance with the passenger carrying provisions of FAR 135 are as follows:

a. A crew member or other employeee of the certificate holder.
b. A person necessary for the safe handling of animals on the aircraft.
c. A person necessary for safe handling of hazardous materials.
d. A person performing duty as a ssecurity or honor guard accompanying a shipment made by or under the authority of the U.S. Government.
e. A military courier or a military route supervisor in operations under a military cargo contract.
f. An authorized representative of the Administrator conducting an enroute inspection.
g. A person, authorized by the Administrator, who is performing a duty connected with a cargo operation of the certificate holder.

ALTITUDE AWARENESS DURING FLIGHT:

DUAL FLIGHT CREWS:

The following procedures shall be practiced during an instrument approach:

1. A review of the instrument approach plates prior to final approach fix, to include:
   a. Field elevation
   b. Approach altitude
   c. Decision height or minimum descent altitude
   e. Approach speed and/or time
2. Completion of the final checklist prior to or as soon as practicable after crossing the final approach fix.
3. Raw ILS data shall be monitored during approach and significant excursions called by the non-flying pilot.
4. During final approach, the non-flying pilot shall check and call out as appropriate:
   a. Final fix inbound for altimeter and instrument cross-check and flag warnings. During flight director auto pilot coupled approach, both pilots shall confirm proper mode and glidescope lock on as appropriate.
   b. Five hundred feet above decision height or MDA check or altimeters, instruments and flag warnings. Thereafter, the non-flying pilot shall call out rate of descent and instrument indications.
   c. One hundred feet above the minimum descent altitude (MDA) or decision height.
   d. Minimum descent altitude or decision height.
   e. Approach, strobe or center line lights "in sight" or "runway in sight or no runway in sight".
5. During non-precision approaches, the altitude call out at minimum descent altitude shall be continued at reasonable time intervals while maintaining the MDA until the aircraft:
   a. Reaches the missed approached point, or
   b. Until the pilot can maintain visual reference for landing as required by FAR 91.175, or
   c. Until a missed approach is commenced and a positive rate of climb is established.

SINGLE PILOT OPERATION:

Altitude awareness and cockpit vigilance is just as important to single pilot operation. The single pilot should follow the same recommended checks and exercise the altitude awareness and cockpit vigilance during instrument approaches.

LOW LEVEL WIND SHEAR POLICY/PROCEDURES:

BACKGROUND:

Wind shear is best described as a change in wind direction and/or speed in a very short distance in the atmosphere. The most prominent meteorological phenomena that causes significant low level wind shear problems are thunderstorms and certain frontal systems at or near the airport. If frontal activity does exist:

a. Note the surface wind direction to determine the direction of the front with respect to the airport.
b. Compare the surface wind direction and the wind above the front to determine the potential wind shear during climb out of approach.

PILOT ACTION:

Make a careful evaluation of all factors. While mild low level wind shear may be troublesome, large shear values can be very hazardous. On approach and when in doubt, or when conditions are not right, execute a missed approach. When on the ground, be assured conditions are right before taking off.

It is company policy to have all pilots exercise extreme caution in areas of reported, forecasted or expected wind shear. It will be the pilot's sole responsibility to avoid all wind shear when he deems it necessary.

ALTITUDE ALERTING SYSTEM OR DEVICE:

It is policy that the Pilot-In-Command will set the altitude alerter or device (if equipped) if he is unable to, he will direct the Second-In-Command to set the altitude desired. The Pilot-In-Command is always responsible.

PROCEDURES FOR OBTAINING MAINTENANCE:

AT HOME BASE:

All maintenance actions must be authorized by the Director of Maintenance who will arrange with qualified and certificated agencies to perform and record the required inspections, repairs or alterations. When aircraft is at the home base, the Director of Maintenance will on a daily basis check each Aircraft Daily Record Sheet to determine if any maintenance is needed and take appropriate action.

AWAY FROM HOME BASE:

When it is necessary for a Pilot-In-Command to obtain maintenance while enroute, authorization for that maintenance action may be given for each instance by the Director of Maintenance over the telephone.

If the aircraft is to be away from home base at the time an inspection is due, the Pilot-In-Command of the flight will take with him all inspection forms which will be required for the inspection, and a copy of this manual. The inspection will be conducted or supervised by one of the following:

1. An appropriately certified repair station or
2. An appropriately rated certified mechanic, qualified on this type aircraft.

The results of the inspection will be noted on the proper inspection forms which are then brought to the home base. The pilot will be responsible for all Discrepancy and Action Sheets and correct entries with mechanic's signature and identification.

Discrepancies affecting the airworthiness of the aircraft, when the aircraft is away from the home base, will be corrected either by 1 or 2 above. The pilot will be responsible for all correct entries with the mechanics signatures and identification on the Discrepancy and Action Record.

The Pilot-In-Command should also ascertain that the appropriate logbook entries have been made in the aircraft and engine logbooks.

FLIGHT LOCATING PROCEDURES:

Flight will be conducted in accordance with an activated flight plan (Instrument Flight Rules or Visual Flight Rules) filed with the appropriate flight service station.

AND/OR

The Pilot-In-Command will give the Dispatcher or a Responsible person within the Royal Air Freight, Inc. all information normally contained in a VFR flight plan, if not filed with a flight service station. The pilot will telephone to the person whom the flight plan was left with upon landing at each destination and the planned departure time to the next destination. If the pilot does not telephone within one hour of the estimated time of arrival, the aircraft will be considered overdue.

The Responsible Royal Air Freight person will attempt to contact each airport of intended landing and request a ramp search for the overdue aircraft. If the aircraft cannot be located within one half hour, all information will be reported to the Lansing Flight Service Station.

The Lansing Flight Service Station telephone number is 1-800-992-7433.

VOR EQUIPMENT CHECK FOR IFR OPERATIONS:

Each Pilot-In-Command of an aircraft to be operated under IFR will ensure prior to flight that the VOR equipment has been operationally checked with the preceding 30 days and found to be within limits prescribed.

VOR checkpoint (surface) $\pm$ 4 degrees
Airborne check $\pm$ 6 degrees
Dual system check 4 degrees

This is accomplished by referring to Royal Air Freight Daily Record Sheet.

- If the check is current no action is necessary other than to carry on the VOR due date.
- If the check is due, complete the check as prescribed in 91.171 and complete the "VOR Check" portion of the Daily Flight Record Sheet.
- If while conducting a VOR check the bearing error is found to be beyond limits, the discrepancy will be recorded on the Daily Record Sheet and IFR flight using the VOR system for radio navigation is prohibited until repairs are made.

* ALL VOR DUE DATES UPON COMPLETION OF FLIGHT SHALL BE TRANSFERRED TO NEXT DAILY RECORD SHEET.

DETERMINATION OF AIRWORTHINESS:

The Pilot-In-Command prior to flight will determine that all the required inspections and return to service compliance are complete or have been deferred.

This is accomplished by reviewing the Royal Air Freight F.M. (Flight Manual) Book for the aircraft to be flown. The F.M. contains the following forms:

Log Book Placard
A.D. Compliance Form
Deferred Maintenance Record Sheet
Daily Record Sheets

Log Book Placard - will be reviewed to insure required inspections, due dates, and hour/cycle limits are in order.

A.D. Compliance Form - will be reviewed to insure that A.D.s have been conducted and that no recurring A.D.s will become due during the planned flight.

Deferred Maintenance Record Sheet - will be reviewed to see if any items have been deferred and if so, is the deferral still current and how will the deferral affect your planned flight.

Daily Record Sheet - will be reviewed to see if the previous flight had any mechanical irregularities and if so, has the aircraft been returned to service.

REPORTING AND RECORDING MECHANICAL IRREGULARITIES:

Mechanical irregularities that come to the attention of the Pilot-In-Command before, during, and after the completion of a flight shall be recorded on the Royal Air Freight Daily Record Sheet for the aircraft in question. The irregularity should be recorded legibly and in sufficient detail so as to convey the problem to maintenance personnel without the need for verbal communication.

When an irregularity is not positively identified or is not considered to be a failure, it should be recorded on the Daily Record Sheet as "Information Only" with the details of the irregularity. "Information Only" write-ups may be used provided it appears normal during the remainder of the flight and the Pilot-in-Command believes it would not affect the safety of further flights.

Examples: -one controller squawks Mode-C but others do not.
-one generator carries more of load, but within limits
-engine idle RPM needs small adjustment.

"Information Only" Write-ups do not ground the aircraft. They help convey to maintenance information needed for adjustments and/or tracking of information to detect reoccurring problems.

CORRECTING COMPANY DOCUMENTS:

Anytime a company document (i.e. Turbine Daily Record Sheet) is checked and a correction is required, the incorrect number or letter will have a line drawn through it, the correct number or letter will be placed next to or near the incorrect information, and the person who is making the correction will place their initials near the correction. Any and all corrections will be made in ink.

REVISING COMPANY DOCUMENTS:

The revision process will be initiated by the Operations department or The Maintenance Department. At that time all affected pages included for the revision will be assembled for review by the affected department manager(s).After the revision has been approved by the department manager(s), it will be reviewed by the General Manager. After the approval of the General Manager, two complete copies of the revision will be sent to the FAA office having jurisdiction over Royal Air Freight inc.

Included within the revision will be copies of the pages which require the approval or acceptance indication (i.e. signature, initial, ect...) from the FAA office. After the FAA office has approved or accepted the revision, they will return our pages with the approval or acceptance indication on the necessary pages after incorporating the revision into their copy of our document.

OPERATIONAL CONTROL:

Operational Control is the control and authority over the initiation, continuation, conduct and termination of flight operations. Operational Control always remains with the Certificate holder Royal Air Freight Inc (BUHA) through the direction of the Director of Operations. This control originates from its base of operations at:
2141 Airport Rd. Waterford, Michigan.

The Director of Operations delegates the daily normal functions of operational control to the Dispatchers of Royal Air Freight Inc with guidance from the Director of Maintenance and Chief Pilot.

When The Director of Operations is not available or operational situations arise the Director of Maintenance and/or Chief Pilot may exercise Operational Control on behalf of the Director of Operations.

When operational situations arise during a flight that could affect the safety of the operation and communication with Royal Air Freight is not feasible the Pilot in Command will exercise Operational Control until the aircraft is on the ground and/or communications with Royal Air Freight is established.

ACCEPTED/[redacted]
AGL - DETROIT FSDO
Principal Airworthiness
Inspector

RESERVED

SECTION 4

ACCIDENT NOTIFICATION PROCEDURES

ACCIDENT NOTIFICATION PROCEDURE:

GENERAL:

National Transportation Safety Board Part 830 (NTSB) contains rules pertaining to reporting aircraft accidents, incidents and certain other occurrences in the operation of the United States Civil Aircraft, when these events occur within the United States, its territories or possessions.

Responsibility:

In the event of an accident, incident, and/or an occurrence covered in NTSB 830.5 the Pilot-In-Command, if able, shall:

1. Attend to any passenger or crew member,
2. Arrange to protect the aircraft and property,
3. Notify the nearest FAA facility to report the accident, incident, or occurrence to the NTSB,
4. Notify the company office,
5. Record names and addresses of all persons involved to include any available witnesses,
6. File a written report for which notification is required by NTSB 830.

Immediate notification of an aircraft accident or when any of the following occur:

1. Flight control system malfunction or failure;
2. Inability of any required flight crewmember to perform his normal flight duties as a result of injury or illness;
3. Failure of structural components of a turbine engine excluding compressor and turbine blades and vane;
4. Inflight fire or
5. Aircraft collide in flight;
6. Damage to property other than aircraft, estimated to exceed $25,000 for repair (including materials and labor) or fair market value in the event of total loss, whichever is less.
7. For large multi engine aircraft (more than 12,500 pounds maximum certificated takeoff weight);
   - (i) In-flight failure of electrical systems which require the sustained use of an emergency bus powered by a back-up source such as a battery, auxillary power unit, or air-driven generator to retain flight control or essential instruments;
   - (ii) In-flight failure of hydraulic systems that results in sustained reliance on the sole remaining hydraulic or mechanical system for movement of flight control surfaces;
   - (iii) Sustained loss of power or thrust produced by two or more engines; and
   - (iv) An evacuation of an aircraft in which an emergency egress system is utilized.
8. An aircraft is overdue and is believed to have been involved in an accident.

ACCIDENT NOTIFICATION PROCEDURE continued

Information to be given in notification:

1. Type, nationality, and registration marks of aircraft.
2. Name of owner, and operator of aircraft.
3. Name of pilot.
4. Date and time of accident.
5. Last point of departure and point of intended landing of the aircraft.
6. Position of the aircraft with reference to some easily defined geographical point.
7. Number of persons aboard, number killed, and number seriously injured.
8. Nature of the accident, the weather and the extent of damage to the aircraft, so far as is known.
9. Description of any explosive, radioactive materials, or other dangerous articles carried.

FORCED LANDING REPORT:

In the event of a forced landing at an airport other than planned stop, the company shall be notified immediately. The reason for forced landing and what arrangements must be made for the aircraft to be declared airworthy again will be made by the Director of Maintenance, Chief Pilot, or an Executive person. Prior to flight all necessary signatures of maintenance, and forms completed. The company will make arrangements for the cargo, or passengers to be taken to the destination if the aircraft cannot be repaired within an allotted time period.

UNUSUAL INCIDENT REPORT:

It is the responsibility of the Pilot-In-Command to report as soon as possible, by telephone, to Chief Pilot or Executive personnel, any occurrence which could be considered unusual in nature or where emergency action becomes necessary. Any deviation from prescribed company policy and the FAR's will be explained in writing and presented to the Chief Pilot or Director of Operations as soon as possible. If you have any doubt about a problem, file an Aviation Safety Reporting Program Form (A.C. 00-46C NASA Form).

ROYAL AIR FREIGHT, INC.
GENERAL OPERATIONS MANUAL

SECTION 5

EMERGENCY PROCEDURES

EMERGENCY PROCEDURES

EMERGENCY AUTHORITY:

If, after evaluating all factors, the Pilot-In-Command believes that an emergency exists or will be created, he may take any action which he considers necessary to insure safety of flight. He may deviate from any company or FAA rule to the extent required to meet the emergency.

The Pilot-In-Command who deviates, in an emergency, from ATC clearance or instruction shall notify ATC of that deviation as soon as possible.

When an emergency arises which does not constitute a deviation from FAA flight rules, but requires corrective or preventive action, the Pilot-In-Command shall report verbally, as soon as practicable, to the Chief Pilot or Director of Operations. His report will include the situation and the action taken due to the situation. The Pilot-In-Command shall, within ten days after a deviation from any applicable FAR, if requested, send to the nearest Flight Standards District Office a complete report of the aircraft operation involved, including a description of the deviation and the reason for it.

AIRCRAFT EMERGENCIES:

All aircraft emergencies shall be conducted, if possible, in the manner prescribed in the aircraft flight manual and checklists which shall be carried on board the aircraft at all times.

IFR OPERATIONS: TWO-WAY RADIO COMMUNICATIONS FAILURE

(a) General: Unless otherwise authorized by ATC, each pilot who has two-way radio communication failure when operating under IFR shall comply with the rules of this section.

(b) VFR conditions: If the failure occurs in VFR conditions, or if VFR conditions are encountered after the failure, each pilot shall continue the flight under VFR and land as soon as practicable.

(c) IFR conditions: If the failure occurs in IFR conditions, or if paragragh (b) of this section cannot be complied with, each pilot shall continue the flight according to the following:

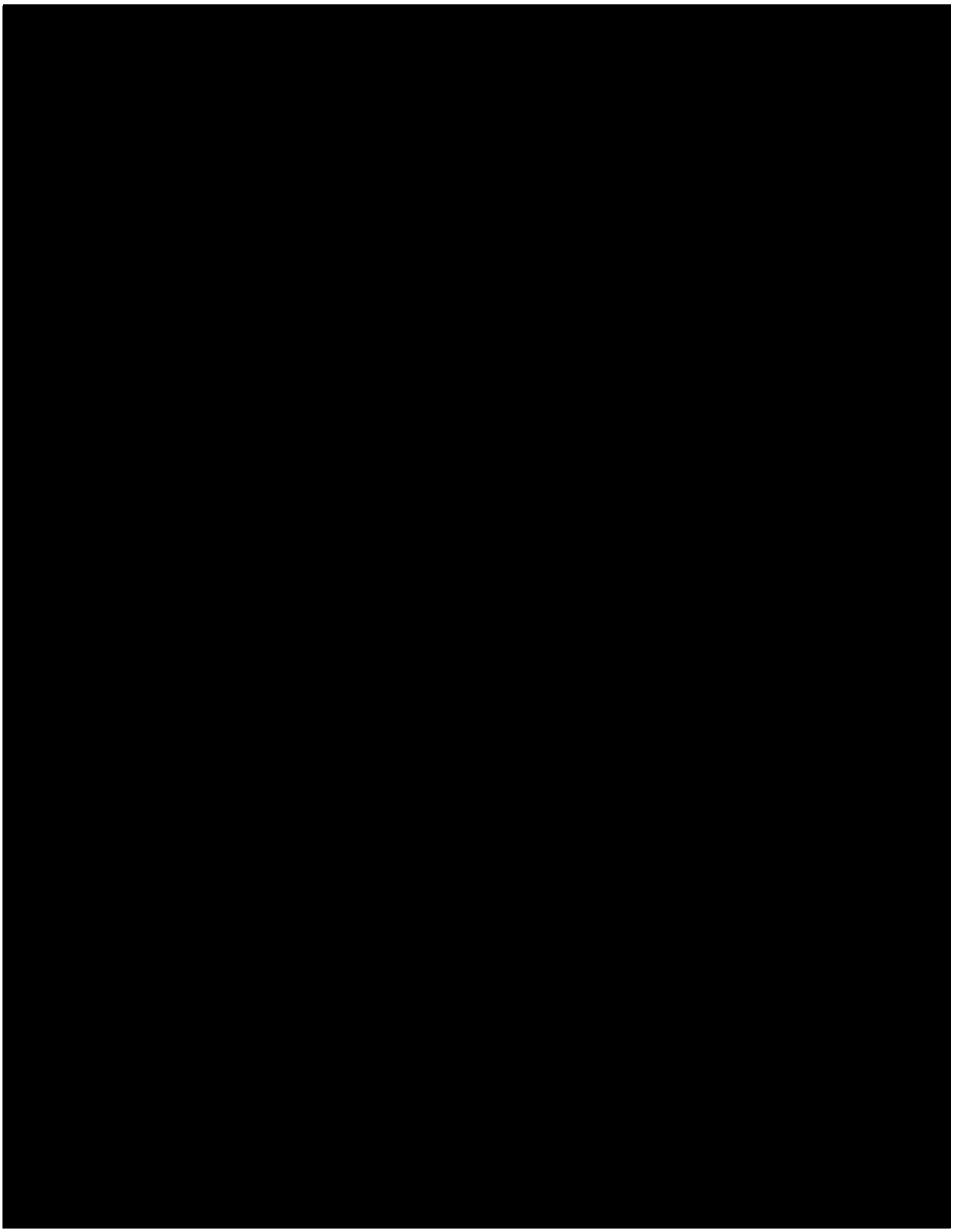
1) Route
   (i) By the route assigned in the last ATC clearance received.
   (ii) If being radar vectored, by the direct route from the point of radio failure to the fix, route, or airway specified in the vector clearance.
   (iii) In the absence of an assigned route, by the route that ATC has advised may be expected in a further clearance, or
   (iv) In the absence of an assigned route or a route that ATC has advised may be expected in a further clearance, by the route filed in the flight plan.

2) Altitude
   At the highest of the following altitudes or flight levels for the route segment being flown:
   (i) The altitude or flight level assigned in the last ATC clearance received;
   (ii) The minimum altitude (converted, if appropriate, to minimum flight level as prescribed in FAR Part 91.121 (c) for IFR operations; or
   (iii) The altitude or flight level ATC has advised may be expected in a further clearance.

LEAVE CLEARANCE LIMIT:
   (i) When the clearance limit is a fix from which an approach begins, commence descent or descent and approach as close as possible to the expect-further-clearance time if one has been received, or if one has not been received as close as possible to the estimated time of arrival as calculated from the filed or amended (with ATC) estimated time enroute.
   (ii) If the clearance limit is not a fix from which an approach begins, leave the clearance limit at the expect-futher-clearance time if one has been received, or if none has been received,

LEAVE CLEARANCE LIMIT continued:

upon arrival over the clearance limit, and proceed to a fix from which an approach begins commence descent or descent and approach as close as possible to the estimated time of arrival as calculated from the filed or amended (with ATC) estimated time enroute.



[redacted]

EMERGENCY EQUIPMENT FOR EXTENDED OVERWATER OPERATIONS:

No pilot may operate an aircraft in extended overwater operations unless it carries, easily accessible to the occupants, the following equipment in the event of ditching:

a. An approved life preserver, with survivor locator light or life rafts to accommodate all occupants of the aircraft, and enough equipment as indicated in FAR 135.167 (b) and (c).

ROYAL AIR FREIGHT, INC.
GENERAL OPERATIONS MANUAL

SECTION 6

FAA NATIONAL OPERATIONS AND TRAINING MANUAL FOR THE ACCEPTANCE AND TRANSPORT OF DANGEROUS GOODS IN AIR TRANSPORTATION

REVISED 2/12/2007

[redacted]
ACCEPTED
AGL - DETROIT FSDO
Principal Airworthiness
Inspector

ROYAL AIR FREIGHT INC.
WILL-CARRY
HAZARDOUS MATERIALS
OPERATIONS MANUAL and
TRAINING PROGRAM

April 2006

(Change 1)

Record of Changes

WILL-CARRY HAZARDOUS MATERIALS

OPERATIONS MANUAL AND TRAINING PROGRAM

Change Number to Original	Date	Description
Original	April 2006	
Change 1	May 15, 2006	Page i: Added (Change 1) Page ii: Modified/updated Page GENERAL-1: Added manual availability regulation, added 175.25 notice clarification, & changed page number Page 1-8: Corrected table Page 2-2: Regulation update added in Table

WILL-CARRY HAZARDOUS MATERIALS OPERATIONS MANUAL AND TRAINING PROGRAM

ROYAL AIR FREIGHT INC.
(Certificate Holder Name)

BUHA 637C
(Certificate Number)

[redacted]
(Physical Address)

WATERFORD	**MI**	**48327**
(City)	(State)	(Zip Code)

[redacted]
(Telephone)

[redacted]
(Fax)

[redacted]
(Signature Block)
Corporate Officer

1-16-07
Date

[redacted]
(Signature Block)
Responsible Hazardous Materials Officer

1-16-07
Date

Statement of Intent:

This Hazardous Materials (HM) Operations Manual and Training Program shall be followed by all employees, agents, and contract employees of **ROYAL AIR FREIGHT INC.** This manual/program will be continually reviewed to ensure compliance with 14 CFR and 49 CFR.

Will Transport Commercial Hazardous Materials? ☒ YES ☐ NO

Will Transport Own HM Company Material (COMAT)? ☒ YES ☐ NO

for [redacted]
Training Program Approved and
Recommend Manual Acceptance
Hazardous Materials Branch Manager

02/06/07
Date

FOR [redacted]
Manual Accepted
FSDO Principal Operations Inspector

02/12/2007
Date

HAZARDOUS MATERIALS OPERATIONS MANUAL AND TRAINING PROGRAM

TABLE OF CONTENTS

PART TWO: HAZARDOUS MATERIALS TRAINING PROGRAM

APPENDICES

WILL-CARRY HAZARDOUS MATERIALS OPERATIONS MANUAL AND TRAINING PROGRAM

GENERAL

Notwithstanding the contents of this manual, we are responsible for compliance with all provisions of the Hazardous Material Regulations (HMR), Title 49, Code of Federal Regulations (49 CFR) and the Federal Aviation Regulations, Title 14 CFR.

A current copy of this manual or appropriate portions thereof shall be made available to ground personnel, maintenance personnel, and crewmembers when performing any Hazardous Materials (HM) duties (14 CFR 121.137 and 135.21). A current copy of the HM regulations found in 49 CFR Parts 107-185 (or a current copy of: the International Civil Aviation Organization (ICAO) Technical Instructions for the Safe Transport of Dangerous Goods by Air or the International Air Transport Association (IATA) Dangerous Goods Regulations) shall be available at each station .

This Hazardous Materials Operations and Training Program shall be followed by each crewmember and person performing or directly supervising any of the following job functions involving any item for transport on board, attached to, or suspended from an aircraft: acceptance, rejection, handling, storage incidental to transport, packaging of company material, or loading. No employee, agent, or contract employee may prepare HM for shipment, including Company Material (COMAT), unless trained in this function.

The terms **Dangerous Goods and Hazardous Materials** are synonymous and may be used interchangeably. Dangerous goods and hazardous materials are sometimes also referred to as regulated materials, restricted articles, and dangerous materials. Definitions of common terms applicable to HM are found in 49 CFR 171.8, Definitions and Abbreviations.

We shall not use or allow any crewmember or person to perform or directly supervise any job function in the Training Reference Table (Part Two), unless that person has satisfactorily completed our FAA-approved initial or recurrent hazardous materials program within the past 24 months. Exceptions for new hires, persons performing a new job function, and persons who work for more than one certificate holder are specified in 14 CFR 121.1005(b) and (c) or 135.505(b) and (c). An exception for operations in foreign locations is specified in 14 CFR 121.1005(f) or 135.505(f).

The notice required by 49 CFR 175.25 shall be prominently displayed at all facility locations where passengers are ticketed, boarded, and/or baggage is checked. The notice required by 49 CFR 175.26 shall be prominently displayed at each facility locations where cargo is accepted. At passenger terminals where both passenger and cargo notices would be required, the use of only the 49 CFR 175.25 notice is allowed.

Each repair station performing work for or on our behalf shall be notified in writing of our policies pertaining to hazardous materials (14 CFR 121.1005(e) or 135.505(e)). This notification requirement only applies to repair stations that are regulated by 49 CFR Parts 171-180. **(See Appendix E)**

PART ONE

HAZARDOUS MATERIALS OPERATIONS MANUAL

I. ACCEPTANCE PROCEDURES

Persons (shippers) offering Hazardous Materials (HM) for air transportation are responsible for properly identifying, describing, classifying, packaging, marking, and labeling the materials as required by either 49 CFR or ICAO. They are also responsible for properly completing the communications and packaging requirements prior to offering the shipment for transportation.

Employees, agents, and contract employees may rely on the certification and information provided by the shipper to determine if the HM shipment is authorized for air transportation. All employees, agents, and contract employees responsible for the acceptance of cargo or baggage shall be provided a trigger list of indicators of undeclared HM to assist them in their review. **(See Appendix A, Hidden Shipment Indicators)**

Domestic shipments may be offered in compliance with either 49 CFR or ICAO requirements. The shipper chooses which regulations to use and the chosen regulations must be complied in their entirety. Shipments following ICAO must also comply with 49 CFR 171.11.

If the shipment is offered in accordance with ICAO, the accepting employee, agent, or contract employee must also ensure that the shipper has complied with all applicable US Variations to the ICAO Dangerous Goods Table.

A checklist **(See Appendix F, Acceptance Checklist)** will be used and will include all reasonable steps to ensure that:

- any package containing HM which is damaged or leaking shall be refused without any further processing;
- the material is properly described on the shipping papers;
- the required certification is on the shipping papers;
- the authorized package is marked and labeled as required;
- the shipment is authorized to be transported by aircraft in the condition offered; and
- emergency response information accompanies the shipment.

A. Shipping Documents and Certification

1. If Offered Under Title 49 CFR: The proper shipping name for each HM is found in 49 CFR 172.101, the Hazardous Materials Table (HMT). The basic description must include the proper shipping name (supplemented with the technical name(s), if required) found in Column 2, the hazard class or division prescribed in Column 3 along with any subsidiary hazard class or division as in Column 6, the identification number prescribed in Column 4, and the packing group in roman numerals prescribed in Column 5. This basic description must be in proper sequence. **"Cyclobutyl chloroformate, 6.1, (8, 3), UN2744, PG II"**

Alternatively, the basic description may be shown with the identification number listed first. **"UN2744, Cyclobutyl chloroformate, 6.1, (8, 3), PG II"**

Listed next is the total quantity of the material by weight or volume and type of packaging. The emergency response telephone number and additional entry requirements follow the basic description and quantity when required. The shipper's certification must appear on the shipping document and be signed by a representative of the shipper.

