GHANA
CIVIL AVIATION AUTHORITY

ADVISORY CIRCULAR
AC 09-010

ACCEPTABLE
REQUIRED FLIGHT PREPARATION DOCUMENTS

SECTION 1 GENERAL

1.1 PURPOSE

This Advisory Circular (AC) provides guidance to individuals, organizations and other entities regarding the contents, instructions and retention of the forms required for flight preparation and trip records that will be acceptable to the Ghana Civil Aviation Authority (GCAA).

1.2 STATUS OF THIS ADVISORY CIRCULAR

This is an original issuance of this AC.

1.3 BACKGROUND

A. It is an international safety standard that a flight shall not be commenced until flight preparation forms have been completed certifying that the pilot-in-command is satisfied that—

1) The aircraft is airworthy;

2) The required instruments and equipment for the particular type of operation to be undertaken, are installed and are sufficient for the flight;

3) A maintenance release has been issued in respect of the aircraft;

4) The mass of the aircraft and centre of gravity location are such that the flight can be conducted safely, taking into account the flight conditions expected;

5) Any load carried on the aircraft is properly distributed and safely secured;

6