2. If Offered Under ICAO: HM must be accurately described on the dangerous goods transport document by its proper shipping name (supplemented with the technical name(s) if required), class or when assigned - division, any assigned subsidiary hazard class or division number(s), UN number, and the appropriate packing group. These four elements of the basic dangerous goods description must be provided in the proper sequence. In addition to the basic dangerous goods description, the following information must be included on the dangerous goods document: total quantity of HM covered by the description of each item of HM bearing a different proper shipping name, UN number or packing group, the number and type of packaging, and packing instructions. The emergency response telephone number and additional entry requirements follow the basic description and quantity. **"Acetyl chloride, 3 (8), UN1717, II"**

Alternatively, the basic description may be shown with the identification number listed first. **"UN1717, Acetyl chloride, 3 (8), II"**

3. If Offered Under 49 CFR or ICAO: Two copies of the shipping papers must be provided with the shipment. One copy must accompany each shipment, and one copy must be retained for one (1) year after the shipment is accepted. Shipping papers must be made available to an authorized official upon request. For a hazardous waste, each shipping paper copy must be retained for three years after the material is accepted. Each shipping paper copy must include the date of acceptance.

B. Marking

The proper shipping name and identification number appearing on the shipping paper shall also be marked on the outside of the package, outside container, or overpack. The name and address of either the consignee or consignor must also be marked on each package. Packages containing liquid hazardous materials must be legibly marked/labeled on two opposite vertical sides of the package with the orientation arrows pointing in the correct upright direction, unless otherwise excepted. Any additional marking requirements specified in 49 CFR required for the package or material being shipped must be met (e.g., specification package marking, overpack marking, limited quantity, etc.). (See 49 CFR Part 172, Subpart D)

C. Labeling

Prior to offering HM for shipment, the package must be properly labeled. Labels are a printed hazard warning. Labels will identify primary and subsidiary hazards specific to the material. They also identify handling instructions.

The labeling requirements are found in 49 CFR Part 172, Subpart E. Acceptance personnel shall verify that the outside of the package is labeled with the appropriate label(s) from Column 6 of the HMT. Additional handling labels may be required. The "Cargo Aircraft Only" label will be affixed to packages containing a quantity of HM that may be shipped only on cargo aircraft or are forbidden for transport on passenger aircraft but are permitted for transport on cargo only aircraft per Columns 9A and 9B of the HMT in Part 172.

The hazard classes are:

Class 1- Explosives (See 49 CFR 173.50)
Class 2- Flammable Gas (See 49 CFR 173.115)
Class 3- Flammable Liquids (See 49 CFR 173.120)
Class 4- Flammable Solids (See 49 CFR 173.124)
Class 5- Oxidizers and Organic Peroxides (See 49 CFR 173.127 and 173.128)
Class 6- Toxic and Infectious Substances (See 49 CFR 173.132 and 173.134)
Class 7- Radioactive Materials (See 49 CFR 173.403)
Class 8- Corrosive Materials (See 49 CFR 173.136)
Class 9- Miscellaneous (See 49 CFR 173.140)
ORM-D- Other Regulated Materials (See 49 CFR 173.144)

Markings and labels identifying handling instructions are:

"Cargo Aircraft Only" label (See 49 CFR 172.402)
"Magnetized Material" label (See 49 CFR 173.21(d) and the ICAO Dangerous Goods List for magnetized materials)

Unless excepted, orientation markings/labels are required on packages containing liquids (↑↑) (See 49 CFR 172.312).

These markings and labels are depicted on the Hazardous Materials Marking, Labeling & Placarding Guide. **(See Appendix B, DOT Chart)**

D. Placards

Unit Loading Devices (ULD's)/freight containers over 640 cubic feet capacity containing HM, must be placarded in accordance with 49 CFR 172.512(a). ULD's/freight containers less than 640 cubic feet capacity containing HM must either be placarded or labeled in accordance with 49 CFR 172.512(b).

E. Rejection of Non-Compliant HM

Non-compliant HM shipments shall be rejected and segregated from all other cargo shipments to prevent accidental introduction into the transportation system. A record of rejected shipments should be maintained. Any shipment not in compliance must be properly disposed of or corrected in accordance with the HMR for further transportation.

II. COMPANY MATERIALS (COMAT)

COMAT is an industry term developed and used by certificate holders and is generally used to describe a wide array of company materials including replacement items for installed equipment and consumable materials. **(See Appendix C, Hazardous Materials Onboard Aircraft)**

A. Shipping / Transporting of COMAT

All COMAT shall be evaluated and identified by its hazardous or non-hazardous classification. All necessary measures to ensure that the HM COMAT is transported in full compliance of the Hazardous Material Regulations (HMRs) shall be taken. The offering of HM COMAT is a shipper function under the HMRs. Shipper's responsibilities include classifying, documenting, declaring, marking, labeling, and packaging a HM shipment. These responsibilities apply to all HM COMAT shipments for any mode of transportation. Anyone who accepts or carries its own HM COMAT is considered a transporter under the HMRs. The offering and acceptance functions should be accomplished by separate employees. Employees, agents, and contractors who prepare and/or offer HM shipments for transportation must receive additional function-specific training to satisfy all of the requirements for shippers under 49 CFR Part 172, Subpart H.

B. HM COMAT Exceptions (49 CFR 175.8)

There are three exceptions to the transport of HM COMAT.

- When an operator transports its own replacement items (spares, COMAT), they can utilize packagings specifically designed for the transport of the aircraft spares and supplies provided that such packagings have at least an equivalent level of protection as required by the HMRs.
- When an operator transports its own replacement items (spares, COMAT), aircraft batteries are not subject to the quantity limitations such as those in 49 CFR 172.101 and 175.8(a)(3).
- Tires that are inflated to a pressure not greater than their rated inflation pressure, are not subject to the requirements of the HMRs. (See 49 CFR 172.307)

All COMAT received from Repair Stations and Parts Suppliers shall be scrutinized to determine if the material is HM before introducing it into the transportation system.

III. LOADING / STOWAGE / HANDLING PROCEDURES

No employee, agent, or contract employee, unless trained in this function, may load or transport aboard an aircraft any HM unless the shipment has met acceptance and packaging requirements, and the Pilot-In-Command notification has been completed (See 49 CFR 175.30 and 175.33).

A. Storage Incidental to Transport/Movement

Title 49 CFR Part 171.1 contains information designed to clarify and define the applicability of the HMRs regarding persons and functions. Included in this section under Transportation Functions (171.1(c)(4)), is further information on the Storage Incidental to Transport/Movement. It defines the term and clarifies that Storage Incidental to Transport/Movement does not include storage of a HM once it has arrived at its final destination as shown on the transport document.

B. Stowage and Segregation

For stowage on an aircraft, in a cargo facility, or at any other area at an airport designated for the stowage of HM, packages containing HM which might react dangerously with one another may not be placed next to each other or in a position that would allow a dangerous interaction in the event of leakage. At a minimum, the segregation instructions prescribed in the Segregation Table below **must** be followed to maintain acceptable segregation between packages containing HM with different hazards. The Segregation Table instructions apply whether or not the class or division is the primary or subsidiary risk. (See 49 CFR 175.78)

Segregation Table

Hazard Label	Class or Division							
	1	2	3	4.2	4.3	5.1	5.2	8
1	Note 1	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2	Note 2
2	Note 2	----	----	----	----	----	----	----
3	Note 2	----	----	----	----	X	----	----
4.2	Note 2	----	----	----	----	X	----	----
4.3	Note 2	----	----	----	----	----	----	X
5.1	Note 2	----	X	X	----	----	----	----
5.2	Note 2	----	----	----	----	----	----	----
8	Note 2	----	----	----	X	----	----	----

Section 175.78(c) Instructions for using the Segregation Table are as follows:

(1) The dashes at the intersection of a row and column indicate that no restrictions apply.
(2) The letter "X" at the intersection of a row and column indicates that packages containing these classes of hazardous materials may not be stowed next to or in contact with each other, or in a position which would allow interaction in the event of leakage of the contents.
(3) Note 1. "Note 1" at the intersection of a row and column means the following:
  (i) For explosives in compatibility groups A through K and N –
    (A) Packages bearing the same compatibility group letter and the same division number may be stowed together.
    (B) Explosives of the same compatibility group, but different divisions may be stowed together provided the whole shipment is treated as belonging to the division having the smaller number. However, when explosives of Division 1.5 Compatibility Group D, are stowed together with explosives of Division 1.2 Compatibility Group D, the whole shipment must be treated as Division 1.1, Compatibility Group D.
    (C) Packages bearing different compatibility group letters may not be stowed together whether or not they belong to the same division, except as provided in paragraphs (c)(3)(ii) and (iii) of this section.
  (ii) Explosives in Compatibility Group L may not be stowed with explosives in other compatibility groups. They may only be stowed with the same type of explosives in Compatibility Group L.
  (iii) Explosives of Division 1.4, Compatibility Group S, may be stowed with explosives of all compatibility groups except for Compatibility Groups A and L.

(iv) Other than explosives of Division 1.4, Compatibility Group S (see paragraph (c)(3)(iii) of this section), and Compatibility Groups C, D and E that may be stowed together, explosives that do not belong in the same compatibility group may not be stowed together.

(A) Any combination of substances in Compatibility Groups C and D must be assigned to the most appropriate compatibility group shown in Sec. 172.101 Table of this subchapter.

(B) Explosives in Compatibility Group N may be stowed together with explosives in Compatibility Groups C, D or E when the combination is assigned Compatibility Group D.

(4) Note 2. "Note 2" at the intersection of a row and column means that other than explosives of Division 1.4, Compatibility Group S, explosives may not be stowed together with that class.

(5) Packages containing hazardous materials with multiple hazards in the class or divisions, which require segregation in accordance with the Segregation Table need not be segregated from other packages bearing the same UN number.

(6) A package labeled "BLASTING AGENT" may not be stowed next to or in a position that will allow contact with a package of special fireworks or railway torpedoes.

Poisons: Packages bearing the poison/toxic or infectious substance label may not be stowed in a ground facility or transported in the same compartment of an aircraft with material known to be foodstuffs, feed, or any other edible material intended for consumption by humans or animals unless loaded in separate ULD's which are not adjacent to each other.

Radioactive Materials (RAM): While in transport or storage, no more than 50.0 Transport Index (TI) of RAM may be stored in any one group of packages. Any group of packages containing 50.0 TI must be separated from any other package or group of packages containing RAM by a distance of 20 feet. No package or group of packages may be placed in a position that is closer to that position which may be continuously occupied by people or animals or to undeveloped film than the distances allowed in 49 CFR Parts 175.701, 175.702, and 175.706.

C: Pre-Board Inspection

General Inspection - No employee, agent, or contract employee shall load any package, outside container, or overpack containing HM aboard an aircraft, into a freight container, or onto a pallet prior to loading it aboard an aircraft unless immediately before doing so that person has inspected the exterior of the package, outside container, or overpack and determined that it has no holes, leakage, or other obvious indications that its integrity has been compromised. The pre-board inspection is not required for shipments of dry ice (CO_2 solid), magnetized materials, or freight containers of ORM-D-AIR materials packaged by, and offered by, a single shipper. (See 49 CFR 175.30)

Unit Load Devices (ULDs) containing HM must be inspected for damage or leakage prior to being loaded on the aircraft. (See 49 CFR 175.88) Packages, overpacks, or ULDs containing HM must be inspected after being unloaded from the aircraft. Any evidence of leakage or damage requires further inspection of the aircraft and the ULD (if applicable) where the HM was stowed. (See 49 CFR 175.90)

Radioactive Materials (RAM)

Radioactive Contamination - Aircraft used routinely for the transport of Class 7 (radioactive) materials shall be periodically checked for radioactive contamination. If the level of contamination exceeds 0.5 millirem per hour the aircraft must be taken out of service and may not again be placed in service or routinely occupied until the radiation dose rate at any accessible surface is less than 0.5 millirem per hour and there is no significant removable radioactive surface contamination. (49 CFR 175.705)

Separation Distances for Animals - The separation distance between the surfaces of all Radioactive Yellow II and Yellow-III packages, overpacks, or freight containers must be separated from live animals by a distance of at least 0.5 meters (20 inches) for journeys not exceeding 24 hours and at least 1.0 meters (39 inches) for journeys longer than 24 hours. (49 CFR 175.701-702)

Passenger Aircraft - In addition to any other requirement, packages requiring a radioactive Yellow II or III label must meet the following loading requirements:

1) The RAM must be intended for use in, or incident to, research or medical diagnosis or treatment as indicated by the shipper's certification required by 49 CFR 172.204(c)(4).

2) No single package carried by a passenger carrying aircraft may exceed a transport index (TI) of 3.0. The combined TI and combined critical index of all the packages on the aircraft may not exceed 50.

3) Each package must be loaded and carried on the aircraft in accordance with the separation distance or approved pre-designated area system specified in 49 CFR 175.701 and be secured so as to prevent any movement in flight which would damage or change the orientation of the package.

Cargo-Only Aircraft - In addition to any other requirement, packages requiring a radioactive Yellow II or III label must meet the following loading requirements:

1) No single package carried on a cargo-only aircraft may exceed a TI of 10.0. The combined TI of all the packages on the aircraft may not exceed 200. The combined critical index of all the packages on the aircraft may not exceed 50 on non-exclusive use cargo aircraft, or 100 on exclusive use cargo aircraft of fissile material (additional instructions must be developed by both shipper and carrier)

2) The total TI of all of the packages loaded on the aircraft does not exceed 200.00 and each package is loaded and carried on the aircraft in accordance with the separation distance of 49 CFR 175.702 and be secured so as to prevent any movement in flight which would damage or change the orientation of the package.

3) The TI for any group of packages cannot exceed 50.0 and each group must be separated by at least 20 feet from any other as measured from the outer surface of each group. For purposes of this paragraph, the term "group of packages" means packages that are separated from each other in aircraft by a distance of 20 feet or less.

Quantity and Loading Table

PASSENGER AIRCRAFT
Packages Authorized for Transport Onboard a Passenger Aircraft

In an accessible cargo compartment		
If packages are accessible	If packages are inaccessible	If packages are in a freight container
No limit.....	25 kg per compartment plus an additional 75 kg of Division 2.2 material	25 kg per container plus an additional 75 kg of Division 2.2 material

In an inaccessible cargo compartment	
If packages are not in a freight container	If packages are in a freight container
25 kg per compartment plus an additional 75 kg of Division 2.2 material	25 kg per compartment plus an additional 75 kg of Division 2.2 material

CARGO ONLY AIRCRAFT
Packages Authorized for Transport Onboard a Passenger Aircraft

In an accessible cargo compartment		
If packages are accessible	If packages are inaccessible	If packages are in a freight container
No limit.....	25 kg per compartment plus an additional 75 kg of Division 2.2 material	25 kg per container plus an additional 75 kg of Division 2.2 material

In an inaccessible cargo compartment	
If packages are not in a freight container	If packages are in a freight container
25 kg per compartment plus an additional 75 kg of Division 2.2 material	25 kg per compartment plus an additional 75 kg of Division 2.2 material

Packages Only Authorized for Transport Aboard a Cargo Aircraft

In an accessible cargo compartment			
If packages are accessible	If packages are inaccessible	If packages are in a freight container and are accessible	If packages are in a freight container and are inaccessible
No limit.....	Forbidden..... Except the following materials are not subject to this restriction: a. Class 3, PG III (unless the hazardous material meets the definition of another hazard class) b. Class 6, (unless also labeled as a flammable liquid) c. Class 7, (unless the hazardous material meets the definition of another hazard class)	No limit.....	Forbidden..... Except the following materials are not subject to this restriction: a. Class 3, PG III (unless the hazardous material meets the definition of another hazard class) b. Class 6, (unless also labeled as a flammable liquid) c. Class 7, (unless the hazardous material meets the definition of another hazard class)

In an inaccessible cargo compartment	
If packages are not in a freight container	If packages are in a freight container
Forbidden..... Except the following materials are not subject to this restriction: a. Class 3, PG III (unless the hazardous material meets the definition of another hazard class) b. Class 6, (unless also labeled as a flammable liquid) c. Class 7, (unless the hazardous material meets the definition of another hazard class)	Forbidden..... Except the following materials are not subject to this restriction: a. Class 3, PG III (unless the hazardous material meets the definition of another hazard class) b. Class 6, (unless also labeled as a flammable liquid) c. Class 7, (unless the hazardous material meets the definition of another hazard class)

Note: No limitations apply to Class 9 or ORM-D-AIR aboard an aircraft.
(See 49 CFR 175.75)

Orientation and Securing of HM Packages - A package containing HM marked or labeled to indicate proper orientation will be loaded and secured in accordance with such markings or labels. Liquid HM without such markings will be loaded and secured with closures up. HM packages will be secured to prevent any movement in flight that would result in damage to or change in orientation of the packages. (See 49 CFR 175.88)

HM Location and Quantity Limitations Aboard Aircraft
No HM package may be carried in the cabin of a passenger-carrying aircraft or on the flight deck of any aircraft. HM may be carried in a main deck cargo compartment of a passenger aircraft provided that the compartment is inaccessible to passengers and that it meets all certification requirements for a Class B aircraft cargo compartment in 14 CFR 25.857(b) or for a Class C aircraft cargo compartment in 14 CFR 25.857(c).

Cargo-Only Aircraft (CAO) Packages
Each CAO package must be loaded in such a manner that a crew member or other authorized person can see, handle, and when size and weight permit, separate such packages from other cargo during flight. See 49 CFR 175.75(e) for exceptions to this requirement.

D: Emergency Response Information

A HM shipment shall not be accepted without emergency response information immediately available. Emergency response information means information that can be used in the mitigation of an incident involving HM. This information may come in the form of a North American Emergency Response Guidebook (ERG), Material Safety Data Sheet (MSDS), the ICAO "Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods" (ICAO Redbook), or equivalent information as provided by the shipper. Emergency response information must be immediately available where the HM is received, stored, or handled during transportation. Emergency response information must also be immediately available onboard the aircraft while HM is being transported. (See 49 CFR 172.600(c) for Exceptions)

An emergency response telephone number shall be provided on the shipping document offered with HM packages. See 49 CFR 172.604(c) for additional information on when an emergency response telephone number is not required. The ERG can be ordered or downloaded at: **http://hazmat.dot.gov/pubs/erg/gydebook.htm**.

IV. PILOT-IN-COMMAND NOTIFICATION

The Pilot-In-Command (PIC) must be given accurate and legibly written information as early as practicable before departure regarding the HM proper shipping name, hazard class, identification number, packing group, total packages, and net quantity or gross weight for each HM, location aboard the aircraft, confirmation that no damage or leaking packages have been loaded. For RAM, the number of packages, overpacks, or ULD's/freight containers, category, transport index (if applicable), and their location aboard the aircraft are required. (See 49 CFR 175.33)

The date of the flight must be listed and the telephone number of a person not aboard the aircraft from whom the information contained in the notification of the PIC can be obtained must be

included on the notification unless the number is in a location in the cockpit that is available and known to the flight crew. (See 49 CFR 175.33(a)(7-8))

A copy of each notification of pilot-in-command must be retained at the airport of departure or the operator's principal place of business for 90 days. This information must be readily accessible at the airport of departure and the intended airport of arrival for the duration of the flight leg and make this information immediately available to any representative of a Federal, State or local government agency who is responding to an incident involving the flight. (See 49 CFR 175.33(c))

If the PIC loads the aircraft, that individual must perform the pre-board inspection required. If someone other than the PIC loads the aircraft and conducts the pre-board inspection, that person shall provide the PIC with written notification. A copy of the PIC notification must be readily available to the PIC during flight. Emergency response information concerning HM on board must be available to the PIC. (See 49 CFR 172.602 (c)(1))

V. SPECIAL FLIGHTS / SPECIAL PERMITS (EXEMPTIONS)

Specific requirements for the transport of flammable liquid fuel when other means of transportation are impracticable, on small passenger-carrying aircraft operating within the State of Alaska or into a remote area, in other than scheduled passenger operations, and on a cargo aircraft, is authorized only when the provisions of 49 CFR 175.310 are met. Operations covered by 175.310 require additional conditions and limitations to be accepted by our FAA POI with coordination from the FAA Hazardous Materials Office (49 CFR 175.310(e)).

Flights made under the provisions of a DOT Special Permit (Exemption) or approval must comply with the conditions specified in the Special Permit or approval.

Any approved Special Permit or approval shall be retained as an Appendix to this manual.

Information regarding the exception for aerial dispensing or expending of HM may be obtained from the FAA POI with coordination from the FAA Hazardous Materials Office. (See 49 CFR 175.9)

VI. HM EXCEPTIONS FOR PASSENGER AND CREW MEMBERS

Certain materials that are normally regulated as HM are excepted from the HMR. A summary of commonly utilized exceptions of this regulation are provided in this section. All available exceptions are listed in 175.10 to include matches/lighters, implanted medical devices and radiopharmaceuticals, alcoholic beverages, butane powered curling irons, small thermometers, small arms ammunition, dry ice, self inflating life jacket, compressed gas for medical limbs, and electrically powered heat producing articles. A current copy of Title 49 CFR Part 175 or a printout of the applicable sections from the internet will be maintained for reference.

http://ecfr.gpoaccess.gov or http://hazmat.dot.gov

A. HM Carried by Passenger or Crew Members

Personal use items carried by passenger or crew members are allowed under the following conditions:

1) Non-radioactive medicinal or toiletry articles (including aerosols) may be carried in checked or carry-on baggage.
2) Any Division 2.2 aerosol with no subsidiary risk and a protective cap (checked baggage only).
3) The aggregate quantity of all HM items carried by each person allowed in 1-2 above may not exceed 70 oz. (2 kg) by mass or 68 fl. oz. (2 L) by volume. Each individual container cannot exceed 18 oz. (0.5 kg) by mass or 17 fl. oz. (500 ml) by volume.
4) One self-defense spray not exceeding 4 fl. oz. that incorporates a positive means to prevent accidental discharge (checked baggage only).

B. Acceptance of Wheelchair / Mobility Aids

Battery-powered wheelchairs/mobility aids can be accepted as baggage. Wheelchairs/mobility aids will **NOT** be transported if it exhibits evidence of previous leakage or damage. Wheelchair batteries are either "spillable" or "non-spillable".

1) Non-Spillable Batteries in a Wheelchair / Mobility Aid
Non-Spillable batteries may be accepted for transport with the battery attached when properly prepared for shipment.

- The battery must be disconnected and terminal and end cables are insulated to prevent short circuits.
- The battery must be securely attached to the wheelchair/mobility aid.
- A visual inspection must not reveal any obvious defects.
- Batteries manufactured after September 30, 1995, must be marked on the outside of the battery case, "NON-SPILLABLE" or "NON-SPILLABLE BATTERY."

If the wheelchair/mobility aid cannot be loaded/stowed in an upright position, it is advisable that the battery be removed and terminals are insulated to prevent short circuits.

2) Spillable Batteries in a Wheelchair / Mobility Aid
Spillable batteries may be accepted for transport with the battery attached when properly prepared for shipment.

- The battery must be disconnected and terminal and end cables are insulated to prevent short circuits.
- The battery must be securely attached to the wheelchair/mobility aid.
- A visual inspection must not reveal any obvious defects.
- The wheelchair/mobility aid must be loaded, stowed, secured, and unloaded in an upright position (If this cannot be accomplished the battery must be removed).
- The Pilot-in-Command must be advised either orally or in writing prior to departure as to the location of the spillable battery aboard the aircraft.

3) **Battery Removal**
If a battery is removed from the wheelchair/mobility aid, the removal **must** be performed by qualified airline personnel only. The battery must be transported in strong, rigid packaging under the following conditions:
- The packaging must be leak-tight and impervious to battery fluid. An inner liner may be used to satisfy this requirement if there is absorbent material placed inside of the liner and the liner has a leakproof closure;
- The battery must be protected against short circuits, secured upright in the packaging, and be packaged with enough compatible absorbent material to completely absorb liquid contents in the event or rupture of the battery; and
- The packaging must be labeled with a CORROSIVE label, marked to indicate proper orientation, and marked with the words "Battery, wet, with wheelchair;"

C. Lithium Batteries

Personal use consumer electronic and medical devices (watches, calculators, cameras, cellular phones, lap-top computers, camcorders, hearing aids, etc.) containing lithium cells or batteries, and spare lithium batteries and cells for these devices, are allowed in checked or carry-on baggage. Each installed or spare lithium battery must confirm to the following:

- The lithium content of the anode of each cell, when fully charged, is not be more than 5g; and
- The aggregate lithium content of the anodes of each battery, when fully charged, is not more than 25g.

VII. REPAIR STATION NOTIFICATION

Each repair station regulated under 49 CFR Parts 171-180 performing work for or on our behalf must be notified in writing of our policies and operation specifications pertaining to its "Will Carry" HM status in accordance with 49 CFR 121.1005(e) or 135.505(e). It is acceptable to notify all repair stations our HM policies and operation specifications.

Each repair station must acknowledge receipt of the above notification. A record of the acknowledgement receipt should be kept together with the notification. **(See Appendix E, Repair Station Notification)**

VIII. NOTIFICATION OF HM INCIDENTS, DISCREPANCIES AND REQUIRED REPORTS

A. Reporting of Incidents (See 49 CFR 171.15)

1) A HM incident shall be reported, as soon as practical but no later than 12 hours after the occurrence the incident, by telephone to the National Response Center (NRC) at 800-424-8802 (toll free) or 202-267-2675 or electronically at http://hazmat.dot.gov/spills.htm. Notice involving an infectious substance may be given to the Director, Centers for Disease Control and Prevention at 800-232-0124 (toll free) in place of the notice to the NRC. This includes incidents that occur during the course of transportation (including loading, unloading, or temporary storage) in which:

a) A person is killed; or
b) A person receives injuries requiring hospitalization; or
c) An evacuation of the general public occurs lasting one or more hours; or
d) One or more major transportation arteries or facilities are closed or shut down for one hour or more; or
e) The operational flight pattern or routine of an aircraft is altered; or
f) Fire, breakage, spillage, or suspected radioactive contamination occurs involving shipment of RAM; or
g) Fire, breakage, spillage, or suspected contamination occurs involving shipment of infectious substances (etiologic agents); or
h) A situation exists of such a nature (e.g., a continuing danger to life exists at the scene of the incident that, in the judgment of the carrier, it should be reported to the NRC even though it does not meet the criteria of paragraph 1)(a) thru (g) of this section.

2) Radioactive Materials (RAM) - In addition to the notification to the NRC, a notification must be made at the earliest practicable moment to the shipper of the RAM involved in the incident.

3) Filing an Incident Report (See 49 CFR 171.16) A report shall be submitted on DOT Form F 5800.1 (01-2004), within 30 days of the date of discovery, for each incident that occurs during the course of transportation (including loading, unloading, or storage, incidental thereto) in which any of the circumstances set forth in 49 CFR 171.15(b) occurs, there has been an unintentional release of hazardous materials from a package or quantity of hazardous waste has been discharged during transportation, or undeclared hazardous materials are found in cargo or baggage.
***Exception**: Undeclared hazardous materials discovered in baggage during the airport screening process are not subject to filing a DOT F5800.1. Such items in baggage must be reported as a discrepancy per 49 CFR 175.31. (See Section VIII.B)*

A copy of DOT Form F 5800.1 (01-2004) will be forwarded to:

a) Information Systems Manager, PHH-63
Pipeline and Hazardous Materials Safety Administration
Department of Transportation
Washington, DC 20590-0001, and

b) The nearest FAA Security Office in the region of discovery.

Instructions for completing DOT Form F 5800.1 (01-2004) are included in **Appendix D.**

B. <u>Reporting of Discrepancies</u> (See 49 CFR 175.31)

1) In the event of a discrepancy relative to the shipment of hazardous material following its acceptance for transportation aboard an aircraft, notification to the nearest FAA Security Office, by telephone or electronically, shall be made as soon as practicable, and shall provide the following information:

   a. Name and Telephone number of the person reporting the discrepancy.
   b. Name of the aircraft operator.
   c. Specific location of the shipment concerned.
   d. Name of the shipper.
   e. Nature of discrepancy.
   f. Address of the shipper or person responsible for the discrepancy, if known

2) Packages or baggage which are found to contain hazardous materials subsequent to their being offered and accepted as other than hazardous materials (undeclared) must be reported.

3) Discrepancies involving hazardous materials which are improperly described, certified, labeled, marked, or packaged, in a manner not ascertainable when accepted under 175.30(a), must be reported.

EMERGENCY RESPONSE CONTACT LISTS

National Incident Response Contacts

CONTACT	PHONE NUMBER
[redacted]	

PART TWO

HAZARDOUS MATERIALS TRAINING PROGRAM

I. REQUIREMENTS

No crewmember or person shall perform or directly supervise any hazardous material (HM) job function to include acceptance, rejection, handling, storage incidental to transport, packaging of company material (COMAT), or loading of cargo and baggage, unless that person has satisfactorily completed our FAA-approved initial or recurrent hazardous materials program within the past 24 months.

A record of the satisfactory completion of the initial and recurrent hazmat training for each individual within the preceding 3 years shall be maintained. These records will be available at the location where the personnel perform such duties, and will be maintained for as long as the employee is performing HM duties, and for 90 days thereafter. Training records for all direct employees, independent contractors, subcontractors, and any other person who performs or directly supervises a HM function must be available upon request. Records may be maintained electronically and provided on location electronically.

The content of the HM Training Records must include:

1. The individuals name,
2. The most recent training completion date,
3. A description, copy or reference to training materials used to meet the training requirement,
4. The name and address of the organization providing the training, and
5. A copy of the certification issued when the individual was trained, which shows that a test has been completed satisfactorily.

If a person is utilized under an exception (new hire or new job function) in 14 CFR 121.1005(b) or 135.505(b), a record must be maintained in accordance with 14 CFR 121.1007(d) or 14 CFR 135.507(d). Exceptions for persons who work for more than one certificate holder are specified in 14 CFR 121.1005(c) or 135.505(c). An exception for operating at foreign locations is specified in 14 CFR 121.1005(f) or 135.505(f).

II. TRAINING CURRICULUM & REFERENCE TABLE

All materials and regulations used in our training curriculum must be current and valid at the time of the training. Part 121 and 135 hazardous material training requirements can be found online at: **http://ecfr.gpoaccess.gov**

Our training program will satisfy the requirements in the Training Reference Table and 49 CFR Parts 171 through 180. The training required is based on the functions being performed. Each trained person will be able to recognize items that contain or may contain regulated hazardous materials. A method to answer all questions prior to testing regardless of the method of instruction will be provided. We will certify that each trainee has been satisfactorily tested and verify understanding of the HM regulations and our policies.

TRAINING REFERENCE TABLE

Table 1. Operators That Transport Hazardous Material - Will-Carry Certificate Holders						
Aspects of transport of hazardous materials by air with which they must be familiar, as a minimum (See Note 1)	Shippers (See Note 2)	Operators and ground-handling agent's staff accepting hazardous materials (See note 3)	Operators and ground-handling agents staff responsible for the handling, storage, and loading of cargo and baggage	Passenger-handling staff	Flight crew members and load planners	Crew members (other than flight crew members)
General philosophy	x	x	x	x	x	x
Limitations	x	x	x	x	x	x
General requirements for shippers	x	x				
Classification	x	x				
List of hazardous materials	x	x			x	
General Packing requirements	x	x				
Labeling and marking	x	x	x	x	x	x
Hazardous materials transport document and other relevant documentation	x	x				
Acceptance procedures		x				
Recognition of undeclared hazardous materials	x	x	x	x	x	x
Storage and loading procedures		x	x		x	
Pilots' notification		x	x		x	
Provisions for passengers and Crew		x	x	x	x	x
Emergency procedures	x	x	x	x	x	x
Note 1 - Depending on the responsibilities of the person, the aspects of training to be covered may vary from those shown in the table.						
Note 2 - When a person offers a consignment of hazmat, including COMAT, for or on behalf of the certificate holder, then the person must be trained in the certificate holder's training program and comply with shipper responsibilities and training. If offering goods on another certificate holder's equipment, the person must be trained in compliance with the training requirements in 49 CFR. All shippers of hazmat must be trained under 49 CFR. The shipper functions in 49 CFR mirror the training aspects that must be covered for any shipper offering hazmat for transport.						
Note 3- When an operator, its subsidiary, or an agent of the operator is undertaking the responsibilities of acceptance staff, such as the passenger handling staff accepting small parcel cargo, the certificate holder, its subsidy, or the agent must be trained in the certificate holder's training program and comply with the acceptance staff training requirements.						

NOTE: The extent of training varies for each person depending on the job function they perform. The material shall be covered in such scope and depth as to provide all persons with sufficient knowledge of applicable HM regulations and procedures to safely accomplish their specific duties.

III. ASPECTS OF HAZARDOUS MATERIALS AIR TRANSPORTATION

At a minimum, our hazardous materials training programs will include the following information for each aspect of hazardous materials air transportation.

General Philosophy

- HM Training Program ~ 14 CFR Subpart Z
- Applicable Regulatory Materials
- Overview of 49 CFR Parts 100-185
- Use of ICAO Technical Instructions ~ 49 CFR 171.11
- Use of IATA Dangerous Goods Regulations
- Definitions Used in Air Transportation of Hazardous Materials ~ 49 CFR 171.8
- General Transportation Requirements ~ 49 CFR 171.2
- Transport by Aircraft ~ 49 CFR Part 175
- Training Requirements and Recordkeeping ~ 49 CFR 172.700
- Enforcement
- Hazardous Materials Security

Limitations

- Hazardous Materials Forbidden on Aircraft Under any Circumstances
- Hazardous Materials Forbidden Unless Exempted
- Hidden Hazardous Materials
- Hazardous Materials Carried by Passenger or Crew

General Requirements For Shippers

- Shippers Specific Responsibilities and Compliance to Regulations
- Identify and Recognize HM COMAT
  - Hazardous Materials Onboard Aircraft ~ Appendix C
  - Replacement Components
  - Consumable Materials
- Specific HM COMAT Exceptions ~ 49 CFR 175.8
- Facility Storage, Safe Movement and Handling Requirements for HM COMAT

Classification

- Hazardous Materials Classification ~ 49 CFR 172.101, 173.2, and 173.2(a)
- Unacceptable Hazardous Materials ~ 49 CFR 172.101, 173.21, and 175.3

List of Hazardous Materials

- Purpose and Use of the Hazardous Materials Tables ~ 49 CFR 172.101
- Proper Shipping Names ~ 49 CFR 172.101 and 172.202
- Hazard Class (Definitions) ~ 49 CFR 172.101 and 173.50 - 173.144
- UN/ID Numbers ~ 49 CFR 172.101 and 172.202
- Packing Group ~ 49 CFR 172.101 and 172.202

General Packing Requirements

- Shippers Responsibilities ~ 49 CFR 171.2(e) and 171.12
- General Packing Requirements ~ 49 CFR 173.24, 173.24(a), and 173.27
- Packing Instructions and Assignments ~ 49 CFR 172.101 and Part 173
- Small Quantity Exceptions ~ 49 CFR 173.4
- Limited Quantity Exceptions ~ 49 CFR 173.150 – 173.156

Labeling and Marking

- Markings Required on Packages Containing Hazardous Materials ~ 49 CFR Subpart D
- Labels Required on Packages Containing Hazardous Materials ~ 49 CFR Subpart E

Hazardous Materials Transport Document and Other Relevant Documentation

- Shipper's Certification Requirements for Hazardous Materials ~ 49 CFR 172.204
- Shipping Paper Requirements ~ 49 CFR 172.200 and 172.201
- Description of Hazardous Materials Required on Shipping Papers ~ 49 CFR 172.202 and 172.203
- Shipping Papers for Hazardous Materials aboard Aircraft ~ 49 CFR 175.33

Acceptance Procedures

- Acceptance and Rejection Procedures and Requirements for HM ~ 49 CFR 171.2(e), 175.3, and 175.30
- Passenger and Cargo Information Signage Requirements ~ 49 CFR 175.25 and 175.26
- Unit Load Device and Package Inspection ~ 49 CFR 175.88

Recognition of Undeclared Hazardous Materials

- Hidden Shipment Indicators ~ Appendix A
- Suspicious Cargo and Baggage Awareness
- Hazardous Materials Discrepancy/Incident Reporting ~ 49 CFR 171.15, 171.16, 175.31, and Appendix D

Storage and Loading Procedures

- Unit Load Device and Package Inspection ~ 49 CFR 175.88
- Quantity Limitations aboard Aircraft ~ 49 CFR 175.75
- Stowage Compatibility ~ 49 CFR 175.78
- Orientation of Packages ~ 49 CFR 175.88
- Securing Packages ~ 49 CFR 175.88
- Location of Packages ~ 49 CFR 175.75
- Damaged Shipments of Hazardous Materials ~ 49 CFR 175.90

Pilots' Notification

- Notification to Pilot-In-Command ~ 49 CFR 175.33
- Emergency Response Information ~ 49 CFR Subpart G

Provisions for Passenger and Crew

- Hazardous Material Exceptions ~ 49 CFR 175.10

Emergency Procedures

- Use of North American Emergency Response Guidebook (Cargo Facility / Ground Handling)
- Use of ICAO Red Book or similar reference (Onboard Aircraft)

APPENDIX A

HIDDEN SHIPMENT INDICATORS

Cargo and baggage that are offered under a general description might have hazards that are not apparent. The Hazardous Materials Table in 49 CFR Part 172 is not complete, and shippers and passengers may not be aware of this. Some of these consignments have caused incidents that could have seriously endangered the safety of the aircraft and/or its passengers.

Please be alert to these possible hazards. Items found containing a hazardous material need to be shipped in accordance with the 49 CFR/ICAO Technical Instructions.

NAME	REMARKS
Aircraft Parts/**COMAT**	May indicate the presence of chemical oxygen generators, flammable liquids/solids, corrosives, compressed gases, radioactive materials in aircraft parts and accessories, or general company materials.
Automobile Parts (car, motor, motorcycle)	May contain cellulose paints, wet batteries, shocks/struts with nitrogen, air bag inflators/air bag modules, etc.
Breathing Apparatus/SCUBA	May indicate compressed air or oxygen cylinders
Bull (or other animal) Semen	May involve use of refrigerant (e.g., Liquid Nitrogen)
Camping Equipment	May contain flammable liquids, gas, or solids
Chemicals	Often found to be hazardous
Cryogenic (Liquid)	Indicates low temperature, low pressure, or non-pressurized gas such as Argon, Helium, Neon, and Nitrogen
Cylinders	May indicate compressed gas
Dental Apparatus	May contain hazardous chemicals such as resins or solvents
Electrical Equipment	May contain magnetized materials or mercury in switch gear and electron tubes
Electrically Powered	May contain wet batteries apparatus (wheelchairs, lawn mowers, golf carts, etc.)
Frozen Fruits, Vegetables	May be packed in Dry Ice (Solid Carbon Dioxide)
Household Goods	May contain hazardous materials such as paint, aerosols, bleaching powder, etc.
Instruments	May conceal barometers, manometers, mercury switches, rectifier tubes, thermometers containing mercury
Laboratory/Testing	May contain various hazardous chemicals
Machinery Parts	May include hazardous chemicals (adhesives, paints, sealants, solvents, etc.)
Medical Supplies/Equipment (Test Kits)	May contain various hazardous chemicals
Pharmaceuticals	May contain various hazardous chemicals

Photo Supplies	May contain various hazardous chemicals
Refrigerators	May contain various hazardous chemicals
Repair Kits	May contain various hazardous materials (adhesives, solvents, cellulose paints, organic peroxides, etc.)
Samples for Testing	May contain various hazardous materials (including infectious substances)
Swimming Pool Supplies	May contain acid, chlorine
Switches in Electrical Equipment or Instrument	May contain mercury
Tear Gas Dispensers	Contains irritating material or pepper gas which is forbidden on passenger aircraft
Toys	May be made of celluloid or other flammable material
Tool Boxes	May contain Flammable gases, liquids, adhesives, Cleaners, Corrosives, Oxidizers, etc.
Vaccines	May be packed in Dry Ice (Solid Carbon Dioxide)

Note 1: Articles which do not fall within the hazardous materials definitions of 49 CFR and which, in the event of leakage, may cause serious cleanup problems or corrosion to aluminum on a long term basis, must be checked by the shipper to at least ensure that the packaging is adequate to prevent leakage during transportation. These may include brine, powered or liquid dyes, pickled foodstuffs, etc.

Note 2: Magnetized material, as defined in 49 CFR, with a gauss reading of more than 0.00525 is forbidden for air transportation and a package with a reading of 0.00525 or less is not regulated. The ICAO and IATA Regulations regulate magnetized material with a reading between 0.002 gauss and 0.00525 gauss, thus requiring a magnetized material label.

APPENDIX B

DOT CHART

Hazardous Materials Marking, Labeling & Placarding Guide

SEE ATTACHED

This DOT CHART is produced by the Pipeline and Hazardous Materials Safety Administration (PHMSA). It can be purchased individually or obtained for Free in their Outreach Training Folder labeled, "HAZARDOUS MATERIALS SAFETY PACK A."

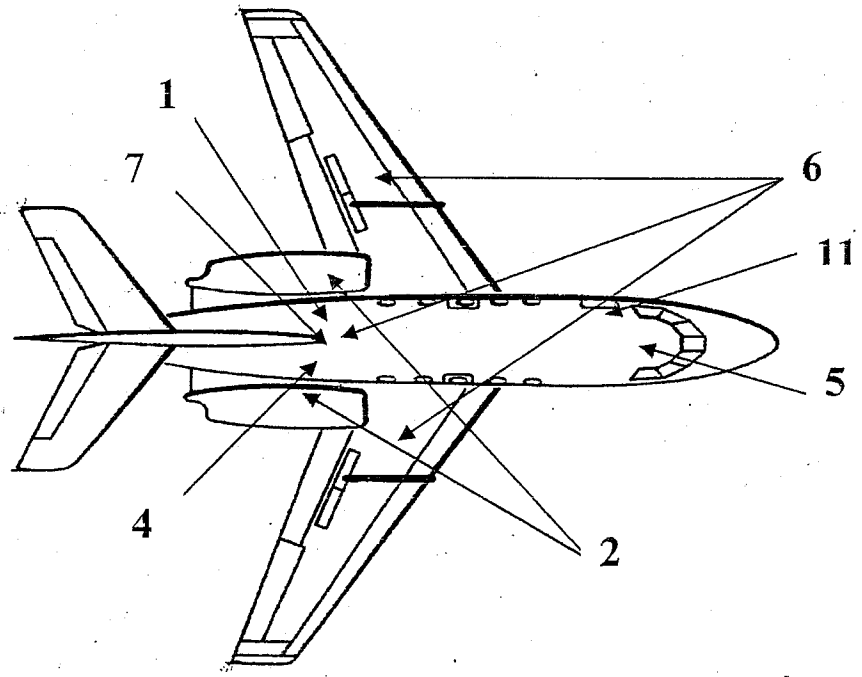
The DOT CHARTs and HAZMAT Pack A's can be ordered on-line at:

https://hazmatonline.phmsa.dot.gov/services/pub_default.aspx

APPENDIX C

Hazardous Materials Onboard Aircraft

FALCON JET 20

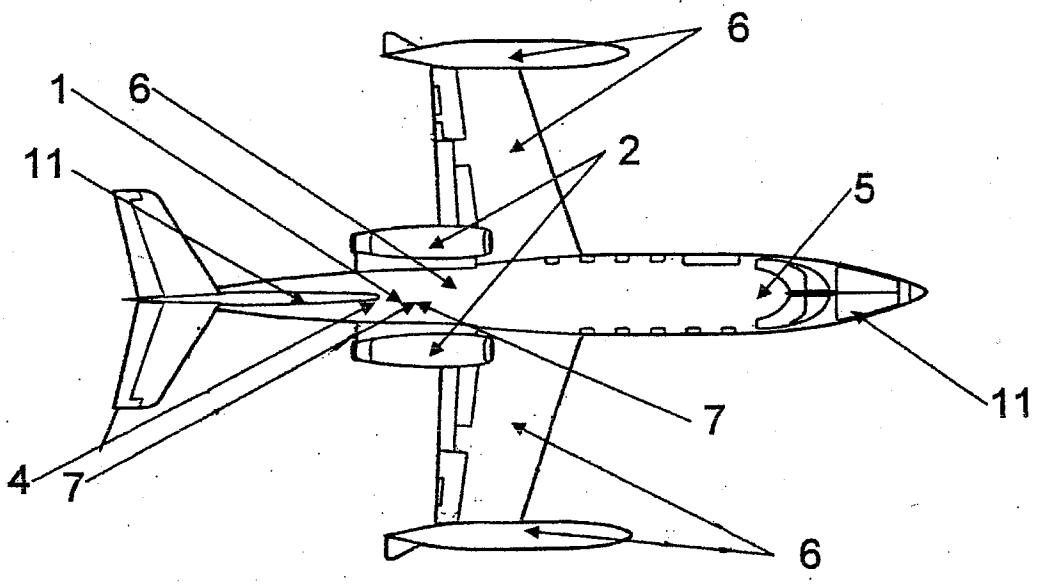


1. **Batteries, Aircraft**
2. **Engine Oil** (as hazardous waste)
3. **Escape Slides/Life Rafts**
4. **Fire Bottles** (APU, engines, lower cargo compartment, and lavatory waste containers)
5. **Fire Extinguishers** (attendant stations, closets, galleys, etc.)
6. **Fuel**
7. **Hydraulic Fluid, Reservoirs** (as hazardous waste)
8. **Uranium** (depleted, counter-balance weights)
9. **Ordnance Devices** (off-wing escape)
10. **Oxygen Bottles, Portable, Gaseous**
11. **Oxygen Bottles, Crew System, Gaseous**
12. **Oxygen Bottles, Passenger System, Gaseous** (Standard)
13. **Oxygen Generators** (optional: each PSU standard: each attendant station and lavatory)
14. **Rain Repellant**
15. **Refrigerant** (located in each galley)
16. **Smoke Hoods**
17. **Tritium Radioactive Signs** (aisle and emergency exit doors)
18.
19.
20.

APPENDIX C

Hazardous Materials Onboard Aircraft

LEAR JET 24/25

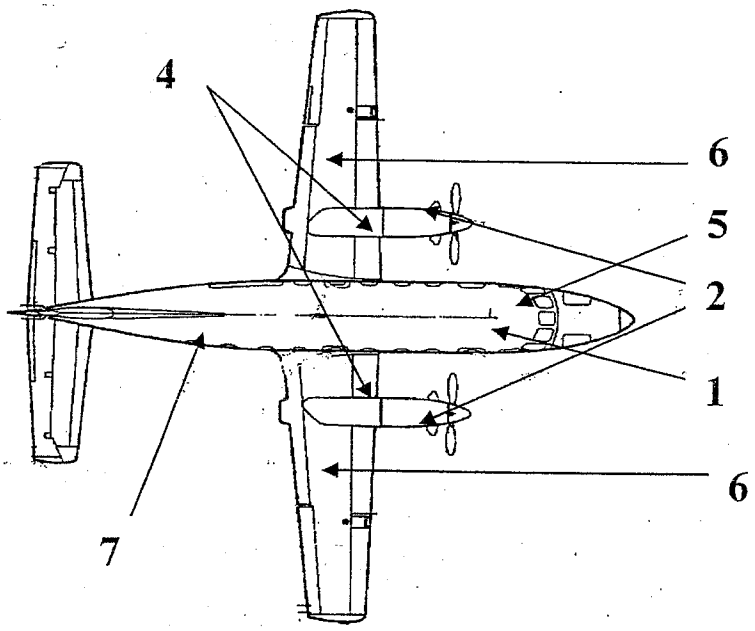


1. **Batteries, Aircraft**
2. **Engine Oil** (as hazardous waste)
3. **Escape Slides/Life Rafts**
4. **Fire Bottles** (APU, engines, lower cargo compartment, and lavatory waste containers)
5. **Fire Extinguishers** (attendant stations, closets, galleys, etc.)
6. **Fuel**
7. **Hydraulic Fluid, Reservoirs** (as hazardous waste)
8. **Uranium** (depleted, counter-balance weights)
9. **Ordnance Devices** (off-wing escape)
10. **Oxygen Bottles, Portable, Gaseous**
11. **Oxygen Bottles, Crew System, Gaseous**
12. **Oxygen Bottles, Passenger System, Gaseous** (Standard)
13. **Oxygen Generators** (optional: each PSU standard: each attendant station and lavatory)
14. **Rain Repellant**
15. **Refrigerant** (located in each galley)
16. **Smoke Hoods**
17. **Tritium Radioactive Signs** (aisle and emergency exit doors)
18.
19.
20.

APPENDIX C

Hazardous Materials Onboard Aircraft

EMB-110

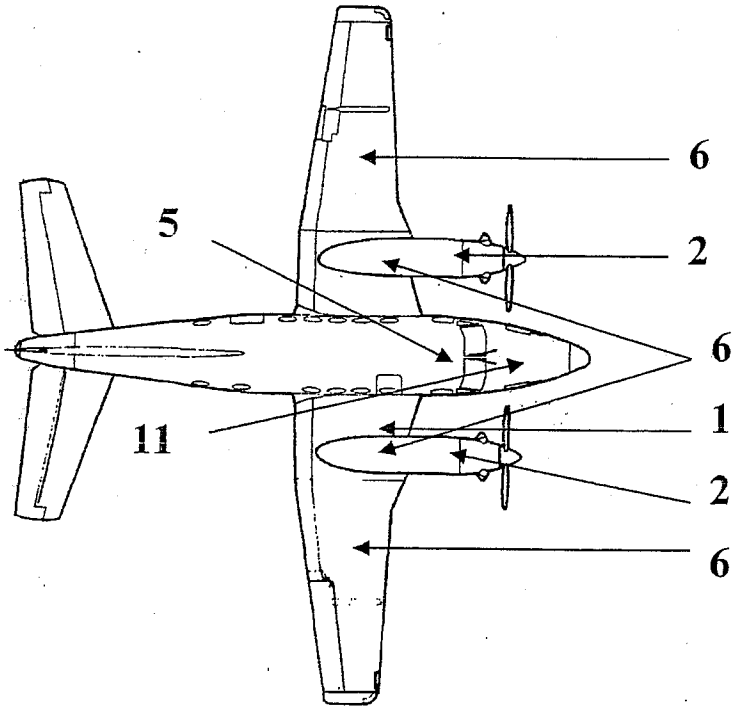


1. **Batteries, Aircraft**
2. **Engine Oil** (as hazardous waste)
3. **Escape Slides/Life Rafts**
4. **Fire Bottles** (APU, engines, lower cargo compartment, and lavatory waste containers)
5. **Fire Extinguishers** (attendant stations, closets, galleys, etc.)
6. **Fuel**
7. **Hydraulic Fluid, Reservoirs** (as hazardous waste)
8. **Uranium** (depleted, counter-balance weights)
9. **Ordnance Devices** (off-wing escape)
10. **Oxygen Bottles, Portable, Gaseous**
11. **Oxygen Bottles, Crew System, Gaseous**
12. **Oxygen Bottles, Passenger System, Gaseous** (Standard)
13. **Oxygen Generators** (optional: each PSU standard: each attendant station and lavatory)
14. **Rain Repellant**
15. **Refrigerant** (located in each galley)
16. **Smoke Hoods**
17. **Tritium Radioactive Signs** (aisle and emergency exit doors)
18.
19.
20.

APPENDIX C

Hazardous Materials Onboard Aircraft

KING AIR

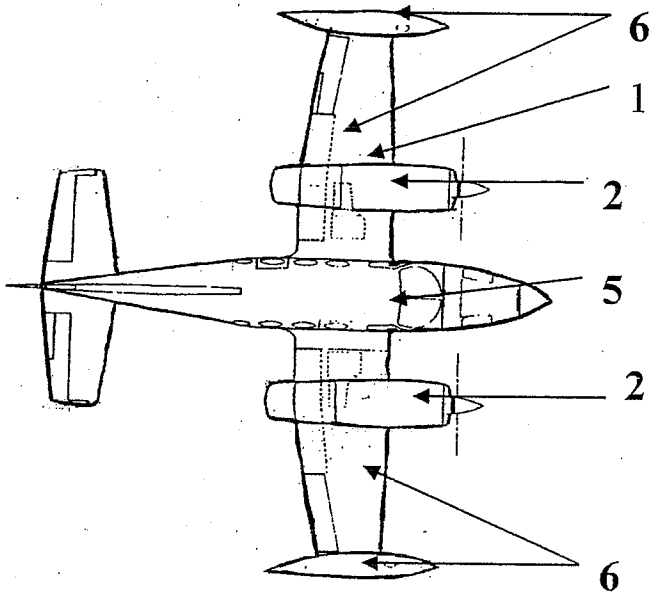


1. **Batteries, Aircraft**
2. **Engine Oil** (as hazardous waste)
3. **Escape Slides/Life Rafts**
4. **Fire Bottles** (APU, engines, lower cargo compartment, and lavatory waste containers)
5. **Fire Extinguishers** (attendant stations, closets, galleys, etc.)
6. **Fuel**
7. **Hydraulic Fluid, Reservoirs** (as hazardous waste)
8. **Uranium** (depleted, counter-balance weights)
9. **Ordnance Devices** (off-wing escape)
10. **Oxygen Bottles, Portable, Gaseous**
11. **Oxygen Bottles, Crew System, Gaseous**
12. **Oxygen Bottles, Passenger System, Gaseous** (Standard)
13. **Oxygen Generators** (optional: each PSU standard: each attendant station and lavatory)
14. **Rain Repellant**
15. **Refrigerant** (located in each galley)
16. **Smoke Hoods**
17. **Tritium Radioactive Signs** (aisle and emergency exit doors)
18.
19.
20.

APPENDIX C

Hazardous Materials Onboard Aircraft

CESSNA 310/402



1. **Batteries, Aircraft**
2. **Engine Oil** (as hazardous waste)
3. **Escape Slides/Life Rafts**
4. **Fire Bottles** (APU, engines, lower cargo compartment, and lavatory waste containers)
5. **Fire Extinguishers** (attendant stations, closets, galleys, etc.)
6. **Fuel**
7. **Hydraulic Fluid, Reservoirs** (as hazardous waste)
8. **Uranium** (depleted, counter-balance weights)
9. **Ordnance Devices** (off-wing escape)
10. **Oxygen Bottles, Portable, Gaseous**
11. **Oxygen Bottles, Crew System, Gaseous**
12. **Oxygen Bottles, Passenger System, Gaseous** (Standard)
13. **Oxygen Generators** (optional: each PSU standard: each attendant station and lavatory)
14. **Rain Repellant**
15. **Refrigerant** (located in each galley)
16. **Smoke Hoods**
17. **Tritium Radioactive Signs** (aisle and emergency exit doors)
18.
19.
20.

APPENDIX D

Hazardous Materials Incident Report: DOT Form F 5800.1 (01-2004)

Includes Guide for Preparing Hazardous Materials Incidents Reports

SEE ATTACHED

DOT Form F 5800.1 can now be reported on-line to the DOT. The form can then be printed out and faxed, mailed, or emailed to your local FAA HM Field Office meeting the requirements of air incidents in 49 CFR 171.16.

For assistance in completing the Incident Report Form 5800.1 or any questions regarding the incident reporting requirements, please call the Hazardous Materials Information Center at 800-467-4922. You may also send your question in by email (hmis@dot.gov).

http://hazmat.dot.gov/enforce/spills/spills.htm

APPENDIX E

Notification of Hazardous Material Policies and Operation Specifications

Date:

To:

From:

_____ is hereby notifying you of our policies and operation specifications concerning the transport of hazardous materials. This notification is conducted in accordance with the requirements of 14 CFR, Parts 121.1005(e) or 135.505(e). In accordance with 14 CFR 145.206(a), you are required to acknowledge receipt of this notification back to us.

_____ has an FAA approved **Will-Carry HM Program** as follows:

_____ **ROYAL AIR FREIGHT INC.** will accept and transport all properly declared and packaged hazardous materials.

_____ **ROYAL AIR FREIGHT INC.** will accept and transport properly declared and packaged hazardous materials COMAT only.

_____ **ROYAL AIR FREIGHT INC.** will accept and transport all properly declared and packaged hazardous materials with the following exceptions:

_____

_____

_____

_____

_____

APPENDIX F
Non-Radioactive

ACCEPTANCE CHECKLIST Non-Radioactive

APPENDIX F APPLIES IF THE OPERATOR ELECTS TO ACCEPT AND TRANSPORT HAZARDOUS MATERIALS USING THE INTERNATIONAL CIVIL AVIATION ORGANIZATION'S "TECHNICAL INSTRUCTIONS" IN ADDITION TO 49 CFR HAZARDOUS MATERIALS REGULATIONS

APPENDIX F

DANGEROUS GOODS CHECKLIST FOR A NON-RADIOACTIVE SHIPMENT

The recommended check list appearing on the following pages is intended to verify shipments at origin. Never accept or refuse a shipment before all items have been checked.

Is the following information correct for each entry?

SHIPPERS DECLARATION FOR DANGEROUS GOODS (DGD)

	YES	NO*	N/A
1. Two copies in English format	☐	☐	
2. Full name and address of Shipper	☐	☐	
3. Full name and address of Consignee	☐	☐	
4. Name and telephone number of a person responsible for Division 6.2 Infectious Substance shipment	☐	☐	☐
5. If the Air Waybill is not shown, enter it	☐	☐	
6. The number of pages shown	☐	☐	☐
7. If full name of Airport or City of Departure or Destination is not shown, enter it	☐	☐	
8. The non-applicable Aircraft Type deleted	☐	☐	
9. The word "Radioactive" deleted	☐	☐	

Identification

10. Proper Shipping Name and the technical name in parentheses for asterisked entries	☐	☐	
11. Class or Division, and for Class 1, the Compatibility Group	☐	☐	
12. UN or ID Number, preceded by prefix	☐	☐	
13. Packing Group	☐	☐	☐
14. Subsidiary Risk	☐	☐	☐

Quantity and Type of Packing

15. Number and Type of Packages	☐	☐	
16. Quantity and unit of measure (net or gross, as applicable) per package	☐	☐	☐
17. If different dangerous goods are packed in one outer packaging, are the following rules applied:			
- Compatible (note exception for chemical kits/first aid kits. See packing Instruction 915 and Y915)	☐	☐	☐
- For UN packages containing Division 6.2	☐	☐	☐
- "All packed in one (type of packaging)"	☐	☐	☐
- Calculation of "Q" value	☐	☐	☐

	YES	NO*	N/A
18. Overpack			
- Indication "Overpack used"	☐	☐	☐
- Compatible	☐	☐	☐
- Multi-overpack marks and quantity	☐	☐	☐

Packing Instructions

19. Packing Instruction Number	☐	☐	

Authorizations

20. Indication of "Limited Quantity" or "Ltd. Qty." if "Y" packing instruction used	☐	☐	☐
21. The Special Provision Number if A1,A2 A51, A81, or A109	☐	☐	☐
22. Indication that governmental authorization is attached, including a copy in English	☐	☐	☐
23. Additional approvals as needed	☐	☐	☐

Additional Handling Information

24. For self-reactive and related substances of Division 4.1 and organic peroxides of Division 5.2, or samples thereof, is the mandatory statement shown	☐	☐	☐
25. Shipper's certification for air transport	☐	☐	
26. Name and Title of Signatory, Place and Date indicated	☐	☐	☐
27. Signature of Shipper	☐	☐	☐
28. Amendment or alteration signed by Shipper	☐	☐	☐

Air Waybill

29. The Handling Information box shows: "Dangerous goods as per attached Shipper's Declaration" or Dangerous Goods as per attached DGD"	☐	☐	☐
30 "Cargo Aircraft Only" or "CAO", if applicable	☐	☐	☐

	YES	NO*	N/A
Package(s) and Overpacks			
31. Packaging conforms with packing instructions and is undamaged	☐	☐	
32. Same number and type of packagings and overpacks delivered as shown on DGD and is undamaged	☐	☐	☐

Markings

33. For UN Specification Packaging, are they marked			
- Symbol and Specification Code	☐	☐	☐
- X, Y, Z, agreed with Packing Group/ Packing Instruction	☐	☐	☐
- Maximum Gross Weight not exceeded (solids or inner packagings)	☐	☐	☐
- Infectious substance package marking	☐	☐	☐
34. The Proper Shipping Name(s) including technical name where required, and the UN or ID Number(s)	☐	☐	
35. The full name(s) and Address(es) of Shipper and Consignee	☐	☐	
36. The Net Quantity of Explosives and Gross Weight of the package for Class 1 items	☐	☐	☐
37. The Name and telephone Number of a person responsible for Division 6.2 Infectious Substances shipment	☐	☐	☐
38. The Special Marking requirements shown for Packing Instruction 202	☐	☐	☐
39. In the case of Carbon Dioxide, Solid (Dry Ice), the Net Weight marked on the Package	☐	☐	☐
40. For Limited Quantity packagings: "Limited Quantity" or "LTD. QTY."	☐	☐	☐
41. For Salvage Packagings: "Salvage"	☐	☐	☐

Labeling

42. The Primary Risk Label(s), with Class or Division Number affixed to each package	☐	☐	
43.. The Subsidiary Hazard Labels must show the Class or Division number	☐	☐	☐
44. Cargo Aircraft Only label, adjacent to Hazard label(s)	☐	☐	☐
45. "Orientation" labels	☐	☐	☐
46. For Magnetized Material, the Handling label	☐	☐	☐
47. "Cryogenic Liquid" labels	☐	☐	☐
48. "Keep Away From Heat" label if required	☐	☐	☐
49. All above labels correctly affixed and have all irrelevant marks and labels been removed	☐	☐	☐

For Overpacks

50. If specification markings are not visible, other authorized indication marked	☐	☐	☐
51. Packaging Use markings as required must be clearly visible or reproduced on the outside of the overpack	☐	☐	☐
52. If more than one overpack, identification marks and the total quantity of each overpack must be indicated	☐	☐	☐
53. "Cargo Aircraft Only" restrictions	☐	☐	☐

General

54. State and Operator variations complied with	☐	☐	☐
55. For "Cargo Aircraft Only" shipments, a cargo aircraft operates on all sectors	☐	☐	☐

Comments:

Checked by:

Place: Signature:

Date:

Time:

*IF ANY QUESTION IS ANSWERED WITH A "NO", DO NOT ACCEPT THE SHIPMENT AND GIVE A DUPLICATE COPY OF THIS COMPLETED FORM TO THE SHIPPER.

ACCEPTANCE CHECKLIST Radioactive

APPENDIX F APPLIES IF THE OPERATOR ELECTS TO ACCEPT AND TRANSPORT HAZARDOUS MATERIALS USING THE INTERNATIONAL CIVIL AVIATION ORGANIZATION'S "TECHNICAL INSTRUCTIONS" IN ADDITION TO 49 CFR HAZARDOUS MATERIALS REGULATIONS

APPENDIX F (cont'd)

DANGEROUS GOODS CHECKLIST FOR A RADIOACTIVE SHIPMENT

The recommended check list appearing on the following pages is intended to verify shipments at origin. Never accept or refuse a shipment before all items have been checked. **Is the following information correct for each entry?**

SHIPPERS DECLARATION FOR DANGEROUS GOODS (DGD)

	YES	NO*	N/A
1. Two copies in English format	☐	☐	
2. Full name and address of Shipper	☐	☐	
3. Full name and address of Consignee	☐	☐	
4. If the Air Waybill is not shown, enter it	☐	☐	
5. The number of pages shown	☐	☐	
6. The non-applicable Aircraft Type deleted	☐	☐	
7. If full name of Airport or City of Departure Destination is not shown, enter it	☐	☐	
8. The word "Non-Radioactive" deleted	☐	☐	

Identification

9. Proper Shipping Name	☐	☐	
10. Class 7	☐	☐	
11. UN Number, preceded by prefix	☐	☐	
12. Packing Group if required for Subsidiary Risk	☐	☐	☐
13. Subsidiary Risk	☐	☐	☐

Quantity and Type of Packing

14. Name or Symbol of Radionuclide(s)	☐	☐	
15. A description of the physical and Chemical form, or Special Form, or low dispersible material	☐	☐	☐
16. The number and type of packages and the activity in Becquerels in each package, or for Fissile Material the total weight in grams or kilograms of fissile material may be shown in place of activity	☐	☐	☐
17. For different individual radionuclides, the activity of each radionuclide and the words "All packed in one"	☐	☐	☐
18. Activity within limits for Type A packages, Type B, or Type C	☐	☐	☐
19. Words "overpack used" shown on DGD	☐	☐	☐

	YES	NO*	N/A
Packing Instructions			
20. Category of package(s) or overpack	☐	☐	☐
21. Transport Index and dimensions for Category II and Category III only	☐	☐	☐
22. For Fissile Material the Criticality Safety Index	☐	☐	☐
23. "Fissile Excepted"	☐	☐	☐
Authorizations			
24. Identification marks shown and a copy of the document in English attached to DGD for the following	☐	☐	☐
- Special Form approval certificate	☐	☐	☐
- Low dispersible material approval certificate	☐	☐	☐
- Type B package design approval certificate	☐	☐	☐
- Type B (M) package shipment approval certificate	☐	☐	☐
- Type C package design and shipment approval	☐	☐	☐
- Fissile material package design and shipment approval certificate	☐	☐	☐
- Special Arrangement shipment approval certificate	☐	☐	☐
25. Additional Handling Information	☐	☐	☐
26. Shipper's certification for air transport	☐	☐	☐
27. Name and Title of Signatory, Place, and Date	☐	☐	☐
28. Signature of Shipper	☐	☐	☐
29. Amendment or alteration signed by	☐	☐	☐
Air Waybill			
30. The Handling Information box shows: "Dangerous goods as per attached Shipper's Declaration" or " Dangerous Goods as per attached DGD	☐	☐	☐
31. Cargo Aircraft Only or CAO if applicable	☐	☐	☐

Package(s) and Overpacks

	YES	NO*	N/A
32. Number and type of packagings and overpacks delivered as shown on DGD	☐	☐	☐
33. Unbroken transportation seal and package in proper condition for transport	☐	☐	☐

Markings

34. For Industrial packages, are they marked appropriately	☐	☐	☐
35. For Type A packages are they marked appropriately	☐	☐	☐
36. For Type B packages, are they marked appropriately	☐	☐	☐
37. For Type C packages, are they marked appropriately	☐	☐	☐
38. For Fissile material, are they marked appropriately	☐	☐	☐
39. The Proper Shipping Name and UN Number	☐	☐	
40. The full Name and Address of the Shipper and Consignee	☐	☐	
41. The permissible gross weight if it exceeds 50 kg	☐	☐	☐

Labeling

42. Two correctly completed Radioactive labels on opposite sides	☐	☐	
43. Applicable Subsidiary Hazard labels adjacent to the Radioactive label completed	☐	☐	
44. Two Cargo Aircraft Only labels, if required, adjacent to the Hazards labels to the Radioactive labels completed	☐	☐	☐
45. For fissile materials, two correctly completed Criticality Safety Index (CSI) labels on opposite sides	☐	☐	☐
46. All labels correctly affixed and irrelevant marks and labels removed	☐	☐	☐

For Overpacks

47. If specification markings are not visible, other authorized indication marked	☐	☐	☐
48. Information on the Contents and Activity appears on the radioactive label (totaled) or for overpacks containing packages of different radionuclides, this information may be be replaced by the statement " See Shipper's Declaration"	☐	☐	☐
49. Packaging markings as required must be clearly visible or reproduced on the outside of the overpack	☐	☐	☐

General

50. State and Operator variations complied with	☐	☐	☐
51. For Cargo Aircraft Only shipments, a cargo aircraft operates on all sectors	☐	☐	☐
52.. For packages containing Cargo Dioxide Solid (dry ice), have the marking, labeling and documentary requirements been applied	☐	☐	☐

Comments:

Checked by:

Place: Signature:

Date:

Time:

*IF ANY QUESTION IS ANSWERED WITH A "NO", DO NOT ACCEPT THE SHIPMENT AND GIVE A DUPLICATE COPY OF THIS COMPLETED FORM TO THE SHIPPER.

Answers To Your COMAT Questions

Federal Dangerous Goods Regulations

The U.S. Department of Transportation's Hazardous Materials Regulations (49 CFR Parts 171-180) require hazardous materials to be properly classified, described, marked and labeled, packaged, handled, stowed, and secured. Employees performing these functions must be properly trained.

What Kind Of Training Is Required?

Hazmat Training Must Include:

- General awareness/familiarization
- Function-specific
- Label recognition
- Safety
- Training Records for each employee

PENALTIES

A violation of the Federal Hazardous Materials Regulations can result in **five years imprisonment and penalties of $250,000** or more (49 U.S.C. 5124).

Need Additional Information?

To obtain additional answers to your COMAT questions call FAA at:

[redacted]

or

Hazardous Materials Info-Line: [redacted]

Visit FAA's Civil Aviation Security

Dangerous Goods Program Website

http://cas.faa.gov/cas/dgp.htm

DOT's Hazardous Materials Homepage

http://hazmat.dot.gov

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VOICE:
FAX

U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration
Office of Hazardous Materials Initiatives & Training/PHH-50
400 Seventh Street, SW
Washington, DC 20590-0001

RSPA-X0131
11/00

Answers to Your COMAT Questions

What is COMAT?

COMAT is the abbreviation for Air Carrier **CO**mpany **MAT**erials.

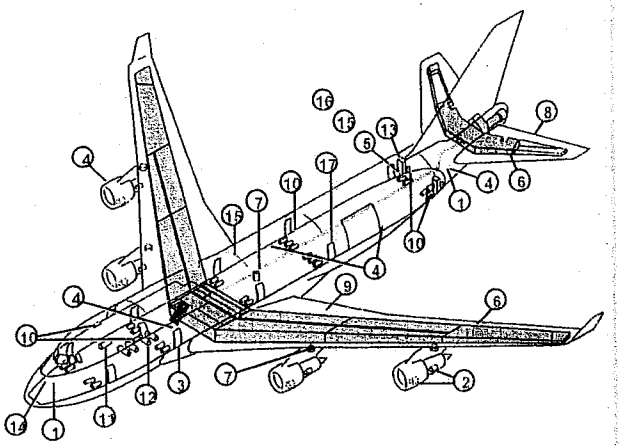
Many of these materials are regulated as hazardous materials under the DOT Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) and as dangerous goods under international regulations.

What Types of COMAT Are Regulated As Hazardous Materials?

COMAT shipped as replacement items for installed equipment, serviceable items, or items removed for servicing and repair may be regulated as hazardous materials/dangerous goods. It is the responsibility of each airline to determine whether such items are subject to the HMR/Dangerous Goods Regulations. Some typical items include oxygen bottles, life rafts, paint, and most other chemicals, fuels, chemical oxygen generators, unpurged fuel pumps, fire extinguishers, airplane batteries, under seat life vests, rain repellent, radioactive exit signs, auxiliary power units, first aid kits and emergency slides.

What Regulations Apply To The Transport Of COMAT?

Hazardous Materials/Dangerous Goods consumed or used in the aircraft industry, including expendable items of replacement, are fully regulated and subject to all applicable HMR/Dangerous Goods Regulations. The HMR requires the proper classification, description, marking, labeling, packaging, handling, stowage, and securing of such items and training of all hazmat employees.



Hazardous Materials Onboard Aircraft

1 **Batteries, Aircraft** (qty 2)

2 **Engine Oil** (waste only)

3 **Escape Slides/Life Rafts** (all entry doors/rafts optional)

4 **Fire Bottles** (APU, engines, lower cargo compartment, and lavatory waste containers)

5 **Fire Extinguishers** (attendant stations, closets, galleys, etc.)

6 **Fuel**

7 **Hydraulic Fluid, Reservoirs,** (waste only)

8 **Uranium,** (depleted, counter-balance weights)

9 **Ordnance Devices** (off-wing escape)

10 **Oxygen Bottles, Portable, Gaseous**

11 **Oxygen Bottles, Crew System, Gaseous**

12 **Oxygen Bottles, Passenger System, Gaseous** (Standard)

13 **Oxygen Generators** (optional: each PSU standard: each attendant station and lavatory)

14 **Rain Repellent**

15 **Refrigerant** (located in each galley)

16 **Smoke Hoods**

17 **Tritium Signs** (aisles and emergency exit doors)

Who May Transport COMAT?

Only an airline with an FAA approved Hazardous Material/ Dangerous Goods program may transport its own materials as COMAT. If an airline does not have an approved program, it must offer its COMAT to another carrier for transport as cargo.

Do the Regulations Provide Any Exceptions For The Transport of COMAT?

Installed equipment containing hazardous materials OR hazardous materials required aboard an airplane to meet airworthiness requirements of the FAA are excepted from the HMR. There is limited relief provided in 49 CFR 175.10(a)(2) for the transport of COMAT if it is being transported as an item of replacement. Specialized packaging may be used in place of required packaging if it provides at least an equivalent level of protection. Aircraft batteries may exceed the 25 kg quantity limit imposed on other batteries for transport aboard passenger aircraft. All other applicable hazardous materials regulations - such as, preparation of shipping papers, marking and labeling of packages, handling, stowage, securement, and training of employees - still apply.

Did You Know?

The Following Are Examples of Hazardous Materials Which **MUST** Be Declared Properly:

Cabin Fire Extinguisher
Chemical Oxygen Generator
Auxiliary Power Unit
Unpurged Fuel Control Unit
Depleted Uranium Control Balance
Crew Oxygen Cylinder
Radioactive Exit Sign
Rain Repellent
First Aid Kit
Life Raft
Aircraft Batteries
Under Seat Life Vest
Engine Fire Extinguisher and Explosive Squib
Emergency Walk Around Oxygen Cylinder
Cargo Compartment Halon Fire Extinguisher

- NTSB Reccomendations
- Hazmat Table Reinsertions
- Hazmat Regs (Title 49 CFR Parts 100-185)
- Letters of Interpretation (Clarifications)
- Current and Frequently Requested Special Permits
- Rulemakings and Notices
- PHMSA's Office of the Chief Counsel
- Contacting the Information Center
- UN Third Party Certification Agencies
- Authorized Cylinder Retesters
- Proposed Hazmat Act of 1999
- Proposed Hazmat Act of 2001
- Federal Hazmat Law
- Guidelines Re: Anthrax

NTSB Safety Aviation Recommendations

The table below is a summary of the NTSB recommendations regarding aviation and the OHMS responses. For copies of the specific letters in WordPerfect (.wpd) or PDF format containing the NTSB/OHMS dialog, click on the link under "Latest PHMSA Response" or "Notes."

- OAR - Open Acceptable Response
- OAA - Open Acceptable Action
- OAAR - Open Acceptable Alternative Action
- OUA - Open UnAcceptable Action
- OUR - Open UnAcceptable Response

NOTE: The following files are being provided as .Tif images. In order to view them, you must have a Tif viewer properly configured with your browser. Visit our help page if you have questions regarding downloading and installing Tif image viewers.

Aviation

NTSB Rec. #	Recommendation	PHMSA Action	Latest PHMSA Response	NTSB Status	Notes
A-99-80 "Lithium Batteries" original NTSB Letter 11/16/99	In cooperation with FAA, evaluate the fire hazards posed by lithium batteries in an air transportation environment and require that appropriate safety measures be taken to protect aircraft and occupants. The evaluation should consider the testing requirements for lithium batteries in the UN's *Transport of Dangerous Goods Manual of Tests and Criteria*, the involvement of packages containing large quantities of tightly packed batteries in a cargo compartment fire, and the possible exposure of batteries to rough handling in an air transportation environment, including being crushed or abraded open.	PHMSA and FAA are reviewing current testing requirements of the UN Transport of Dangerous Goods Manual of Tests and Criteria and regulatory requirement with input from industry. PHMSA published an Advisory Notice in the *Federal Register* on 09/07/00 regarding the Transportation of Lithium Batteries.	Letter to NTSB 06/10/02 FR 04/02/02 HM-224C HM: Transportation of Lithium Batteries (NPRM) Letter to NTSB 10/24/2000 FR 09/07/00 Advisory Notice; Transportation of Lithium Batteries Letter to NTSB 03/29/00	OAR	NTSB Letter 07/06/05 NTSB Letter 09/26/02 NTSB Letter 06/13/01 NTSB Letter 06/27/00
A-99-82	Require that packages containing lithium batteries	PHMSA and FAA are reviewing	Letter to NTSB 06/10/02	OAR	NTSB Letter

"Lithium Batteries" original NTSB Letter 11/16/99	be identified as hazardous materials, including appropriate marking and labeling of the packages and proper identification in shipping documents, when transported on aircraft.	current testing requirements of the UN *Transport of Dangerous Goods Manual of Tests and Criteria* and regulatory requirement with input from industry. PHMSA published an Advisory Notice in the *Federal Register* on 09/07/00 regarding the Transportation of Lithium Batteries.	FR 04/02/02 HM-224C HM: Transportation of Lithium Batteries (NPRM) Letter to NTSB 10/24/2000 FR 09/07/00 Advisory Notice; Transportation of Lithium Batteries Letter to NTSB 03/29/00		09/26/02 NTSB Letter 06/13/01 NTSB Letter 06/27/00

Index

U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration

Hazardous Materials Marking, Labeling & Placarding Guide

Refer to 49 CFR, Part 172:

Marking - Subpart D

Labeling - Subpart E

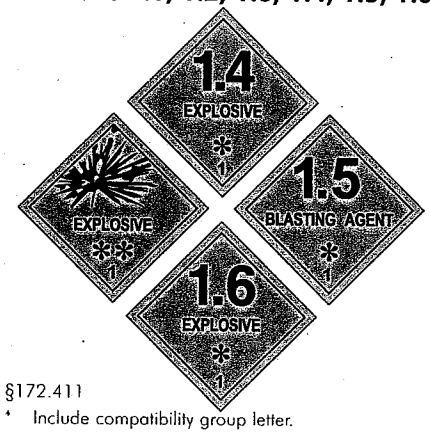
Placarding - Subpart F

Emergency Response - Subpart G

NOTE: This document is for general guidance only and may not be used for determining compliance with 49 CFR Parts 100-185.

Actual label size: 100 mm (3.9 inches) on all sides

CLASS 1 Explosives: Divisions 1.1, 1.2, 1.3, 1.4, 1.5, 1.6

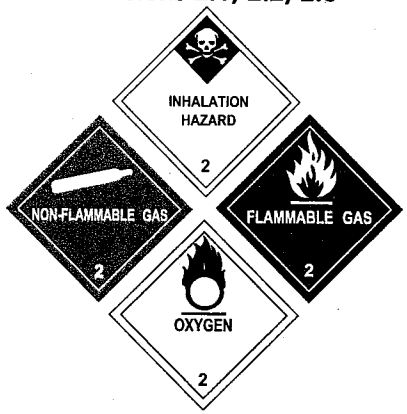


§172.411

* Include compatibility group letter.

** Include division number and compatibility group letter.

CLASS 2 Gases: Divisions 2.1, 2.2, 2.3



§172.405(b), §172.415, §172.416, §172.417

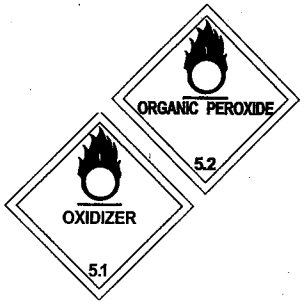
CLASS 3 Flammable Liquid

§172.419

CLASS 4 Flammable Solid, Spontaneously Combustible, and Dangerous When Wet: Divisions 4.1, 4.2, 4.3

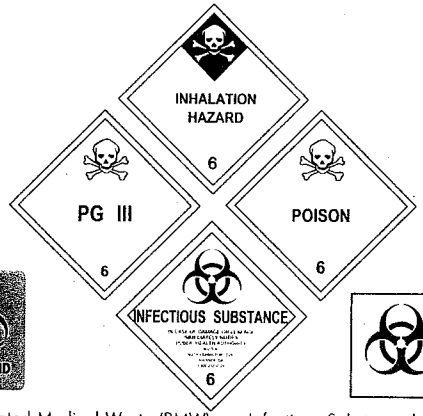
§172.420, §172.422, §172.423

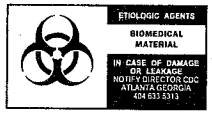
CLASS 5 Oxidizer, Organic Peroxide: Divisions 5.1 and 5.2



§172.426, §172.427

CLASS 6 Poison (Toxic), Poison Inhalation Hazard, Infectious Substance: Divisions 6.1 and 6.2

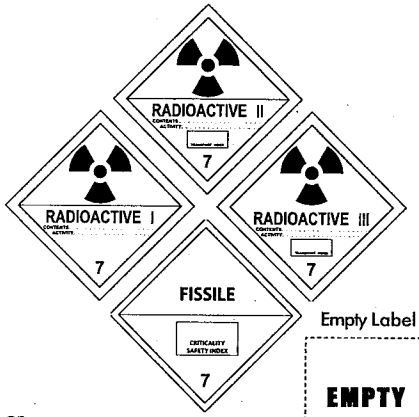




For Regulated Medical Waste (RMW), an Infectious Substance label is not required on an outer packaging, if the OSHA Biohazard marking is used as prescribed in 29 CFR 1910.1030(g). CDC Etiologic Agent label must be used as prescribed in 42 CFR 72.3 and 72.6. A bulk package of RMW must display a BIOHAZARD marking.

§172.323, §172.405(c), §172.429, §172.430, §172.432

CLASS 7 Radioactive



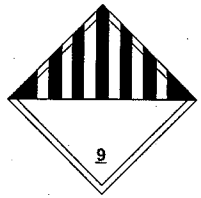
Empty Label

§172.436, §172.438, §172.440, §172.441, §172.450

CLASS 8 Corrosive

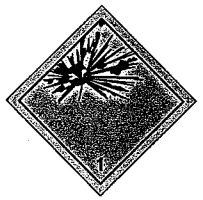
§172.442

CLASS 9 Miscellaneous Hazardous Material



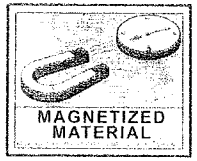
§172.446

Subsidiary Risk Label



§172.411

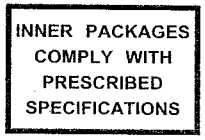
For Aircraft Only



Cargo Aircraft Only

§172.448

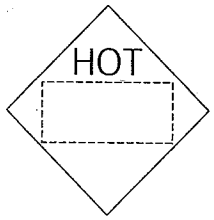
HAZARDOUS MATERIALS MARKINGS



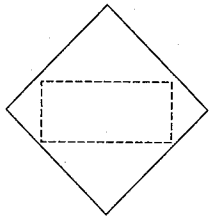
§173.25(a)(4)

§172.312(a)

§172.322



§172.325

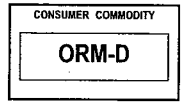


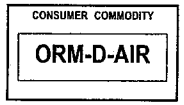
§172.332(a)

Fumigant Marking

§172.302(g) and §173.9

§172.313(a)





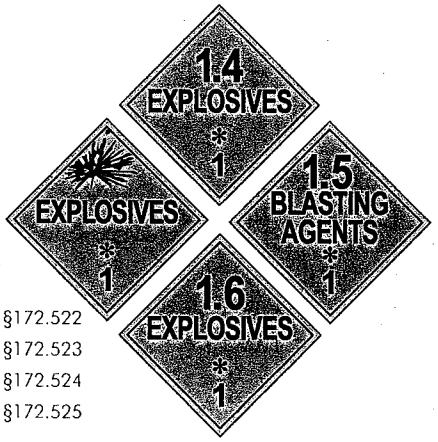
§172.

Keep a copy of the Emergen esponse Guidebook handy!

Hazardous Materials Warning Placards

Actual placard size: 273 (10.8 inches) on all sides

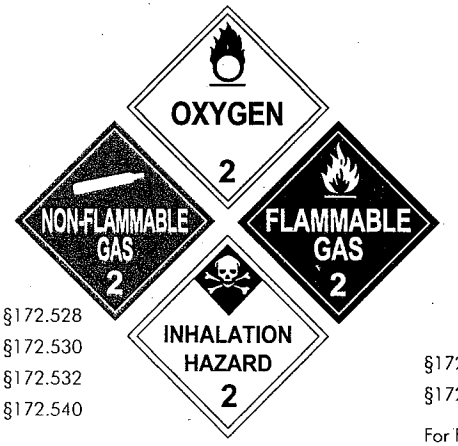
CLASS 1 Explosives



§172.522
§172.523
§172.524
§172.525

* For Divisions 1.1, 1.2, or 1.3, enter division number and compatibility group letter, when required; placard any quantity. For Divisions 1.4, 1.5, and 1.6, enter compatibility group letter, when required; placard 454 kg (1,001 lbs) or more.

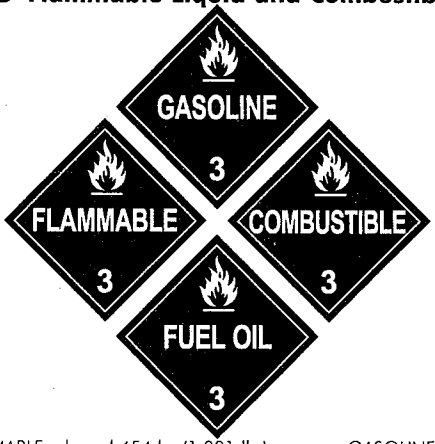
CLASS 2 Gases



§172.528
§172.530
§172.532
§172.540

For NON-FLAMMABLE GAS, OXYGEN (compressed gas or refrigerated liquid), and FLAMMABLE GAS, placard 454 kg (1,001 lbs) or more gross weight. For POISON GAS (Division 2.3), placard any quantity.

CLASS 3 Flammable Liquid and Combustible Liquid



§172.542
§172.544

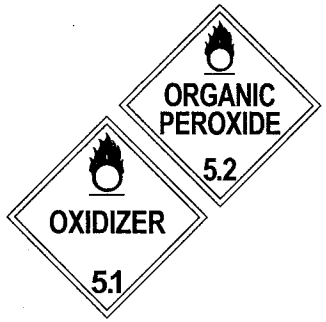
For FLAMMABLE, placard 454 kg (1,001 lbs) or more. GASOLINE may be used in place of FLAMMABLE placard displayed on a cargo tank or portable tank transporting gasoline by highway. Placard combustible liquid transported in bulk. See §172.504(f)(2) for use of FLAMMABLE placard in place of COMBUSTIBLE. FUEL OIL may be used in place of COMBUSTIBLE on a cargo or portable tank transporting fuel oil not classed as a flammable liquid by highway.

CLASS 4 Flammable Solid, Spontaneously Combustible, and Dangerous When Wet

§172.546, §172.547, §172.548

For FLAMMABLE SOLID and SPONTANEOUSLY COMBUSTIBLE, placard 454 kg (1,001 lbs) or more. For DANGEROUS WHEN WET (Division 4.3), placard any quantity.

CLASS 5 Oxidizer & Organic Peroxide



§172.550, §172.552

For OXIDIZER and ORGANIC PEROXIDE (other than TYPE B, temperature controlled), placard 454 kg (1,001 lbs) or more. For ORGANIC PEROXIDE (Division 5.2), Type B, temperature controlled, placard any quantity.

CLASS 6 Poison (Toxic) and Poison Inhalation Hazard

§172.504(f)(10), §172.554, §172.555

For POISON (PGI or PGII, other than inhalation hazard) and POISON (PGIII), placard 454 kg (1,001 lbs) or more. For POISON-INHALATION HAZARD (Division 6.1), inhalation hazard only, placard any quantity.

CLASS 7 Radioactive

§172.556

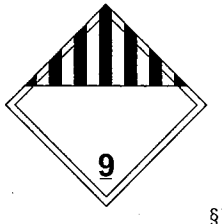
Placard any quantity - packages bearing RADIOACTIVE YELLOW-III labels only. Certain low specific activity radioactive materials in "exclusive use" will not bear the label, but the radioactive placard is required for exclusive use shipments of low specific activity material and surface contaminated objects transported in accordance with §173.427(b)(3) or (c).

CLASS 8 Corrosive

§172.558

Placard 454 kg (1,001 lbs) or more.

CLASS 9 Miscellaneous Dangerous

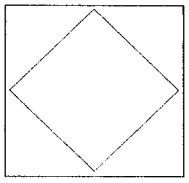


§172.560

Not required for domestic transportation. A bulk packaging containing a Class 9 material must be marked with the appropriate ID number displayed on a Class 9 placard, an orange panel, or a white square-on-point display.

§172.521

A freight container, unit load device, transport vehicle, or rail car which contains non-bulk packagings with two or more categories of hazardous materials that require different placards specified in Table 2 may be placarded with DANGEROUS placards instead of the specific placards required for each of the materials in Table 2. However, when 1,000 kg (2,205 lbs) or more of one category of material is loaded at one loading facility, the placard specified in Table 2 must be applied.



§172.527

White square background required for placard for highway route controlled quantity radioactive material and for rail shipment of certain explosives and poisons, and for flammable gas in a DOT 113 tank car (§172.507 and §172.510).

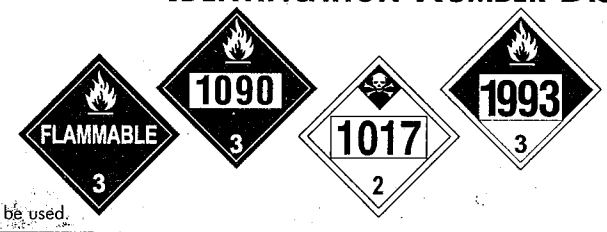
PLACARDS OR ORANGE PANELS

§172.332

and

Appropriate placard must be used.

IDENTIFICATION NUMBER DISPLAYS



MUST BE DISPLAYED ON: (1) Tank Cars, Cargo Tanks, Portable Tanks, and other Bulk Packagings; (2) Vehicles or containers containing 4,000 kg (8,820 lbs) in non-bulk packages of only a single hazardous material having the same proper shipping name and identification number; and (3) 1,000 kg (2,205 lbs) of materials poisonous by inhalation in Hazard Zone A or B. See §172.301(a)(3) and §172.313(c).

Response begins with identification!

General Guidelines on Use of Warning Labels and Placards

LABELS

See 49 CFR, Part 172, Subpart E, for complete labeling regulations.

- The Hazardous Materials Table [§172.101, Col. 6] identifies the proper label(s) for the hazardous material listed.
- Any person who offers a hazardous material for transportation MUST label the package, if required [§172.400(a)].
- Labels may be affixed to packages when not required by regulations, provided each label represents a hazard of the material contained in the package [§172.401].
- The appropriate hazard class or division number must be displayed in the lower corner of a primary and subsidiary hazard label [§172.402(b)].
- For classes 1,2,3,4,5,6, and 8, text indicating a hazard (e.g., "CORROSIVE") is NOT required on a primary or subsidary label. The label must otherwise conform to Subpart E of Part 172 [§172.405].
- Labels must be printed on or affixed to the surface of the package near the proper shipping name marking [§172.406(a)].
- When primary and subsidiary labels are required, they must be displayed next to each other [§172.406(c)].
- For a package containing a Division 6.1, Packing Group III material, the POISON label specified in §172.430 may be modified to display the text PG III instead of POISON or TOXIC. Also see §172.313(d).
- The class number must be displayed on a subsidiary label. For Transition 2005, see §172.402(b).

PLACARDS

See 49 CFR, Part 172, Subpart F, for complete placarding regulations.

- Each person who offers for transportation or transports any hazardous material subject to the Hazardous Materials Regulations must comply with all applicable requirements of Subpart F [§172.500].
- Placards may be displayed for a hazardous material, even when not required, if the placarding otherwise conforms to the requirements of Subpart F of Part 172 [§172.502(c)].
- For other than Class 7 or the DANGEROUS placard, text indicating a hazard (e.g., "FLAMMABLE") is not required. Text may be omitted from the OXYGEN placard only if the specific ID number is displayed on the placard [§172.519(b)(3)].
- For a placard corresponding to the primary or subsidiary hazard class of a material, the hazard class or division number must be displayed in the lower corner of the placard. For Transition 2005, see §172.519(b)(4).
- Any transport vehicle, freight container, or rail car containing any quantity of material listed in Table 1 must be placarded [§172.504].
- When the gross weight of all hazardous materials in non-bulk packages covered in Table 2 is less than 454 kg (1,001 lbs), no placard is required on a transport vehicle or freight container [§172.504(c)].
- Notes: See §172.504(f)(10) for placarding Division 6.1, PG-III materials.
- Placarded loads require registration with USDOT. See §107.601 for registration regulations.

Inhalation Hazard Materials

§172.540

§172.555

§172.313

Materials which meet the inhalation toxicity criteria have additional "communication standards" prescribed by the HMR. The words "Poison-Inhalation Hazard" must be entered on the shipping paper, as required by §172.203(m)(2). Packagings must be marked "Inhalation Hazard" or, alternatively, when the words "Inhalation Hazard" appear on the label or placard, the "Inhalation Hazard" marking is not required on the package. Transport vehicles, freight containers, portable tanks and unit load devices that contain a poisonous material subject to the "Poison-Inhalation Hazard" shipping description, must be placarded with a POISON INHALATION HAZARD or POISON GAS placard, as appropriate. This shall be in addition to any other placard required for that material [§172.504].

Placarding Tables

[§172.504(e)]

Table 1 (Placard any quantity)

Hazard class or division	Placard name
1.1	EXPLOSIVES 1.1
1.2	EXPLOSIVES 1.2
1.3	EXPLOSIVES 1.3
2.3	POISON GAS
4.3	DANGEROUS WHEN WET
5.2 (Organic peroxide, Type B, liquid or solid, temperature controlled)	ORGANIC PEROXIDE
6.1 (Inhalation Hazard, Zone A or B)	POISON INHALATION HAZARD
7 (Radioactive Yellow III label only)	RADIOACTIVE

Table 2 (Placard 1,001 lbs or more)

Hazard class or division	Placard name
1.4	EXPLOSIVES 1.4
1.5	EXPLOSIVES 1.5
1.6	EXPLOSIVES 1.6
2.1	FLAMMABLE GAS
2.2	NON-FLAMMABLE GAS
3	FLAMMABLE
Combustible Liquid	COMBUSTIBLE
4.1	FLAMMABLE SOLID
4.2	SPONTANEOUSLY COMBUSTIBLE
5.1	OXIDIZER
5.2 (Other than organic peroxide, Type B, liquid or solid, temperature controlled)	ORGANIC PEROXIDE
6.1 (Other than inhalation hazard, Zone A or B)	POISON
6.2	(None)
8	CORROSIVE
9	CLASS 9 [§172.504(f)(9)]
ORM-D	(None)

For complete details, refer to one or more of the following:

- Code of Federal Regulations, Title 49, Transportation, Parts 100-185. [All modes]
- International Civil Aviation Organization (ICAO) Technical Instructions for the Safe Transport of Dangerous Goods by Air. [Air]
- International Maritime Dangerous Goods (IMDG) Code. [Water]
- Transportation of Dangerous Goods Regulations of Transport Canada. [Rail and Highway]

U.S. Department of Transportation

Pipeline and Hazardous Materials Safety Administration

Copies of this Chart may be obtained by contacting:

USDOT/PHMSA/OHMIT/PHH-50
Washington, D.C. 20590
or
Phone: 202-366-2301
E-mail: training@dot.gov
Web site: http://hazmat.dot.gov

PHH50-0057-0605

ROYAL AIR FREIGHT, INC.
GENERAL OPERATIONS MANUAL

SECTION 7

RVSM OPERATING PRACTICES AND PROCEDURES

1. Introduction. The following items are incorporated into traini programs and operating practices and procedures.

2. Flight Planning. During flight planning, the flight crew should pay particular attention to conditions which may affect operation in RVSM airspace. These include, but may not be limited to:

   a. Verifying that the aircraft is approved for RVSM operations.
   b. Annotating the flight plan to be filed with the Air Traffic Service Provided to show that the aircraft and operator are approved for RVSM operations. Block 3 of the FAA flight plan should be annotated with the letter "W" to show RVSM approval. For the FAA flight plan other letters may be applicable in the future.
   c. Reported and forecast weather conditions on the route of flight;
   d. Minimum equipment requirements pertaining to height-keeping systems;
   e. If required for the specific aircraft group; accounting for any aircraft operating restrictions related to RVSM airworthiness approval.

3. Preflight procedures at the aircraft for each flight. The following actions should be accomplished during preflight.

   a. Review maintenance logs and or forms to ascertain the conditi of equipment required for flight in the RVSM airspace. Ensu that maintenance action has been taken to correct defects to required equipment;
   b. During the external inspection of aircraft, particular attention should be paid to the condition of the static sources and the condition of the fuselage skin in the vicinity of each static source and any other component that affects altimetry system accuracy.
   c. Before takeoff, the aircraft altimeters should be set to the local altimeter (QNH) setting and should display a known elevation (field elevation) within the limits specified in the aircraft operating manuals. The difference between the known elevation and the elevation displayed on the altimeters should not exceed 75 ft. The two primary altimeters should also agree within limits specified by the aircraft operating manual.
   d. Before takeoff, equipment required for flight in RVSM airspace should be operational, and indications of malfunction should be resolved.

4. Procedures prior to RVSM airspace entry. The following equipment should be operating normally at entry into RVSM airspace:

   a. Two primary altitude measurement systems.
   b. One automatic altitude control system
   c. One altitude alerting device.
   d. Should any of the required equipment fail prior to the aircraft entering RVSM airspace, the pilot should request a new clearance so as to avoid flight in this airspace.

5. In flight Procedures. The following policies should be incorporated into flight crew training and procedures.

   a. Flight crews should comply with aircraft operating restrictions related to RVSM airworthiness approval.
   b. Emphasis should be placed on promptly setting the sub-scale on all primary and standby altimeters to 29.92 in. when passing the transition altitude and rechecking for proper altimeter setting when reaching the initial cleared flight level (CFL):
   c. In level cruise it is essential that the aircraft is flown at the CFL. This requires that particular care is taken to ensure that ATC clearances are fully understood and followed. Except in contingency or emergency situations, the aircraft should not intentionally depart from CFL without a positive clearance from ATC.
   d. During cleared transition between flight levels, the aircraft should not overshoot the cleared flight level by more than 150 ft.
   e. An automatic altitude control system should be operative and engaged during level cruise, except when circumstances such as the need to re-trim the aircraft or if turbulence requires disengagement. In any event, adherence to cruise altitude should be done by reference to one of the two primary altimeters:
   f. The altitude alerting system should be operational;
   g. At intervals of approximately one hour, cross check between the primary altimeters and the stand-by altimeter should be made. A minimum of two primary altimeters should agree within 200 ft. or a lesser value if specified in the aircraft operating manual. The difference between the primary and standby altimeters should be noted for use in contingency situations. Note: the normal pilot scan of cockpit instruments should suffice for altimeter crosschecking on most flights.
   h. Normally, the altimetry system being used to control the aircraft should be selected to provide altitude reporting information to ATC.

i. If the pilot notified by ATC of an AAD error which exceeds 300 ft. then the pilot should take action to return to CLF as quickly as possible.
j. Contingency procedures after entering RVSM airspace. The pilot should notify ATC of contingencies (aircraft system failures, weather conditions) which affect the ability to maintain the CFL and coordinate a plan of action. (See In-Flight Abnormal Procedures cockpit card. FORMS section 9-16, 9-17)

6. Post Flight.

a. In making maintenance log book entries against malfunctions in height keeping systems, the pilot should provide sufficient detail to enable maintenance to effectively troubleshoot and repair the system. The pilot should detail the actual defect and the crew action taken to try to isolate and rectify the fault. The following information should be noted when appropriate:

(1) Primary and standby altimeter readings.
(2) Altitude selector setting.
(3) Subscale setting on altimeter.
(4) Autopilot used to control the airplane and any Differences when the alternate system was selected.
(5) Differences in altimeter readings if alternate static ports were selected.
(6) Use of system selected No. 1 or 2.
(7) Transponder selected to provide altitude information To ATC and any difference if alternate source is Selected.

7. Special Emphasis Items: Flight crew Training. The following items should also be included in flight crew training program:

a. Use of cockpit cards "RVSM Operations Practices and Procedures" And "In-Flight Abnormal Procedures". (see section 9 "Forms")
b. Standard ATC phraseology.
c. Importance of crew members cross checking each other to ensure That ATC clearances are promptly and correctly complied with.
d. Use and limitations of standby altimeters.
e. Problems of visual perception of other aircraft at 1000 ft. Planned separation during night conditions
f. Characteristics of aircraft altitude capture systems.
g. Relationship between the altimetry, automatic altitude control, And transponder systems in normal and abnormal situations.
h. Aircraft operating restrictions related to RVSM airworthiness Approval.

ROYAL AIR FREIGHT, INC.
GENERAL OPERATIONS MANUAL

SECTION 8

WEIGHT AND BALANCE

GENERAL:

No company multi-engine aircraft may be utilized unless current empty weight and center of gravity have been established by actual weighing or new within the last thirty-six calendar months.

The Pilot-In-Command of the flight shall be responsible for seeing that the aircraft is properly loaded in accordance with the Aircraft Flight Manual or Approved Weight and Balance Procedure. He may assign the actual aircraft loading to another competent person provided, that he personally checks the loading and assures himself that the aircraft is within proper center of gravity limits. The Pilot-In-Command will insure that the takeoff weight does not exceed the maximum allowable, considering takeoff field conditions, normal consumption of fuel and oil for the planned flight. The Pilot-In-Command shall also insure that the aircraft is not loaded in excess of any maximum zero fuel weight that may be established by the aircraft type certificate.

LOAD MANIFEST FOR MULTI-ENGINE AIRCRAFT:

In order to insure proper loading procedures in the type of aircraft mentioned above, a load manifest will be prepared in duplicate, before each takeoff on flights where cargo or passengers are carried. The Pilot-In-Command will carry a copy of the load manifest to the destination. The duplicate copy will be left at the departure point or the equivalent information will be relayed to the company by telephone or fax. A copy of the load manifest will be held on file at the Home Office for at least thirty days. The manifest will contain items listed in FAR 135.63 and will be available for inspection.

All pilots will determine the weight of any cargo by the following methods:

1. By actual weight of cargo, or
2. By actual weight of cargo listed on shipping paper.

Pilots must also determine the weight of shipping containers such as boxes, skids and platforms by having the weight of a container listed on the shipping papers or by actual weight of all the cargo and its shipping containers.

ROYAL AIR FREIGHT, INC.
GENERAL OPERATIONS MANUAL

SECTION 8

WEIGHT AND BALANCE

i. If the pilot notified by ATC of an AAD error which exceeds 300 ft. then the pilot should take action to return to CLF as quickly as possible.
j. Contingency procedures after entering RVSM airspace. The pilot should notify ATC of contingencies (aircraft system failures, weather conditions) which affect the ability to maintain the CFL and coordinate a plan of action. (See In-Flight Abnormal Procedures cockpit card. FORMS section 9-16, 9-17)

6. Post Flight.

a. In making maintenance log book entries against malfunctions in height keeping systems, the pilot should provide sufficient detail to enable maintenance to effectively troubleshoot and repair the system. The pilot should detail the actual defect and the crew action taken to try to isolate and rectify the fault. The following information should be noted when appropriate:

(1) Primary and standby altimeter readings.
(2) Altitude selector setting.
(3) Subscale setting on altimeter.
(4) Autopilot used to control the airplane and any Differences when the alternate system was selected.
(5) Differences in altimeter readings if alternate static ports were selected.
(6) Use of system selected No. 1 or 2.
(7) Transponder selected to provide altitude information To ATC and any difference if alternate source is Selected.

7. Special Emphasis Items: Flight crew Training. The following items should also be included in flight crew training program:

a. Use of cockpit cards "RVSM Operations Practices and Procedures" And "In-Flight Abnormal Procedures". (see section 9 "Forms")
b. Standard ATC phraseology.
c. Importance of crew members cross checking each other to ensure That ATC clearances are promptly and correctly complied with.
d. Use and limitations of standby altimeters.
e. Problems of visual perception of other aircraft at 1000 ft. Planned separation during night conditions
f. Characteristics of aircraft altitude capture systems.
g. Relationship between the altimetry, automatic altitude control, And transponder systems in normal and abnormal situations.
h. Aircraft operating restrictions related to RVSM airworthiness Approval.

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   a. Two primary altitude measurement systems.
   b. One automatic altitude control system
   c. One altitude alerting device.
   d. Should any of the required equipment fail prior to the aircraft entering RVSM airspace, the pilot should request a new clearance so as to avoid flight in this airspace.

5. In flight Procedures. The following policies should be incorporated into flight crew training and procedures.

   a. Flight crews should comply with aircraft operating restrictions related to RVSM airworthiness approval.
   b. Emphasis should be placed on promptly setting the sub-scale on all primary and standby altimeters to 29.92 in. when passing the transition altitude and rechecking for proper altimeter setting when reaching the initial cleared flight level (CFL):
   c. In level cruise it is essential that the aircraft is flown at the CFL. This requires that particular care is taken to ensure that ATC clearances are fully understood and followed. Except in contingency or emergency situations, the aircraft should not intentionally depart from CFL without a positive clearance from ATC.
   d. During cleared transition between flight levels, the aircra should not overshoot the cleared flight level by more than 1 ft.
   e. An automatic altitude control system should be operative and engaged during level cruise, except when circumstances such as the need to re-trim the aircraft or if turbulence requires disengagement. In any event, adherence to cruise altitude should be done by reference to one of the two primary altimeters:
   f. The altitude alerting system should be operational;
   g. At intervals of approximately one hour, cross check between the primary altimeters and the stand-by altimeter should be made. A minimum of two primary altimeters should agree within 200 ft. or a lesser value if specified in the aircraft operating manual. The difference between the primary and standby altimeters should be noted for use in contingency situations. Note: the normal pilot scan of cockpit instruments should suffice for altimeter crosschecking on most flights.
   h. Normally, the altimetry system being used to control the aircraft should be selected to provide altitude reporting information to ATC.

1. Introduction. The following items are incorporated into training programs and operating practices and procedures.

2. Flight Planning. During flight planning, the flight crew should pay particular attention to conditions which may affect operation in RVSM airspace. These include, but may not be limited to:

   a. Verifying that the aircraft is approved for RVSM operations.
   b. Annotating the flight plan to be filed with the Air Traffic Service Provided to show that the aircraft and operator are approved for RVSM operations. Block 3 of the FAA flight plan should be annotated with the letter "W" to show RVSM approval. For the FAA flight plan other letters may be applicable in the future.
   c. Reported and forecast weather conditions on the route of flight;
   d. Minimum equipment requirements pertaining to height-keeping systems;
   e. If required for the specific aircraft group; accounting for any aircraft operating restrictions related to RVSM airworthiness approval.

3. Preflight procedures at the aircraft for each flight. The following actions should be accomplished during preflight.

   a. Review maintenance logs and or forms to ascertain the condition of equipment required for flight in the RVSM airspace. Ensure that maintenance action has been taken to correct defects to required equipment;
   b. During the external inspection of aircraft, particular attention should be paid to the condition of the static sources and the condition of the fuselage skin in the vicinity of each static source and any other component that affects altimetry system accuracy.
   c. Before takeoff, the aircraft altimeters should be set to the local altimeter (QNH) setting and should display a known elevation (field elevation) within the limits specified in the aircraft operating manuals. The difference between the known elevation and the elevation displayed on the altimeters should not exceed 75 ft. The two primary altimeters should also agree within limits specified by the aircraft operating manual.
   d. Before takeoff, equipment required for flight in RVSM airspace should be operational, and indications of malfunction should be resolved.

ROYAL AIR FREIGHT, INC.
GENERAL OPERATIONS MANUAL

SECTION 7

RVSM OPERATING PRACTICES AND PROCEDURES

ROYAL AIR FREIGHT, INC.
GENERAL OPERATIONS MANUAL

SECTION 9

ROYAL AIR FREIGHT, INC. FORMS

AD COMPLIANCE

AIRFRAME

AIRCRAFT S/N:

ONE-TIME_____ RECURRING_____

AD NUMBER EFFECT. DATE	SUBJECT	DATE AND HOURS AT COMPLIANCE	METHOD OF COMPLIANCE	COMP/DUE DATE/HR.

_____ A & P_____

AUTHORIZED SIGNATURE

ROYAL AIR, INC.
LOG BOOK PLACARD

AIRCRAFT MAKE & MODEL _____
SERIAL NUMBER _____
DATE_____

N-_____
TOTAL TIME_____
A/C LANDINGS_____

ALTIMETER CALIBRATION & STATIC SYSTEM INSPECTION PER FAR 91.411
DATE DUE_____

TRANSPONDER CERTIFICATION PER FAR 91.413
DATE DUE_____

AIRCRAFT WEIGHT CHECK PER FAR 135.185
DATE DUE_____

ELT BATTERY REPLACEMENT

DATE DUE_____

LEFT ENGINE
MODEL_____
SERIAL NUMBER_____
DUE O/H AT A/C TT_____

RIGHT ENGINE
MODEL_____
SERIAL NUMBER_____
DUE O/H AT A/C TT_____

LEFT PROPELLER
MODEL_____
SERIAL NUMBER_____
OVERHAUL DUE DATE_____
A/C TIME WHEN DUE_____

RIGHT PROPELLER
MODEL_____
SERIAL NUMBER_____
OVERHAUL DATE DUE_____
A/C TIME WHEN DUE_____

ANNUAL DUE DATE_____

NEXT INSPECTION DUE_____
A/C TIME WHEN DUE_____

ROYAL AIR FREIGHT, INC.

DEFERRED MAINTENANCE RECORD SHEET

DATE	ITEM DEFERRED	CORRECTED BY	DATE

FORM C

REVISION: 19

DATE: 5-06-97

ROYAL AIR FREIGHT

WEEKLY FLIGHT AND REST REQUIRMENTS

PILOT NAME

MONTH

YEAR

DAY / DATE	FLIGHT TIMES IN 24HR. LOCAL																								FLIGHT TIME
MONDAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
TUESDAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
WEDNESDAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
THURSDAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
FRIDAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
SATURDAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
SUNDAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
																						WEEKLY TOTALS			

NUMBER OF 24HR.
REST PERIODS

PILOT

PILOT NAME _____

ROYAL AIR FREIGHT, INC.

YEAR _____

FLIGHT TIME AND REST REQUIREMENT YEARLY RECORD

	FLIGHT HOURS	REST PERIODS
JANUARY		
FEBRUARY		
MARCH		
APRIL		
MAY		
JUNE		
JULY		
AUGUST		
SEPTEMBER		
OCTOBER		
NOVEMBER		
DECEMBER		

REVISION: ORIGINAL DATE: 1-20-95 PAGE: 9-6

000255

ROYAL AIR FREIGHT, INC.

JET DAILY RECORD SHEET

A/C TYPE _____

A/C N- _____

DATE _____

ROUTES		24 HOUR LOCAL TIME				TIMES				FAR	LOAD MANIFEST					
FROM	TO	RAMP	TAKEOFF	LANDING	RAMP	BLOCK	AIRCRAFT FLIGHT	IFR	NIGHT	135/91	NO FAX	MAX. ALLOW TAKE OFF WT	TOTAL WT. LOADED A/C	FWD	AFT	C.G.

PILOT _____ CO PILOT _____

PILOT SIGNATURE _____

DAILY TOTAL

DISCREPANCIES	CORRECTIVE ACTION

	AIRCRAFT	LEFT ENG.	RIGHT ENG.	LT. CYCLE	RT. CYCLE
TOTALS BROUGHT FWD.					
TIME TODAY					
TOTALS					

REMARKS

ENGINE TRENDS

O.A.T. _____

ALTITUDE _____

	LEFT	RIGHT
OIL PRESS		
OIL TEMP		
FUEL FLOW		
EGT		
RPM / FAN		
EPR		

VOR 30 DAY CHECK DUE

DATE _____

PLACE _____

SIGN _____

ERROR	
#1	#2

RETURN TO SERVICE: I certify that corrective actions listed have been made in accordance with FAR Part 43 and that so far as the work performed is concerned the aircraft is approved for return to service.

Signature: Date: _____

A&P or Rpr. Sta. No.: _____

REVISION: ORIGINAL

DATE: 1-20-95

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A/C TYPE _____

A/C N- _____

ROYAL AIR FREIGHT, INC.

TURBINE DAILY RECORD SHEET

000455

DATE _____

ROUTES		24 HOUR LOCAL TIME				TIMES				FAR	LOAD MANIFEST MAX T.O. WT. _____				
FROM	TO	RAMP	TAKEOFF	LANDING	RAMP	BLOCK	AIRCRAFT FLIGHT	IFR	NIGHT	135/91	NO PAX	TOTAL WT OF LOADED A/C	FWD	AFT	C.G.
					DAILY TOTAL										

PILOT _____ CO PILOT _____

PILOT SIGNATURE _____

	AIRCRAFT	LEFT ENG	RIGHT ENG	LT CYCLE	RT CYCLE
TOTALS BROUGHT FWD.					
TIME TODAY					
TOTALS					

DISCREPANCIES	CORRECTIVE ACTION
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

REMARKS

ENGINE TRENDS

O.A.T. _____

ALTITUDE _____

	LEFT	RIGHT
OIL PRESS		
OIL TEMP		
FUEL FLOW		
ITT		
RPM		
TORQUE		

MAINTENANCE RELEASE: I certify that corrective actions listed have been made in accordance with FAR Part 43 and that so far as the work performed is concerned the aircraft is approved for return to service.

Signa
A&P Sta. No.: _____

VOR 30 DAY CHECK

DATE _____

PLACE _____

SIGN _____

ERROR	
#1	#2

REVISION:

DATE: 1-20-95

PAGE: 9-8

A/C TYPE EMB-110

A/C N- _____

ROYAL AIR FREIGHT, INC.

TURBINE DAILY RECORD SHEET

DATE _____ 000458

ROUTES		24 HOUR LOCAL TIME				TIMES				FAR	LOAD MANIFEST MAX T.O. WT. _____				
FROM	TO	RAMP	TAKEOFF	LANDING	RAMP	BLOCK	AIRCRAFT FLIGHT	IFR	NIGHT	135/91	NO PAX	TOTAL WT OF LOADED A/C	FWD	AFT	C.G.

DAILY TOTAL

PILOT _____ CO PILOT _____

PILOT SIGNATURE _____

	AIRCRAFT	LEFT ENG	RIGHT ENG	LT CYCLE	RT CYCLE
TOTALS BROUGHT FWD.					
TIME TODAY					
TOTALS					

DISCREPANCIES	CORRECTIVE ACTION
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

REMARKS

ERROR	#1	#2
PRESSURE ALTITUDE		
STANDARD AIR TEMP.		
INDICATED AIRSPEED		

VOR 30 DAY CHECK

DATE _____

PLACE _____

SIGN _____

TREND MONITORING

ALTIMETER SETTING		OIL PRESSURE		
ICE PROTECTION	ON OFF	OIL TEMPU.		
AIR-CONDITION	ON OFF	GENERATOR AMPS		
		T_5		
		TORQUE		
		N_G		
		PROP RPM		
		FUEL FLOW		

MAINTENANCE RELEASE: I certify that corrective actions listed have been made in accordance with FAR Part 43 and that so far as the work performed is concerned the aircraft is approved for return to service.

Signature:

A&P or Rpr. Sta. No.: _____

A/C TYPE _____

A/C N- _____

ROYAL AIR FREIGHT, INC.

PISTON DAILY RECORD SHEET

003455

DATE _____

ROUTES		24 HOUR LOCAL TIME				TIMES		FAR			LOAD MANIFEST MAX T.O. WT. _____				
FROM	TO	RAMP	TAKEOFF	LANDING	RAMP	BLOCK	AIRCRAFT FLIGHT	IFR	NIGHT	135/91	NO PAX	TOTAL WT OF LOADED A/C	FWD	AFT	C.G.

PILOT _____ CO PILOT _____ DAILY TOTAL

PILOT SIGNATURE _____

	AIRCRAFT	LEFT ENG	RIGHT ENG
TOTALS BROUGHT FWD.			
TIME TODAY			
TOTALS			

DISCREPANCIES	CORRECTIVE ACTION
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

REMARKS

ENGINE TRENDS

O.A.T. _____

ALTITUDE _____

	LEFT	RIGHT
OIL PRESS		
OIL TEMP		
CYL TEMP		
RPM		
FUEL FLOW		
EGT		
MAN. PRESS		

MAINTENANCE RELEASE: I certify that corrective actions listed have been made in accordance with FAR Part 43 and that so far as the work performed is concerned the aircraft is approved for return to service.

Signa
A&P o Sta. No.: _____

VOR 30 DAY CHECK DUE

DATE _____

PLACE _____

SIGN _____

ERROR	
#1	#2

REVISION: ORIGINAL

DATE: 1-20-95

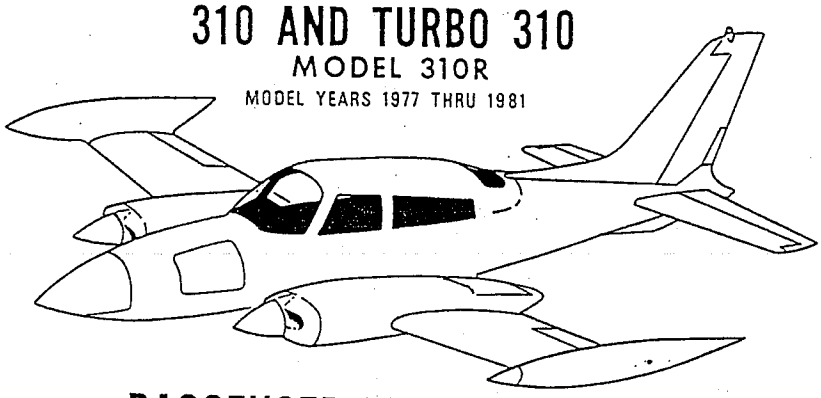
PAGE: 9-9

Cessna

310 AND TURBO 310

MODEL 310R

MODEL YEARS 1977 THRU 1981



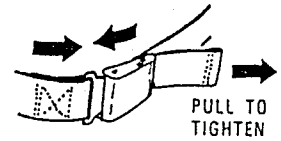
PASSENGER BRIEFING CARD

NOTE: THIS CARD CONTAINS IMPORTANT INFORMATION. PLEASE READ BEFORE TAKEOFF.

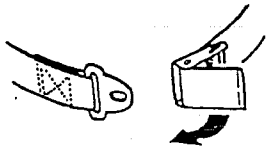
GENERAL INFORMATION

SEAT BELTS

*SEAT BELT MUST BE FASTENED FOR TAKEOFF AND LANDING.



PULL TO TIGHTEN

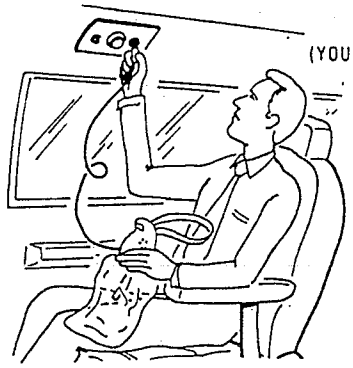


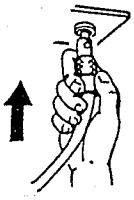
PULL TO RELEASE

*FOR OTHER PHASES OF FLIGHT, RECOMMEND SEAT BELT REMAIN FASTENED WHILE SEATED.

OXYGEN MASK

USE WHEN DIRECTED BY FLIGHT CREW
(YOUR AIRPLANE MAY NOT HAVE THIS OPTION)



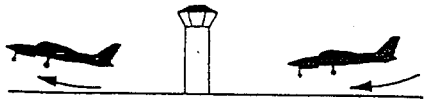


1 PUSH END OF MASK HOSE INTO OUTLET

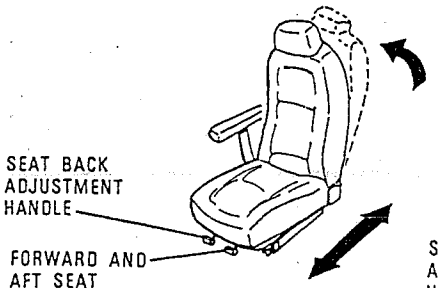
2 TURN END OF MASK HOSE CLOCKWISE TO LOCK IN PLACE

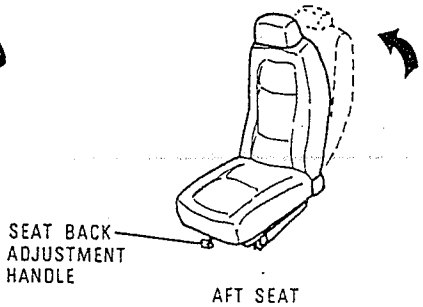
* EXTINGUISH ALL SMOKING MATERIALS
* LOCATE OXYGEN MASK IN NEAREST SEAT BACK POCKET
* PLUG YOUR MASK HOSE INTO OVERHEAD OUTLET
* PLACE MASK OVER BOTH NOSE AND MOUTH
* BREATHE NORMALLY

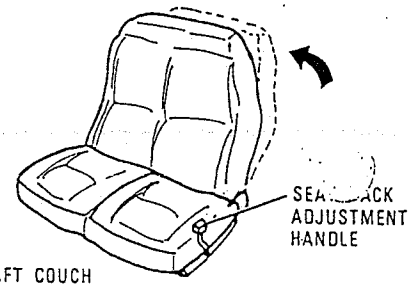
SEAT ADJUSTMENT



SEAT BACK MUST BE IN UPRIGHT POSITION FOR TAKEOFF AND LANDING





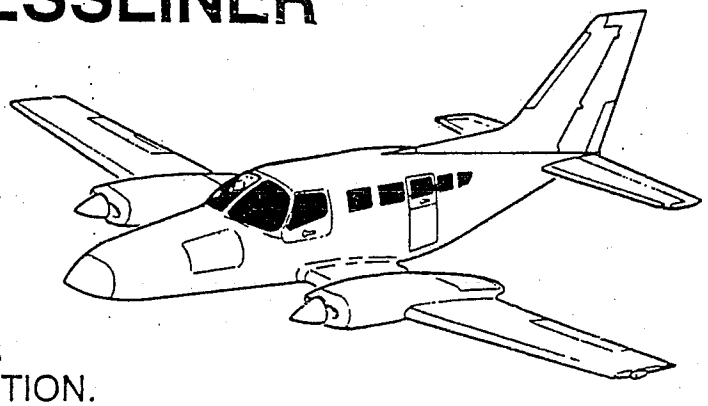


SEE OTHER SIDE FOR EMERGENCY INFORMATION

D5233-1-13
3 NOV 1980

PASSENGER BRIEFING CARD
402 BUSINESSLINER

MODEL 402C
MODEL YEARS 1979 THRU 1985



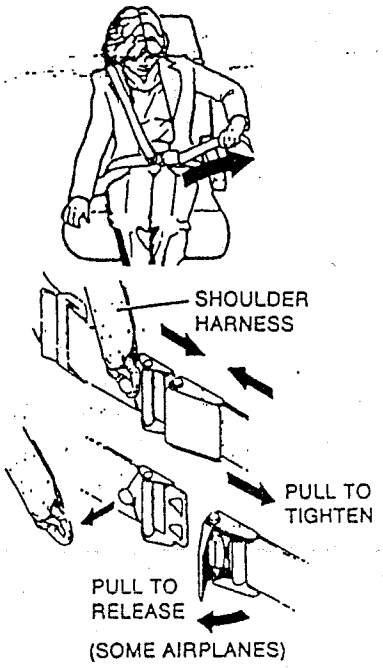
NOTE: THIS CARD CONTAINS
IMPORTANT INFORMATION.
PLEASE READ BEFORE TAKEOFF.

GENERAL INFORMATION

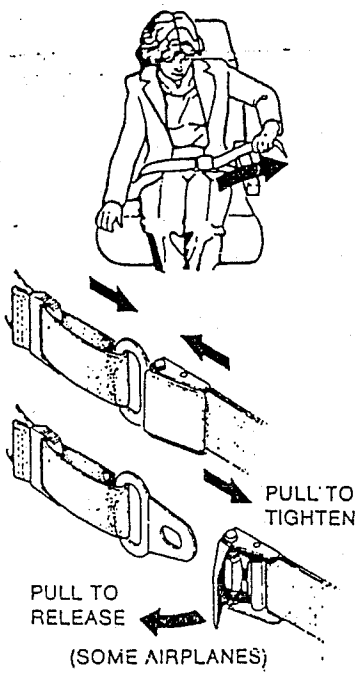
- SEAT BACK MUST BE IN UPRIGHT POSITION FOR TAKEOFF AND LANDING.
- FASTEN SEAT BELTS AND SHOULDER HARNESS (IF INSTALLED).
- ALL TABLES MUST BE STOWED.
- EXTINGUISH ALL SMOKING MATERIALS.

SEAT BELTS

- SEAT BELT AND SHOULDER HARNESS (IF INSTALLED) MUST BE FASTENED FOR TAKEOFF AND LANDING.
- FOR OTHER PHASES OF FLIGHT, RECOMMEND SEAT BELT AND SHOULDER HARNESS (IF INSTALLED) REMAIN FASTENED WHILE SEATED.
- SHOULDER HARNESS MAY GO OVER LEFT OR RIGHT SHOULDER, DEPENDING ON SEAT LOCATION.

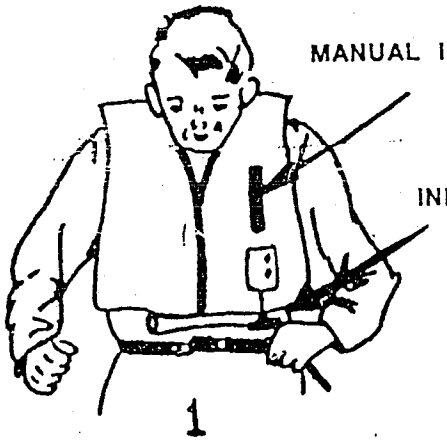


(SOME AIRPLANES)



(SOME AIRPLANES)

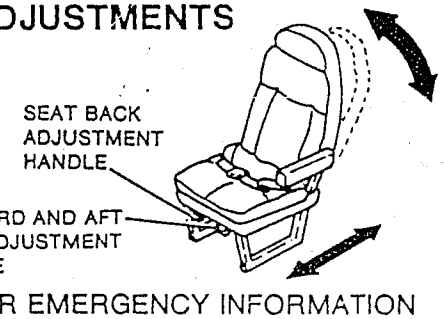
LIFE VESTS
DONNING INSTRUCTIONS



1.) PASS STRAPS AROUND BACK

2.) BRING STRAPS TO FRONT, MAKING CERTAIN INFLATION TAB IS NOT UNDER WAIST STRAP. PROCEED TO SNAP ONTO "D" RING & PULL SHORTENING TAB TO ADJUST.

SEAT ADJUSTMENTS



D5236-6-13
2 JANUARY 1985

SEE OTHER SIDE FOR EMERGENCY INFORMATION

ROYAL AIR, INC.
MECHANICAL RELIABILITY REPORT
(To be filed within 24 hours of Occurrence or Detection)

Aircraft Type _____ Date _____

Aircraft I.D. Number N_____ Aircraft S/N _____

Nature of failure:_____

_____

_____

_____

Identification of Part Causing Action:

Manufacturer: _____ Condition:_____

Part Number: _____ System Involved:_____

Serial Number: _____ Time Since O/H:_____

Apparent Cause of Failure: Wear, Crack, Design Flaw, Personnel Error, Etc.

_____

_____

_____

_____

Corrective Action:

_____

_____

_____

_____

Reported By:_____
for Royal Air, Inc.

(Required by FAR 135.415)

MECHANICAL INTERRUPTION SUMMARY REPOSRT

Period Covered: _____ **to** _____ **Page:** _____ **of** _____

DATE	FLIGHT NO.	TAIL NO.	PILOTS	LOCATION SEGMENT	CAUSE OR NATURE OF INTERRUPTION	CORRECTIVE ACTION

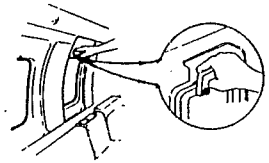
Prepared By: _____ **Operating Certificate Number:** BUHA637A

EXTINGUISHER BEHINDE CO-PILOTS SEAT

OPERATION:

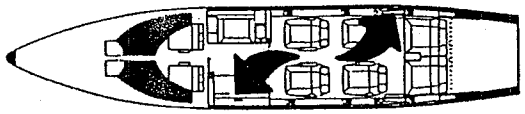
1. Remove from bracket
2. Pull ring on handle
3. Aim at base of fire
4. Squeeze lever.

EMERGENCY EXIT WINDOW



1. Pull handle.
2. Pull window in.
3. Place window out of way.

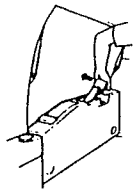
EMERGENCY EXIT WINDOW



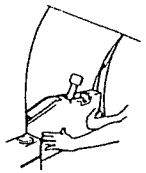
CABIN DOOR EXIT

CABIN DOOR EXIT

DO NOT OPEN LOWER DOOR



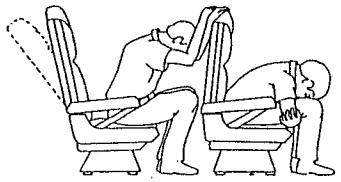
① Lift handle.



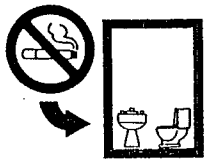
② Push upper door outward.

BRACE POSITION

BEST KNOWN PRACTICE

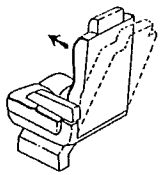


NO SMOKING

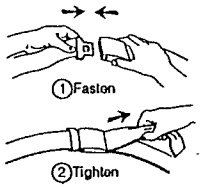


TAKEOFF & LANDING

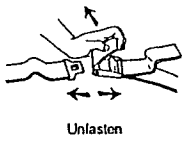
• No Smoking



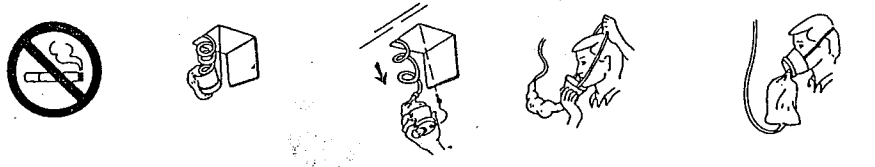
• Seat Back Upright
Tray Stowed



• Fasten seat belt



OXYGEN MASKS



① When mask deploys, extinguish smoking materials.

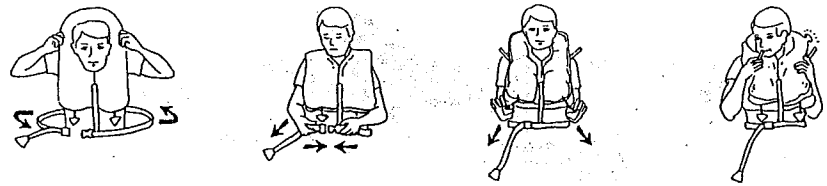
② To activate oxygen flow, pull mask down.

③ Pull mask over face covering nose and mouth.

④ Breathe normally. Assist others.

LIFE VESTS

DO NOT INFLATE LIFE VEST IN CABIN



① Pull life vest over head.

② Fasten waist strap. Pull tab to tighten.

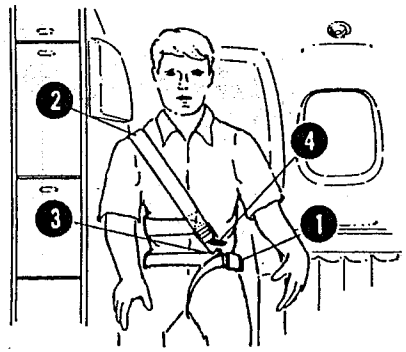
③ After exiting pull red tabs, or

④ Inflate by blowing into mouthpieces.

Life vests are located behind each crew seat, and either beneath or behind each passenger seat.

SHOULDER HARNESS OPERATION

1. Bring seat belt around hips, latch and tighten.
2. Insert arm through loop in shoulder harness.
3. Draw shoulder harness around front of body and latch to hip belt.
4. Grasp tab and end of shoulder harness and tighten.



CERTIFICATE OF TRAINING:

This certificate covers Hazardous Materials Training received by the following named employee:

NAME OF EMPLOYEE:_____

INITIAL TRAINING-DATE RECEIVED_____

SIGNATURE OF INSTRUCTOR_____

RECURRENT TRAINING-DATE RECEIVED_____

SIGNATUE OF INSTRUCTOR_____

RECURRENT TRAINING-DATE RECEIVED_____

SIGNATURE OF INSTRUCTOR_____

RECURRENT TRAINING-DATE RECEIVED_____

SIGNATURE OF INSTRUCTOR_____

RECURRENT TRAINING-DATE RECEIVED_____

SIGNATUE OF INSTRUCTOR_____

RECURRENT TRAINING-DATE RECEIVED_____

SIGNATURE OF INSTRUCTOR_____

RECURRENT TRAINING-DATE RECEIVED_____

SIGNATURE OF INSTRUCTOR_____

RVSM OPERATIONS
Practices and Procedures

FLIGHT PLANNING

Minimum Equipment Requirements
- Two independent primary altimetry systems
- Altitude alerting system
- Altitude hold system

Minimum equipment list and deferred equipment.
Reported and Forecast weather.

PREFLIGHT

Review maintenance discrepancies and forms
External inspection
- Static sources
- Conditions of fuselage skin
- Pitot tube condition

Altimeters set to local setting
All altimeters read within 75 feet of field elevation
Two primary altimeters read within flight manual limits

IN-FLIGHT PROCEDURES

Prior to entering RVSM airspace
- Altitude hold operating normally
- Altitude alerter operating normally
- Primary altimeters normal and within 200 feet

Transition altitude altimeters to 29.92
Level off with less than 150 ft overshoot
Altimeter cross-check at least hourly

POST FLIGHT

If a discrepancy is found with the altimetry system the pilot should provide sufficient detail to enable maintenance to effectively troubleshoot and repair system.

IN-FIGHT ABNORMAL PROCEDURES

Severe turbulence or mountain wave

Severe turbulence
- notify ATC you are unable RVSM

Mountain wave
- 200 feet or more notify ATC you are unable RVSM
- less than 200 feet notify ATC of wave condition

Failure of one primary altimetry system

- Cross check remaining altimeter with standby
- Select functioning system to autopilot
- Notify ATC you are operating on one system
- RVSM can still be maintained
- If not able to confirm accuracy of remaining Altimeter proceed to next section

Failure of both primary altimeters, Altitude hold or Alerter system

- Notify ATC of failure
- Repeat notification to ATC on each hand-off
- ATC will provide 2000 foot separation
- Request clearance to leave RVSM airspace if operations allow

Primary altimetry systems differ by more than 200 feet

- If able to determine defective system. Proceed with failure of one primary system
- If unable to determine defective system. proceed with failure of both primary systems

AIRCRAFT N NUMBER:_____ A/C TT:_____

(1) DISCREPANCY:	DATE:

(1) MAINTENANCE ACTION:

MECHANICS SIGNATURE: CERTIFICATE NUMBER: DATE:

(2) DISCREPANCY:	DATE:

(2) MAINTENANCE ACTION:

MECHANICS SIGNATURE: CERTIFICATE NUMBER : DATE:

(3) DISCREPANCY:	DATE:

(3) MAINTENANCE ACTION:

MECHANICS SIGNATURE: CERTIFICATE NUMBER : DATE:

(4) DISCREPANCY:	DATE:

(4) MAINTENANCE ACTION:

MECHANICS SIGNATURE: CERTIFICATE NUMBER : DATE:

AIRCRAFT N NUMBER_____ AIRCRAFT TT_____

(1) DISCREPANCY:	DATE:
(1) MAINTENANCE ACTION:	
MECHANICS SIGNATURE: CERTIFICATE NUMBER: DATE:	
(2) DISCREPANCY:	DATE:
(2) MAINTENANCE ACTION:	
MECHANICS SIGNATURE: CERTIFICATE NUMBER: DATE:	
(3 DISCREPANCY:	DATE:
(3) MAINTENANCE ACTION:	
MECHANICS SIGNATURE: CERTIFICATE NUMBER: DATE:	

ROYAL AIR FREIGHT, INC.
GENERAL OPERATIONS MANUAL

SECTION 10

USE OF MINIMUM EQUIPMENT LIST

INSTRUCTIONS FOR USE OF MINIMUM EQUIPMENT LIST

PILOT-IN-COMMAND:

Upon failure of any piece of equipment in the aircraft, the Pilot-In-Command, before continuation or additional flight, will follow the Minimum Equipment List approved for that aircraft. He will look up the defective piece of equipment and determine his/her course of action under the "Remarks or Exceptions" column. Special attention is to be given to instructions prefixed by "(O)", this indicates a requirement in planning for and/or operating with the listed item inoperative. Normally these procedures are accomplished by the flight crew; however, other personnel may be qualified and authorized to perform certain functions. The satisfactory accomplishment of all procedures, regardless of who performs them, is the responsibility of the operator. Attention should also be given to the instructions prefixed by "(M)". Normally these procedures are accomplished by maintenance personnel; however, other personnel may be qualified and authorized to perform certain functions. Procedures requiring specialized knowledge or skill, or requiring the use of tools or test equipment should be accomplished by maintenance personnel. The satisfactory accomplishment of all maintenance procedures, regardless of who performs them, is the responsibility of the operator.

Once the Pilot-In-Command has made his determination based on the information contained in the M.E.L. he/she shall contact the Director of Maintenance for his concurrence or to receive verbal approval and any operational procedures to be followed.

Prior to operating the aircraft, the pilot will accomplish the following:

1. Enter on the Daily Record Sheet in the discrepancies column the nature of the equipment failure. (Included shall be the M.E.L. system and sequence number.)
2. Enter on the Daily Record Sheet in the corrective action column the date and time of the deferral along with a pilot signature.
3. Enter on the Deferred Maintenance Record (Form C) the date, item deferred, and the M.E.L. system and sequence number.
4. The item that is inoperative must be placarded to inform and remind the crewmembers and maintenance personnel of equipment condition. Placard stickers available in pocket behind this sheet.

NOTE: Where the MMEL shows a variable number installed, the MEL must reflect the actual number installed or an alternate means of configuration control approved by the Administrator.

Examples of the procedures stated above are demonstrated on the following page.

ROYAL AIR INC. MINIMUM EQUIPMENT LIST
MANAGEMENT PROGRAM

This document is the required management program which will explain the procedures for our minimum equipment lists as described in our Operations Specifications part D95 (c).

Each aircraft will have in its Company Flight Manual, which contains the Daily Record form, a current list of all deferred items for that aircraft on the DEFERRED MAINTENANCE RECORD SHEET, page 9-3 of the general operations manual. This list will be monitored by not only the Director of Maintenance, but also each Pilot in Command of each flight, so the flight crew is informed of the condition of the aircraft.

A master list of M.E.L. items will be maintained in the maintenance office so that the Director of Maintenance can keep current on each deferred item on all the company aircraft. This list will be posted and reviewed daily.

If a Pilot or Mechanic has used the M.E.L., they MUST follow all instructions as given in the ROYAL AIR FREIGHT Instructions for use of Minimum Equipment List page 10-1 of the operations manual and notify the maintenance department of the deferral by written entry in the flight maintenance log and the Deferred Maintenance Record sheet. The Flight Maintenance log book will be reviewed by the Director of Maintenance or a designated representative daily.

The Director of Maintenance will be responsible for ensuring each item is repaired as quickly as possible within the time frame allowed by each deferred item. This is done with a verbal arrangement, by the Director of Maintenance, with the operations department, the dispatch department and the maintenance department, so the arrival of necessary parts, will be at the same time maintenance personnel and the aircraft are available for the repair. This normally happens at the home base.

If the repair needs to be completed away from the home base, it will be the responsibility of the Pilot In Command to co-ordinate with the Director of Maintenance to ensure the repair is acceptable.

If this cannot be done, an extension to the repair period can be granted by the Director of Maintenance, on category B and C items, so long as notification of the local Flight Standards District Office, 8800 Beck Rd. Belleville, MI. 48111, takes place within 24 hrs of the extension approval. This notification will be in writing to the Principal Maintenance Inspector for Royal Air Inc. or in their absence their supervisor and will be faxed or mailed directly to that FSDO which has control over Royal Air Freight.

This document will include the reason why the extension is required, back ordered parts or what ever reason, the length of the extension, and the expected return to service date. The extension length must also be documented in the flight log Deferred Maintenance Record Sheet and the maintenance office M.E.L. listing sheet.

SEP 15 10

Non Essential Equipment and Furnishings

(THIS PROGRAM IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

(NEF Program)

Introduction

Non Essential Equipment and Furnishings (NEF) are those items installed on the aircraft as part of the original type certificate, supplemental type certificate, or other form of alterations that have no effect on the safe operation of flight under all operational conditions and would not be required by the applicable certification or operational rules.

The NEF program will provide guidelines and procedures for the deferral of NEF items by the flight crew with maintenance personnel concurrence. These items will be listed in the General Operations Manual and may not be listed in the operators current Minimum Equipment List (MEL). Items not listed on the NEF list may be deferred and added to the NEF program by following the steps in the deferral process paragraph in this section.

The NEF program is an addition to the MEL program and can only be utilized on aircraft with an approved MEL program.

NEF List

The NEF list is a list of items deferrable under this program. Each item will b listed by name, have a brief description and be assigned a deferral sequence number. Repa intervals will be determined for each item and listed in the NEF list along with an procedures required by the flight crew or maintenance personnel before aircraft operations can be conducted. A complete list will be located in the General Operations Manual adjacent to the MEL onboard each aircraft and in the director of maintenance office, the original copy will be located in the director of operations office.

Method of Revision

When the need arises to make revisions to the NEF program or deferral list it is the responsibility of director of maintenance to make such revisions. If the director of maintenance is unavailable, the director of operation may make needed revisions.

The NEF deferral checklist (form NEF 2) is used to immediately add deferrals to the NEF program. A revision for these deferrals will be submitted to the primary maintenance inspector (PMI) overseeing this program within 10 business days. A copy of the completed deferral checklist will be given to the PMI along with a revision request. If the PMI upon review of a revision has any suggestions or comments, the PMI will contact the director of maintenance or director of operations.

Non Essential Equipment and Furnishings

(THIS PROGRAM IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

(NEF Program)

NEF Deferral Process

Deferring an NEF item that is already listed in the NEF program can be performed by the director of maintenance, flight crew, or director of operations. Deferred items must be reported to the director of maintenance or director of operations on the day of deferral or the next business day. The following procedure must be followed when deferring a listed item.

(1) Determine if the inoperative, damaged, or missing item is listed in the aircraft minimum equipment list (MEL). If the item is listed in the MEL then normal MEL deferral procedures must be followed. If the item is not on the MEL go to #2.
(2) Enter a discrepancy in the aircraft flight log.
(3) Perform any required procedure as indicated in the NEF list.
(4) Enter required information in the NEF deferred maintenance log page (form NEF 1)
(5) Enter a corrective action in the aircraft flight log. This corrective action will include the statement "deferred I/A/W NEF program" along with the deferral sequence number, any required special procedures, and the signature of the person deferring the item.
(6) Placard deferred item using labels located adjacent to the NEF list. The placard should read "Deferred per NEF item #"
(7) Pull circuit breaker for any item circuit breaker protected.
(8) When NEF items have been cleared, the date and initials of the person who cleared them will be entered into the NEF deferred maintenance log page (form NEF 1) and the deferred placard will be removed.

Deferring an item that is not already listed in the NEF program must be performed by a committee. This committee will consist of the flight crew and the director of maintenance or other maintenance personnel if the director of maintenance is unavailable. The NEF deferral checklist (form NEF 2) will be used to determine if the item is deferrable. This checklist will be filled out by the flight crew and signed. Each committee member is to be listed by name and title on the NEF form 2 at the time of deferral. Maintenance committee members are to sign the NEF form 2 when the aircraft returns to its home base. The following procedure must be followed when deferring an item not listed in the NEF program.

(1) Determine if the inoperative, damaged, or missing item is listed in the aircraft minimum equipment list (MEL). If the item is listed in the MEL then normal MEL deferral procedures must be followed. If the item is not on the MEL go to #2.
(2) Enter a discrepancy in the aircraft flight log.
(3) As a committee determine if the item is deferrable by performing the procedures outlined in the "Determining Deferrable Items" paragraph in this section.
(4) Complete NEF deferral checklist (form NEF 2) and insert in aircraft flight log until deferral is cleared or NEF program has been revised to reflect the addition of this item.
(5) Enter required information in the NEF deferred maintenance log page (form NEF 1) NEF number can be found on form NEF 2.
(6 Enter a corrective action in the aircraft flight log. This corrective action will include the statement "deferred I/A/W NEF program" along with the deferral sequence number, any required special procedures, and the signature of the person deferring the item.
(7) Placard deferred item using labels located adjacent to the NEF list. The placard should read "Deferred per NEF item #"
(8) Pull circuit breaker for any item circuit breaker protected.
(9) When NEF items have been cleared, the date and initials of the person who cleared them will be entered into the NEF deferred maintenance log page (form NEF 1) and the deferred placard will be removed.

Non Essential Equipment and Furnishings

(THIS PROGRAM IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

(NEF Program)

NEF Reporting

Deferred NEF items already listed in the NEF program do not need to be reported to the primary maintenance inspector (PMI) overseeing the program. However all current NEF deferred maintenance log pages (form NEF 1) will be maintained in the aircraft flight book for review upon request. Full pages will be transferred and maintained in the aircraft maintenance log for review upon request. Deferred items listed in the NEF program will be reported to the director of maintenance or director of operations on the day of deferral or the next business day.

Deferred items not already listed in the NEF program must be reported to the primary maintenance inspector (PMI) overseeing this program within 10 business days. A copy of the completed deferral checklist (form NEF 2) will be given to the PMI for review within 10 business days. If the PMI has any questions or concerns, he or she will contact the director of maintenance or director of operations.

Determining Deferrable Items

When adding an item to the NEF program the item must be evaluated and approved by a committee consisting of at least one flight crew member and the director of maintenance or other maintenance personnel if the director of maintenance is unavailable. This evaluation will determine if the inoperable, damaged, or missing item will affect safety of flight emergency systems, have an adverse effect on other systems, or if the item is required f the operational rules in which the aircraft is operated. The evaluation will also determi if any maintenance actions are required by the flight crew or maintenance personnel before further operations. The committee will establish a time interval in which the deferred item must be cleared, along with a general method for doing so. The evaluation will be recorded on the NEF deferral checklist (form NEF 2) and submitted to the primary maintenance inspector (PMI) overseeing this program.

Using the NEF deferral checklist (form NEF 2) the committee will evaluate each item by answering a series of questions. These questions can be found on the form NEF 2 and require a yes or no answer. If any question can be answered with yes then the item can not be deferred and will require maintenance before further operation.

Once an item has been determined to be deferrable the committee will evaluate the need for any special operational or maintenance procedures. Special operational procedures will be identified with an (O) symbol and maintenance procedures with an (M) symbol. If no special procedures are required then this will be identified with an (N/A) symbol. Maintenance procedures may be performed by the flight crew provided they do not require tools, specialized knowledge or skill. Operational procedures are to be accomplished by the flight crew. The results of this determination will be listed on the form NEF 2 along with a description of any required procedure. Deferred items are to be placarded using labels located adjacent to the NEF list, placard should read "Deferred per NEF item #"

Non Essential Equipment and Furnishings

(THIS PROGRAM IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

(NEF Program)

Determining Deferrable Items (continued)

The committee will assign the deferred item a repair interval category letter. This category letter determines the number of days the item may be deferred before maintenance is performed and the item is cleared. Once a repair interval has been determined, the category letter will be entered on the NEF deferral checklist. Categories are defined as described below.

Category A---Items in this category shall be repaired within three (3) consecutive calendar days, excluding the day the deferral was recorded in the flight book. For example if the deferral was recorded at 10am on January 11th the three day interval would begin at midnight the 12th and end at midnight the 15th

Category B---Items in this category shall be repaired within ten (10) consecutive calendar days, excluding the day the deferral was recorded in the flight book. For example if the deferral was recorded at 10am on January 6th the ten day interval would begin at midnight the 7th and end at midnight the 17th

Category C---Items in this category shall be repaired within one hundred and twenty (120) consecutive calendar days, excluding the day the deferral was recorded in the flight book. For example if the deferral was recorded at 10am on January 1st the one hundred and twenty day interval would begin at midnight the 2nd and end at midnight May 1st

Category D---Items in this category may be indefinitely deferred.

Once an item has been evaluated, special requirements recorded and a repair interval determined, each committee member will then print and sign their names along with their title on the form NEF 2 and the director of maintenance or maintenance personnel will assign it an NEF deferral sequence number. Sequence numbers will be determined and listed by ATA code and item number. For example when adding a 6th NEF item to the fuselage, the sequence number will be "53-6" the next item will become "53-7" and so on. Maintenance personnel signatures will be added when the aircraft returns to its home base. The director of Maintenance will approve the form NEF 2 when the aircraft has returned to home base.

ROYAL AIR FREIGHT, INC.
NEF deferred maintenance log page

N_____

Instructions for form NEF 1: (Box 1) Enter sequence number from NEF list or form NEF 2, (Box 2) Circle Y if deferrable item is not listed on NEF list, or N if it is already listed, (Box 3) Enter description of item being deferred, (Box 4) Enter repair interval category letter as found on NEF list or form NEF 2, (Box 5) Enter date that item is being deferred, (Box 6) Enter initials of person deferring item, (Box 7) Enter initials of person clearing deferred item after maintenance.

Box 1	Box 2	Box 3	Box 4	Box 5	Box 6	Box 7
Seq. #	New Item	NEF Deferred item	Repair interval	Date	Entered by Initial	Cleared by Initial
	Y N					
	Y N					
	Y N					
	Y N					
	Y N					
	Y N					
	Y N					
	Y N					
	Y N					
	Y N					
	Y N					
	Y N					
	Y N					
	Y N					

NOTE: This NEF deferred maintenance log page is to remain in the above listed aircraft flight book until it is full, at which time it is to be removed and inserted into the aircraft maintenance records. Deferred items listed on the NEF deferred maintenance log page will be reported to the director of maintenance or director of operations on the day of deferral or the next business day.

ROYAL AIR FREIGHT, INC.
NEF Deferral Checklist

NEF Deferral Sequence Number
_____
Description of Deferred Item
_____

Answer the following questions with Yes or NO

1)	Is the item required for operational rules in which the aircraft is operated?	1)
2)	Does it create the potential for fire/smoke or other hazardous condition?	2)
3)	Could it have an adverse effect on other required systems or components?	3)
4)	Does its condition potentially affect the safety of passengers, crew or service personnel?	4)
5)	Could it have a negative impact on emergency or abnormal procedures?	5)
6)	Does it create additional workload for crew at critical times of flight or flight preparation?	6)
7)	Will crewmembers need to evaluate the deferred NEF item on a flight-by-flight basis?	7)

NOTE: If any question is given a Yes answer than the item being evaluated is NOT deferrable

List any special operational or maintenance procedures that must completed before further operations

M-procedures:

O-procedures:

Repair interval category letter	

The above evaluation must be accomplished for the inoperative, damaged, or missing item at face value, and also for underlying cause of the discrepancy. The evaluation must be approved by the director of maintenance. Approving signature will be added when the aircraft returns to its home base.

_____ _____
Approving Signature Date

_____
Title

Committee members: Name Title & signature

name	title	signature
1)		
2)		
3)		
4)		
5)		

DETERMINATION OF AIRWORTHINESS:

The Pilot-In-Command prior to flight will determine that all the required inspections and return to service compliance are complete or have been deferred.

This is accomplished by reviewing the Royal Air Freight F.M. (Flight Manual) Book for the aircraft to be flown. The F.M. contains the following forms:

Log Book Placard
A.D. Compliance Form
Deferred Maintenance Record Sheet
Daily Record Sheets

Log Book Placard - will be reviewed to insure required inspections, due dates, and hour/cycle limits are in order.

A.D. Compliance Form - will be reviewed to insure that A.D.s have been conducted and that no recurring A.D.s will become due during the planned flight.

Deferred Maintenance Record Sheet - will be reviewed to see if any items have been deferred and if so, is the deferral still current and how will the deferral affect your planned flight.

Daily Record Sheet - will be reviewed to see if the previous flight had any mechanical irregularities and if so, has the aircraft been returned to service.

REPORTING AND RECORDING MECHANICAL IRREGULARITIES:

Mechanical irregularities that come to the attention of the Pilot-In-Command before, during, and after the completion of a flight shall be recorded on the Royal Air Freight Daily record Sheet for the aircraft in question. The irregularity should be recorded legibly and in sufficient detail so as to convey the problem to maintenance personnel without the need for verbal communication.

Irregularities that the Pilot-in-command believes will not affect the safety of further flight can be deferred using the MEL or NEF programs listed in section 10 of this manual.

ROYAL AIR FREIGHT, INC.

DEFERRED MAINTENANCE RECORD SHEET

"EXAMPLE"

DATE	ITEM DEFERRED	CORRECTED BY	DATE
6-12-93	28-4 FUEL QUANTITY		

Section: 20G-3
Form C

Revision: Original

DISCREPANCIES	CORRECTIVE ACTION
1. FUEL QUANTITY GAGE INOP (28-4)	1. DEFERRED BY MEL
2.	2. 6-12-93 (11:45 AM)
3.	3. [redacted]
4.	4.
5.	5.

BROUGHT FWD.
TIME TODAY
TOTALS

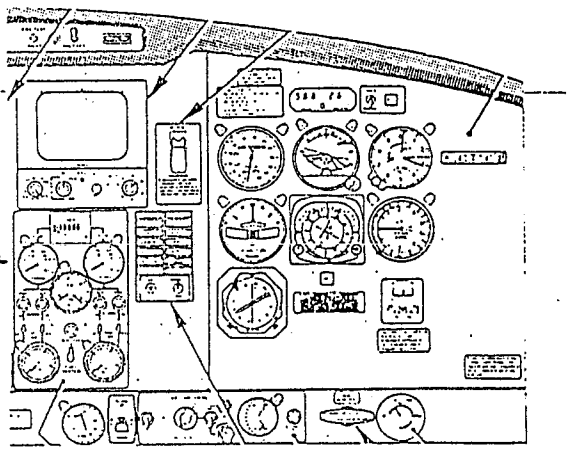
REMARKS

MAINTENANCE RELEASE: I certify that corrective actions listed have been made in accordance with FAR Part 43 and that so far as the work performed is concerned the aircraft is approved for return to service.

Signature:
A&P or Rpr. Sta. No.: _____

VOR 30 DAY CHECK
DATE _____
PLACE _____
SIGN _____

AFFIX PLACARD NEAR INDICATOR



FUEL QUANTITY
28-4

PLACARD

ROYAL AIR FREIGHT, INC.
NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

LIST OF EFFECTIVE PAGES

PAGE	REVISION	DATE	PAGE	REVISION	DATE
I	ORIGINAL	09/01/2010			
II	ORIGINAL	09/01/2010			
III	ORIGINAL	09/01/2010			
21-1	ORIGINAL	09/01/2010			
22-1	ORIGINAL	09/01/2010			
23-1	ORIGINAL	09/01/2010			
24-1	ORIGINAL	09/01/2010			
25-1	ORIGINAL	09/01/2010			
26-1	ORIGINAL	09/01/2010			
27-1	ORIGINAL	09/01/2010			
28-1	ORIGINAL	09/01/2010			
29-1	ORIGINAL	09/01/2010			
30-1	ORIGINAL	09/01/2010			
31-1	ORIGINAL	09/01/2010			
32-1	ORIGINAL	09/01/2010			
33-1	ORIGINAL	09/01/2010			
34-1	ORIGINAL	09/01/2010			
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55-1	ORIGINAL	09/01/2010			
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57-1	ORIGINAL	09/01/2010			
61-1	ORIGINAL	09/01/2010			
71-1	ORIGINAL	09/01/2010			
72-1	ORIGINAL	09/01/2010			
73-1	ORIGINAL	09/01/2010			
74-1	ORIGINAL	09/01/2010			
75-1	ORIGINAL	09/01/2010			
76-1	ORIGINAL	09/01/2010			
77-1	ORIGINAL	09/01/2010			
78-1	ORIGINAL	09/01/2010			
79-1	ORIGINAL	09/01/2010			
80-1	ORIGINAL	09/01/2010			

Approved SEP 14 2010
AGL - DETROIT FSDO
Principal Airworthiness
Inspector
[redacted]

ROYAL AIR FREIGHT, INC.
NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

TABLE OF CONTENTS

ROYAL AIR FREIGHT, INC.

NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

RECORD OF REVISION

REVISON NUMBER	DATE	EFFECTED PAGES

ROYAL AIR FREIGHT, INC.
NEF Deferral List

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29-1	ORIGINAL	09/01/2010			
30-1	ORIGINAL	09/01/2010			
31-1	ORIGINAL	09/01/2010			
32-1	ORIGINAL	09/01/2010			
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73-1	ORIGINAL	09/01/2010			
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80-1	ORIGINAL	09/01/2010			

SEP 14 2010

Approved
AGL - DETROIT FSDO
Principal Airworthiness
Inspector
[redacted]

ROYAL AIR FREIGHT, INC.

NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 21 — **AIR CONDITIONING**

SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER
NEF 21-1	Bonding straps not required by the manufacturer worn/broken/missing	N/A	No procedures required	Category C

ROYAL AIR FREIGHT, INC.

NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 22 — **AUTOFLIGHT**

SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER
NEF22-1	Bonding straps not required by the manufacturer worn/broken/missing	N/A	No procedures required	Category C

ROYAL AIR FREIGHT, INC.

NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 23 — **COMMUNICATIONS**

SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER

ROYAL AIR FREIGHT, INC.

NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 24 — **ELECTRICAL POWER**

SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER

ROYAL AIR FREIGHT, INC.
NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 25 — **EQUIPMENT & FURNISHINGS**

SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER
NEF 25-1	Misc. cabin forms missing/worn	N/A	No procedures required	Category C
NEF 25-2	Non-cargo cabin interior trim missing/worn	N/A	No procedures required	Category C
NEF 25-3	Carpet missing/worn	N/A	No procedures required	Category D
NEF 25-4	Non-cargo wall coverings Missing/worn	N/A	No procedures required	Category C
NEF 25-5	Cabin lighting inop.	N/A	No procedures required	Category C
NEF 25-6	Coffee maker missing, inop.	N/A	No procedures required	Category D
NEF 25-7	Seat covers torn	N/A	No procedures required	Category D
NEF 25-8	Sun shades missing/broken	N/A	No procedures required	Category D
NEF 25-9	Oxygen mask holder missing/broken	N/A	No procedures required	Category C
NEF 25-10	Tray tables missing, broken, inop.	N/A	No procedures required	Category D
NEF 25-11	Floor screws missing	N/A	No procedures requir	Category C
NEF 25-12	Rudder pedal covers torn	N/A	No procedures required	Category C
NEF 25-13	Control column covers torn	N/A	No procedures required	Category C
NEF 25-14	Misc. cabin placards faded/worn (not required by TC/STC/AD or other approved data)	N/A	No procedures required	Category C
NEF 25-15	Misc. cockpit placards faded/worn (not required by TC/STC/AD or other approved data)	O	Review POH for proper operation of system for which the placard addresses	Category B

ROYAL AIR FREIGHT, INC.

NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 26	FIRE PROTECTION			
SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER

ROYAL AIR FREIGHT, INC.
NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 27	FLIGHT CONTROLS			
SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER
NEF 27-1	Misc. placards faded/worn (not required by TC/STC/AD or other approved data)	O	Review POH for proper operation of system for which the placard addresses	Category B
NEF 27-2	Paint flaking/worn	N/A	No procedures required	Category D
NEF 27-3	Corrosion light surface	N/A	No procedures required	Category C
NEF 27-4	Bonding straps not required by the manufacturer worn/broken/missing	N/A	No procedures required	Category C
NEF 27-5	Fairings cracked/missing	M	Operate flight control and verify that no interference is present and no further damage to the flight control or aircraft will occur during normal operation. No further action required	Category B

ROYAL AIR FREIGHT, INC.
NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 28			FUEL	
SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER
NEF 28-1	Bonding straps not required by the manufacturer worn/broken/missing	N/A	No procedures required	Category C

ROYAL AIR FREIGHT, INC.
NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 29 — **HYDRAULIC POWER**

SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER
NEF 29-1	Auxiliary hydraulic service caps missing/leaking	M	Check hydraulic fluid reservoir for proper level, operate auxiliary hydraulic pump and look for leaks. If no leaks are detected no further action is required (Check hydraulic fluid level after each landing)	Category B

ROYAL AIR FREIGHT, INC.

NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 30 — **ICE & RAIN PROTECTION**

SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER
NEF 30-1	Ice shields cracked/broken	N/A	No procedures required	Category C
NEF 30-2	Deice boots holes, wear, loose sealant provided boots are operational	N/A	No procedures required	Category C
NEF 30-3	Bonding straps not required by the manufacturer worn/broken/missing	N/A	No procedures required	Category C

ROYAL AIR FREIGHT, INC.
NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 31			INDICATING & RECORDING SYS.	
SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER

ROYAL AIR FREIGHT, INC.
NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 32			LANDING GEAR	
SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER
NEF 32-1	Paint flaking/worn	N/A	No procedures required	Category C
NEF 32-2	Corrosion light surface	N/A	No procedures required	Category C
NEF 32-3	Valve stem caps missing	N/A	No procedures required	Category C
NEF 32-4	Landing gear door seal missing/torn	N/A	No procedures required	Category C
NEF 32-5	Landing gear actuator or hose hydraulic leak	M	Check hydraulic fluid reservoir for proper level, operate auxiliary hydraulic pump and look for leaks. If no leaks are detected no further action is required (Check hydraulic fluid level after each landing)	Category B
NEF 32-6	Hub caps missing (Non-antiskid)	N/A	No procedures required	Category C
NEF 32-7	Bonding straps not required by the manufacturer worn/broken/missing	N/A	No procedures required	Category C
NEF 32-8	Static ground wick not required by the manufacturer missing	N/A	No procedures required	Category C

ROYAL AIR FREIGHT, INC.

NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 33	LIGHTS			
SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER
NEF 33-1	Navigation lights foggy/cracked lens	N/A	No procedures required	Category C
NEF 33-2	Landing lights foggy/cracked lens	N/A	No procedures required	Category C
NEF 33-3	Recognition lights foggy/cracked lens	N/A	No procedures required	Category C
NEF 33-4	Strobe light foggy/cracked lens	N/A	No procedures required	Category C

ROYAL AIR FREIGHT, INC.
NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 34			NAVIGATION	
SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER

ROYAL AIR FREIGHT, INC.
NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 35			OXYGEN	
SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER
NEF 35-1	Oxygen discharge disc cracked/missing	M	Check for pressure on oxygen gauge, if pressure is present no further action is required	Category A

ROYAL AIR FREIGHT, INC.
NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 38			WATER/WASTE	
SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER

ROYAL AIR FREIGHT, INC.
NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 51	STRUCTURE, GENERAL			
SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER
NEF 51-1	Paint flaking/worn	N/A	No procedures required	Category C
NEF 51-2	Corrosion light surface	N/A	No procedures required	Category C
NEF 51-3	Rivet loose/missing	N/A	No procedures required	Category C
NEF 51-4	Screws missing/loose	N/A	No procedures required	Category C
NEF 51-5	Erosion coatings abraded/worn/missing	N/A	No procedures required	Category C

ROYAL AIR FREIGHT, INC.
NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 52 — **DOORS**

SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER
NEF 52-1	Non-cargo Door covering missing/worn	N/A	No procedures required	Category C
NEF 52-2	Door damper missing/broken	N/A	No procedures required	Category C
NEF 52-3	Door cable frayed/broken	N/A	No procedures required	Category B
NEF 52-4	Misc. placards faded/worn provided placard is not required by an STC or AD	O	Review POH for proper operation of system for which the placard addresses	Category B
NEF 52-5	Paint flaking/worn	N/A	No procedures required	Category C
NEF 52-6	Corrosion light surface	N/A	No procedures required	Category C
NEF 52-7	Rivets loose/missing	N/A	No procedures required	Category C
NEF 52-8	Screws loose/missing	N/A	No procedures required	Category C
NEF 52-9	Bonding straps not required by the manufacturer worn/broken/missing	N/A	No procedures required	Category C
NEF 52-10	Door seals worn/dirty/torn	O	Contact maintenance department for ground pressurization procedure, Provided cabin pressure can be maintained, no further action is required	Category B

ROYAL AIR FREIGHT, INC.
NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 53 — **FUSELAGE**

SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER
NEF 53-1	Louvered panel's loose/broken/missing	N/A	No procedures required	Category C
NEF 53-2	Paint flaking/worn	N/A	No procedures required	Category C
NEF 53-3	Corrosion light surface	N/A	No procedures required	Category C
NEF 53-4	Rivets loose/missing	N/A	No procedures required	Category C
NEF 53-5	Screws loose/missing	N/A	No procedures required	Category C
NEF 53-6	Antennas erosion, sealant peeling off	N/A	No procedures required	Category C
NEF 53-7	Hydraulic leak	M	Check hydraulic fluid reservoir for proper level, operate auxiliary hydraulic pump and look for leaks. If no leaks are detected no further action is required (Check hydraulic fluid level after each landing)	Category B
NEF 53-8	Erosion coatings abraded/worn/missing	N/A	No procedures required	Category C
NEF 53-9	Skin adjacent to ice shields battered	N/A	No procedures required	Category C
NEF 53-10	Bonding straps not required by the manufacturer worn/broken/missing	N/A	No procedures required	Category C
NEF 53-11	Misc. placards faded/worn (not required by TC/STC/AD or other approved data)	O	Review POH for proper operation of system for which the placard addresses	Category B

ROYAL AIR FREIGHT, INC.
NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 54	NACELLES/PYLONS			
SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER
NEF 54-1	Louvered panel's loose/broken/missing	N/A	No procedures required	Category C
NEF 54-2	Paint flaking/worn	N/A	No procedures required	Category C
NEF 54-3	Corrosion light surface	N/A	No procedures required	Category C
NEF 54-4	Rivets loose/missing	N/A	No procedures required	Category C
NEF 54-5	Screws loose/missing	N/A	No procedures required	Category C
NEF 54-6	Latches loose/missing	N/A	No procedures required	Category C
NEF 54-7	Hydraulic fluid leak	M	Check hydraulic fluid reservoir for proper level, operate auxiliary hydraulic pump and look for leaks. If no leaks are detected no further action is required (Check hydraulic fluid level after each landing)	Category B
NEF 54-8	Bonding straps not required by the manufacturer worn/broken/missing	N/A	No procedures required	Category C
NEF 54-9	Misc. placards faded/worn (not required by TC/STC/AD or other approved data)	O	Review POH for proper operation of system for which the placard addresses	Category B

ROYAL AIR FREIGHT, INC.
NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 55 — **HORIZONTAL & VERTICAL STABILIZERS**

SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER
NEF 55-1	Fairings cracked	M	Stop drill when aircraft returns to home base	Category C
NEF 55-2	Paint flaking/worn	N/A	No procedures required	Category C
NEF 55-3	Corrosion light surface	N/A	No procedures required	Category C
NEF 55-4	Rivets loose/missing	N/A	No procedures required	Category C
NEF 55-5	Screws loose/missing	N/A	No procedures required	Category C
NEF 55-6	Antennas erosion, sealant peeling off	N/A	No procedures required	Category C
NEF 55-7	Static wicks not required by the manufacturer missing/broken/worn	N/A	No procedures required	Category C
NEF 55-8	Bonding straps not required by the manufacturer worn/broken/missing	N/A	No procedures required	Category C
NEF 55-9	Erosion coatings abraded/worn/missing	N/A	No procedures required	Category C
NEF 55-10	Misc. placards faded/worn (not required by TC/STC/AD or other approved data)	O	Review POH for proper operation of system for which the placard addresses	Category B

ROYAL AIR FREIGHT, INC.
NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 56 — **WINDOWS**

SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER
NEF 56-1	Cabin windows crazed, moisture in panes	N/A	No procedures required	Category C
NEF 56-2	Cabin windows cracked (non-pressurized)	N/A	No procedure required	Category C
NEF 56-3	Dv window cracked non-pressurized	N/A	No procedure required	Category C
NEF 56-4	Windshield cracked non-pressurized	O	Provided crack is not in critical view area, no further action is required.	Category A

ROYAL AIR FREIGHT, INC.
NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 57	WINGS			
SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER
NEF 57-1	Boundary layer energizers missing	O	Review pilots operating handbook or contact maintenance for limitation	Category B
NEF 57-2	Paint flaking/worn	N/A	No procedures required	Category C
NEF 57-3	Corrosion light surface	N/A	No procedures required	Category C
NEF 57-4	Rivets loose/missing	N/A	No procedures required	Category C
NEF 57-5	Screws loose/missing	N/A	No procedures required	Category C
NEF 57-6	Antennas erosion, sealant peeling off	N/A	No procedures required	Category C
NEF 57-7	Stall fence sealant peeling/missing	N/A	No procedures required	Category C
NEF 57-8	Hydraulic fluid leak	M	Check hydraulic fluid reservoir for proper level, operate auxiliary hydraulic pump and look for leaks. If no leaks are detected no further action is required (Check hydraulic fluid level after each landing)	Category B
NEF 57-9	Erosion coatings abraded/worn/missing	N/A	No procedures required	Category C
NEF 57-10	Jack pads installed	N/A	No procedures required	Category C
NEF 57-11	Fairings cracked	N/A	No procedures required	Category C
NEF 57-12	Flight control brushes worn/missing	N/A	No procedures required	Category C
NEF 57-13	Fuel leaks (static)	M	Provided puddle does not exceed 9sqft in any 24-hour period, no further action is required	Category C
NEF 57-14	Vortex generators broken/missing	O	Review pilots operating handbook or contact maintenance for limitation	Category B
NEF 57-15	Bonding straps not required by the manufacturer worn/broken/missing	N/A	No procedures required	Category C
NEF 57-16	Misc. placards faded/worn (not required by TC/STC/AD or other approved data)	O	Review POH for proper operation of system for which the placard addresses	Category B

ROYAL AIR FREIGHT, INC.

NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 61 — **PROPELLER**

SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER
NEF 61-1	Paint abraded	N/A	No procedures required	Category C

ROYAL AIR FREIGHT, INC.
NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 71			POWER PLANT	
SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER
NEF 71-1	Bonding straps not required by the manufacturer worn/broken/missing	N/A	No procedures required	Category C

ROYAL AIR FREIGHT, INC.
NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 72 — **ENGINE-TURBINE**

SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER

ROYAL AIR FREIGHT, INC.
NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 73			ENGINE FUEL AND CONTROL	
SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER

ROYAL AIR FREIGHT, INC.
NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 74			IGNITION	
SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER

ROYAL AIR FREIGHT, INC.

NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 75			AIR	
SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER

ROYAL AIR FREIGHT, INC.

NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 76 — **ENGINE CONTROLS**

SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER

ROYAL AIR FREIGHT, INC.
NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 77 — **ENGINE INDICATING**

SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER

ROYAL AIR FREIGHT, INC.
NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 78			EXHAUST	
SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER

ROYAL AIR FREIGHT, INC.

NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 79			OIL	
SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER

ROYAL AIR FREIGHT, INC.

NEF Deferral List

(THIS LIST IS APPLICABLE TO ALL AIRCRAFT MODELS WITH AN MEL)

ATA 80 | **STARTING**

SEQ. #	ITEM DESCRIPTION	M O N/A	DESCRIPTION OF REQUIRED SPECIAL PROCEDURES	Category LETTER

ROYAL AIR FREIGHT, INC.
GENERAL OPERATIONS MANUAL

SECTION 11

MAINTENANCE PROCEDURES

MAINTENANCE PROCEDURES

A.A.I.P PROGRAM ADMINISTRATION

Each Aircraft listed in Operations Specifications section (D073-1) must be maintained in accordance with an approved aircraft inspection program. This program will be approved by the Administrator, current copies of each A.A.I.P will be kept in the director of maintenance's office.

Inspection Program Responsibility

The owner/operator has overall responsibility for complying with the provisions of these programs. The person designated by the owner/operator who is responsible for administering these programs is the Director of Operations, who is listed in the current Operations Manual.

Duties and Responsibilities

While it is the responsibility of the Director of Operations to comply with the provisions of these programs, he may delegate the following duties to the Director of Maintenance.

1) Scheduling inspections, test, component overhauls, replacement of life limited parts, and all other maintenance required by these programs.

2) Recording the accomplishment of any maintenance in the appropriate documents (e.g. work forms and logbooks) acceptable documents can be those found in the form section of this manual, or any log book entry made by a repair station or certified mechanic performing contracted maintenance under these programs.

3) Updating these programs and obtaining FAA approval of revisions when necessary.

4) Accounting for and maintaining work forms and/or log books.

5) Making arrangements with repair stations or certified mechanics that are appropriately qualified to perform maintenance on the types of aircraft listed in Operation Specification (D073-1)

6) Monitoring the computerized maintenance/inspection programs.

Program Evaluation

These programs will be evaluated by the Director of Operations prior to their submission to the FAA for approval. At this time it will be determined that each program will be appropriate for the make, model, and configuration of each aircraft being maintained.

Maintenance Department Procedures

Each morning, each aircraft which has been operated will be checked for discrepancies and hours of operation. This information will be retrieved from the ROYAL AIR FREIGHT Daily Flight Log.

Each aircraft which has flown will have the computer tracking system updated by the Director of Maintenance or his Designated Representative.

If the aircraft has a discrepancy, the book will be placed in a separate area, designated as "Aircraft Needing Maintenance" by the pilot who wrote the discrepancy or by dispatch.

If there were no discrepancies found during the flight, the pilot will return the book to the "Aircraft Ready for Dispatch" shelf.

When a Daily Flight Log is in the "Aircraft Needing Maintenance" area, the Director of Maintenance or his Appointed Representative, will take the book to the office. A maintenance technician will then be assigned to correct the discrepancy.

After the corrective action has been performed, the log book will have the corrective action written in the Corrective Action area. Next the mechanic will sign off the work in the Maintenance Release area. The book will then be returned to the "Aircraft Ready for Dispatch" shelf.

If there has been an interruption of a trip, the Director of Maintenance, or his Appointed Representative, must determine if a "Mechanical Reliability Report" is required by the provisions of FAR 135.415. If required, this report must be submitted within 24 hours of the detection of the discrepancy by filling out the form (Page 9-12 of the Operations Manual) and submitting this information to the FAA. If not required, the information should be saved for the "Maintenance Interruption Summary Report" required by FAR 135.417 (Page 9-13 of the Operations Manual). Said report shall be submitted, to the FAA, by the tenth day of the following month whether or not there is anything to report. If there are no events to report, the submitted summary report shall reflect "None".

Each day, it is the responsibility of the Director of Maintenance, or his representative, to review the listing of aircraft maintenance due, and determine if required inspections or any airworthiness items are coming due. After reviewing this information, the acting Director of Maintenance will assign maintenance personnel to perform the work necessary for the day.

Each job should have one person acting as Lead Mechanic, to coordinate the work, provide necessary information to the Director of Maintenance, and act as a Quality Control Manager. This person will be appointed by the acting Director of Maintenance on each job, or if necessary, each day of the job.

If any aircraft is not available for flight, the dispatch department should be notified as soon as possible by the acting Director of Maintenance.

AIRWORTHINESS DIRECTIVES MANAGEMENT

All applicable Airworthiness Directives will be complied with within the time limits specified in each A.D.

A.D research will assisted by the use of Avantext, inc. C.D ROM program. This tool helps to ensure that all A.D.'s are being properly tracked on each aircraft.

All A.D.'s will be recorded, and tracked on an A.D compliance form, this form can be found in the form section of this manual. Proper completion of this form will include the aircraft identification number, revision number, effective date, A.D subject, method of compliance, compliance date and next due date or time. This form also identifies recurring or one-timeA.D.'s .

A copy of reoccurring A.D.'s will be kept in the aircraft flight log, both reoccurring and one-time A.D.'s will kept in the aircraft log book.

All A.D.'s that do not apply to a particular aircraft/engine will be identified on the A.D compliance form, this form must include a signature and certificate number before return to service.

ENGINE RECORDS TRACKING

Aircraft engines having major components with different total time or cycles (e.g. Pratt & Whitney PT6 Gas Gen. section and Power section) will have appropriately recorded times and cycles for all major components in each log book entry for that engine.

REVIEW OF REPAIRED OR OVERHAULED COMPONENTS

All components sent for repair or overhaul will have a Purchase Order attached. This Purchase Order will describe in detail the work to be performed, any changes to this work will be documented on this Purchase Order as an amendment.

Upon the return of any component, the Purchase Order will be reviewed and compared to the component return to service documents to ensure the work performed was that which was requested.

LIFE LIMITED COMPONENTS OR ASSEMBLIES

All components that are limited by hours, cycles, or calendar date are considered life limited and will be subject further inspection before installation. This inspection will be performed by the mechanic performing maintenance or his/her supervisor, and will consist of the following inspections.

1) Visual inspection

2) Review of return to service documentation for component description, work performed, serial number, and time remaining.

It is the responsibility of the Director of Maintenance to ensure that a proper log book entry is made before return to service of any aircraft or engine. A proper log book entry will include time remaining and/or time used of any life limited component. The Director of Maintenance will also ensure that the computerized tracking system is updated.

AIRCRAFT FLEET MAINTENANCE CONTINUOUS SURVEILLANCE

In an effort to ensure that the aircraft fleet maintenance requirements are met, maintained and accurate, a thorough review of each aircrafts maintenance activity and log entries will be conducted on a regular basis. This review will encompass comparison of current aircraft maintenance status, as recorded, to the requirements of:

- Applicable Inspection Program
- Life Limited Components
- Applicable AD's
- Requirements of Pertinent 337 Forms
- Continuous Airworthiness Requirements of Incorporated STC's

These reviews will be conducted in such a manner so as to ensure that through the course of a 12 month period (not to exceed 18 months), the entire fleet is reviewed and deemed accurate as to its current status of airworthiness. Compliance with said review will be tracked, recorded and monitored in the aircraft maintenance tracking computer system.

Avionics Inspection Procedures

Communications Transceivers operational check.

Check both communications radios. If aircraft has dual audio panels check one radio from the pilot's side and the other from the copilot's side.

1. Call ground control on frequency 121.9 for radio check. A "*Loud & Clear*" or "*5 x 5*" response from ground control denotes acceptable operation.

2. Evaluate quality of received audio. Clear (non garbled) audio reception denotes acceptable operation.

Navigational Receiver VOR operational check.

NOTE: Use Nav. ramp tester such as Kustom Electronics Nav. check I or equivalent.

Turn on Nav. Ramp Tester
Select 0/180 on the top knob.
Select to/from
Place variable select knob on CAL.

Tune both Nav. radios to frequency 108.0.

On both Nav. Indicators (i.e. VOR Heads or Horizontal Situation Indicators[HSI]) move the Omni Bearing Selector (OBS) to a heading of "0" degrees.

Evaluate both Nav. Indicators for:

1. Nav. flag should NOT be visible - denotes acceptable operation.
2. A "TO" indication on the TO / FROM indicator denotes acceptable operation.
3. A Centered Left / Right needle ($\pm$ 2 degrees) denotes acceptable operation.

3A. If aircraft has Radio Magnetic Indicators (RMI) installed, The VOR RMI needle(s)should point to "0" degrees - denotes acceptable operation.

On Nav. Ramp Tester PLACE VARIABLE SELECT KNOB ON VOR

4. Rotate Variable Adjust Knob on Ramp Tester to the left then the right. Movement to left then right of Left / Right needles on both nav. indicators denote acceptable operation.

Navigational Receiver LOC operational check.

NOTE: Use Nav. ramp tester such as Kustom Electronics
Nav. check I or equivalent.

Turn on Nav. Ramp Tester
Select 108.1 on the top knob.
Place variable select knob on CAL.
Tune both Nav. radios to frequency 108.1.

Evaluate both Nav. Indicators for:

1. Nav. flag should NOT be visible - denotes acceptable operation.
2. A Centered Left / Right needle (± 1/2 dot) denotes acceptable operation.

On Nav. Ramp Tester PLACE VARIABLE SELECT KNOB ON LOC

3. Rotate Variable Adjust Knob on Ramp Tester to the left then the right. Movement to left then right of Left / Right needles on both nav. indicators denote acceptable operation.

Navigational Receiver GS operational check.

NOTE: Use Nav. ramp tester such as Kustom Electronics
Nav. check I or equivalent.

Turn on Nav. Ramp Tester
Select 108.1 on the top knob.
Place variable select knob on CAL.

Evaluate both Nav. Indicators for:

1. GS flag should NOT be visible - denotes acceptable operation.
2. A Centered UP / DOWN needle (i.e. Glide Slope Needle)(± 1/2 dot) - denotes acceptable operation.

On Nav. Ramp Tester PLACE VARIABLE SELECT KNOB ON G/S

3. Rotate Variable Adjust Knob on Ramp Tester to the left then the right. Movement up and down of the UP / DOWN needles on both nav. indicators denote acceptable operation.

Marker Beacon Receiver operational check.

NOTE: Use Nav. ramp tester such as Kustom Electronics
Nav. check I or equivalent.

Turn on Nav. Ramp Tester
Select OM / 400 Hz. on the top knob.

In the Aircraft:
Select Marker Beacon HIGH / LOW SENS switch to "LOW SENS"
Turn ON "MKR" switch on audio panel(s).

Evaluate Marker Beacon for:
1. Blue Marker Light illuminated denotes acceptable operation.
2. A 400 Hz. tone heard from the audio system denotes acceptable operation.

On Nav. Ramp Tester Select MM / 1300 Hz. on the top knob.

Evaluate Marker Beacon for:

1. Yellow Marker Light illuminated denotes acceptable operation.
2. A 1300 Hz. tone heard from the audio system denotes acceptable operation.

On Nav. Ramp Tester Select ZM / 3000 Hz. on the top knob.

Evaluate Marker Beacon for:

1. White Marker Light illuminated denotes acceptable operation.
2. A 3000 Hz. tone heard from the audio system denotes acceptable operation.

Move the Ramp Tester farther away from the aircraft until the white marker light just goes out. Leave ramp tester in this location.

Evaluate Marker Beacon for:

1. Change Marker Beacon HIGH / LOW SENS switch to "HIGH SENS". The white Marker Light should again illuminate - denotes acceptable operation.

ADF Receiver operational check

Turn "ON" ADF switch on aircraft audio panel(s).
Turn "ON" ADF Receiver & select "ADF" position on the ANT / ADF switch.
On ADF receiver tune frequency 760 Khz (WJR) or 800 Khz (CKLW)

Notes:

A. The ADF indicator may be a separate dedicated ADF Indicator or one of the needles on the RMI.

B. On the ground the ADF Indicator needle may lock on in any direction due to radio wave reflections particularly if aircraft is in or near hangars

C. Switching from ADF position the ANT position will make the audio clearer by eliminating the "buzz" coming from the direction finding circuitry. Switch must be in ADF position to evaluate ADF needle indication.

Evaluate ADF Receiver for:

1. Audio heard from radio station denotes acceptable operation.
2. ADF Indicator Needle should move and lock onto the station - denotes acceptable operation.

DME Receiver operational check

NOTE: Use DME ramp tester such as IFR ATC-600A, or equivalent.

Turn on DME Ramp Tester
Place ramp tester antenna 14" from aircraft DME antenna.
Place VELOCITY switch to "RANGE"
Place SQTR switch to SQTR
Place mode select(center) switch to "DME"
Place freq select switch to 17X
Use Slow Slew switch to set range to 50 Km.

Tune DME radio to frequency 108.0.

Evaluate DME Receiver for:

1. Aircraft DME indicator should indicate 50 Km (± 0.1 Km) - denotes acceptable operation.

GPS Receiver operational check

Note: Aircraft must be outside away from hangars for GPS checks.

Turn on GPS Receiver and monitor the start-up self testing operation on the GPS screen.

Evaluate GPS Receiver for:

1. Absence of any self-test faults denotes acceptable operation.

On the GPS enter direct to FNT Airport(KFNT on some GPS units)

2. The GPS should indicate 23.2 K miles and 327 degrees bearing to FNT - denotes acceptable operation. (Note that distance and bearing may be slightly different at different positions on the airport.)

RADAR operational check

Note: Aircraft must be outside and pointing away from hangars, other aircraft, equipment, or people for RADAR ground operational checks.

Turn on RADAR to TEST Mode.
Select lowest range
Tilt antenna 5 to 10 degrees down

Evaluate RADAR for:

1. Antenna sweeping as indicated on RADAR indicator screen in teat mode denotes acceptable operation.

Select contour mode on RADAR indicator.

2. Observation of ground returns on RADAR indicator screen denotes acceptable operation.

COMPONENT CONTINUING AIRWORTHINESS PROGRAM

The Concept

The Component Continuing Airworthiness Program (CCAP) is a process that transforms the manufacturer's component maintenance concept of "Hard Time" and "On Condition" by analyzing this concept in accordance with a defined and approved standard. This analysis process is outlined in ATA MSG-3 (Revision 2007.1) and begins with four basic questions, "Could failure affect safety on ground or in flight?" "Is failure undetected during normal operations?" "Could failure have significant operational economic impact?" "Could failure have significant non-operational impact?" This process utilizes the outcome of these questions and carries them through a series of "Failure Effect Questions" determining the results of a possible failure, those results being "Evident Safety", "Evident Operational", "Evident Economic", "Hidden Safety", or "Hidden Economic". A series of recommended maintenance tasks will be evaluated based on the outcome of the Failure Effect analysis. As a result of the detailed analysis performed on each component in this program, formal maintenance procedures will be established defining exactly what must be accomplished to or for the component, enabling it to remain in service, these procedures will then be added to the Approved Aircraft Inspection Program. Through this process, the manufacturer's maintenance concept is logically and methodically transformed into a task-oriented maintenance concept.

Abbreviations

AAIP	- Approved Aircraft Inspection Program
CCAP	- Component Continuing Airworthiness Program
CM	- Condition Monitoring
HT	- Hard Time
INSP	- Inspection
Ldgs	- Landings
O/C	- On Condition
PROC	- Procedure
INTV'L	- Interval

Definitions

Condition monitoring - This concept qualifies the type of component for which only the symptom of a defect provides justification for remedial treatment.

Failure Effect Analysis - Examination of the effect(s) resulting from a functional failure.

Hard Time - This concept qualifies the type of component maintenance which imposes fixed limits for component removal and depends upon time of flying hours, operating hours, calendar time or cycles, ext.

On Condition - This concept qualifies the type of component maintenance which subjects the component to scheduled operations, or continuous monitoring, if applicable, to ascertain its condition. Work only being undertaken if condition is found to be unsatisfactory.

Resultant Failures - Failure of one item attributable to the initial failure of a different item.

COMPONENT CONTINUING AIRWORTHINESS PROGRAM

Program Objectives

Royal Air Fright Inc has three main objectives for maintaining components under this program, the objectives are as follows.

1. To provide maintenance tasks that ensure the reliability and safety of certain components as an alternative to costly periodical overhauls.
2. To restore safety and reliability of components to acceptable levels when deterioration has occurred.
3. To accomplish these goals at a minimum cost and at minimum cost of resultant failure.

Program Evaluation

Continuous evaluation of this program is necessary to assure that the program applies to all applicable company aircraft. Whenever service experience, test, inspections, disassembly analysis, changes in operating conditions or environments, or it is discovered that this program does not provide adequate maintenance of any item approved under this program, a revision will be designed to correct the deficiency.

Whenever a manufacturer revises their maintenance or inspection procedures affecting a component being maintained under this program, or revises a reference used to maintain a component under this program, a revision will be designed to reflect the appropriate changes. All reference material used to produce this program along with detailed analysis of each component being maintained under this program will be retained on the Royal Air Fright Inc. computer network or copies will be on file in the Director of maintenance's office. Individual analysis will not be added to the General Operations Manual or aircraft AAIP.

The Director of maintenance is responsible for retaining reference material, component analysis, generating any required revisions to this program, and ensuring that it is current at all times.

Application for Approval

Whenever Royal Air Fright Inc. has completed its analysis of a component and feels that it is a good candidate for this program, a revision to the General Operation Manual, and applicable AAIP will be submitted to the administrator along with the complete analysis of the component being submitted.

Program Procedures

The following CCAP procedures are to be used in lieu of current manufacture's listed maintenance concepts and intervals. Components for which Royal Air Fright Inc. is approved to maintain under this program will be phased into the appropriate AAIP for the aircraft to which this component applies. In no case will a current manufacture's recommended interval be exceeded without the appropriate approved CCAP procedures being applied.

The CCAP will comprise of separate procedures for each individual component, these procedures will be outlined on individual "procedure work cards" which are identified by a "procedure number" the component will be identified by part number on its applicable card. Procedure cards will be maintained in the appropriate aircraft AAIP for which the component applies.

COMPONENT CONTINUING AIRWORTHINESS PROGRAM

Program Procedures (Continued)

The CCAP consist of a group of scheduled tasks to be completed at specified intervals with the objective to prevent deterioration of the inherent safety and reliability levels of the specified components, these tasks are to include the following.

1. Lubricating/Servicing: For the purpose of maintaining inherent design capabilities.
2. Operational Check: To determine that an item is fulfilling its intended purpose.
3. Visual Check: An observation to determine that an item is fulfilling its intended purpose.
4. Inspection: An examination of an item against a specific standard.
5. Functional Check: A quantitative Check to determine if one or more functions of an item perform within specified limits.
6. Restoration: Work necessary to return an item to a specific standard. (Restoration may very from cleaning to a complete overhaul, the scope of each restoration task is specified in the applicable maintenance or overhaul manual.)
7. Discard: Removal from service of an item at a specified life limit.

The "Procedure Work Cards" will include only tasks necessary to meet the objectives listed in this program and will not schedule additional tasks which will increase maintenance costs without a corresponding increase in reliability, unscheduled tasks may be required due to the following discoveries.

1. Discrepancies discovered when the scheduled tasks (Procedures) are accomplished at specific intervals.
2. Reports of malfunctions (Flight Crew Write-up's)
3. Data analysis (Trend monitoring, surveillance, etc.)

Upon completion of any procedure under this program, procedure intervals will be updated in the computer tracking system, and log book entries will be maintained as outlined in the life limited components paragraph of this manual. Log entries will include the serial number, and procedure number for all components maintained under this program.

CCAP Procedures Listing

The following chart is a list of components previously maintained under the Manufacture's Maintenance Program. Each component is listed by Aircraft Manufacture, part number, and description, followed by the Manufacture's maintenance concept and interval, then the Royal Air Fright Inc. CCAP Procedure number and interval, which is replacing the Manufacture's intervals in this program. Maintenance procedures can be found under the procedure number in the appropriate AAIP for that aircraft type.

AIRCRAFT MFR'S	ATA REF	MFR'S PART NO.	DESCRIPTION	MFR'S MAINT CONCEPT	MFR'S MAINT INTV'L	PROC NO.	Royal Air PROC INTV'L
FALCON FAN JET	20-60	MY20770-74820, 75820, 76820 77820, 84820, 85820 86820, 87820	Electro-Pump Selector control Cables Engine Power Control Cables	HT	12 YEARS	F20-0001	7 INSP

COMPONENT CONTINUING AIRWORTHINESS PROGRAM

CCAP Procedures Listing (Continued)

AIRCRAFT MFR'S	ATA REF	MFR'S PART NO.	DESCRIPTION	MFR'S MANT CONCEPT	MFR'S MANT INTV'L	PROC NO.	Royal Air PROC INTV'L
FALCON FAN JET	20-60	MY20770-74820, 75820, 7 820 77820, 84820, 85820 86820, 87820	Electro-Pump Selector control Cables Engine Power Control Cables	HT	12 YEARS	F20-0002	C INSP
FALCON FAN JET	21-10	3155ZEQ1	Turbo Compressor	HT	3000 Hours	F21-0001	A INSP
FALCON FAN JET	21-50	2-2508	Heat Exchanger	HT	9000 Hours	F21-0003	Z INSP
FALCON FAN JET	28-10-2	MY20521-10.11 MY20521-20.21	Feeder Tank Bladder	HT	20 Years	F28-0001	Z INSP
FALCON FAN JET	29-10	57083	Hydraulic Pump	HT	1800 Hrs or 3000 Hrs if S.B 314 applied	F29-0002	A INSP
FALCON FAN JET	32-10	VTS431	Landing Gear Door Uplocks (Aft Main Gear Doors)	HT	6000 Landings	F32-0001	B INSP
FALCON FAN JET	32-10	VTS442, 443, 4-22 4423, 4424	Landing Gear Door Uplocks with Micro switches	HT	6000 Landings	F32-0002	B INSP
FALCON FAN JET	76-10	MY20571-54860	Teleforce Cable (In RH Engine Nacelle)	HT	4800 Hours	F76-0001	Z INSP

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IT IS NOT PART OF THE GENERAL OPS MANUAL.

ROYAL AIR FREIGHT, INC.
GENERAL OPERATIONS MANUAL
RECORD OF REVISIONS

REVISION DATE	REVISION NUMBER	REVISION
June 98	ops specs	241-149 tbo ext & add 16KK
Aug 98	ops specs	1 time tbo ext 249SC119A & 240MC012A
Oct 98	ops specs	CJ610 TBO ext. to 5500 & HSI's TBO ext. to 1250
Feb 99	ops specs	Add 402B's aditional Gov's Add 37KK
April 99	ops specs	CJ610 HSI to 1375
Aug 99	ops specs	Add 69288, Add 876MC, Remove 4 pt6 engines from MORE
Oct 99	ops specs	Add 56149 to MORE program
Nov 15, 99	ops specs	Remove 56973 and 57082 from MORE program, MU2 Prop Gov's up to 6000 + 100 hrs, CJ610 HSI to 1500 hrs.
Mar 6,2000	ops specs	CJ 610 extension up to 6500 Hour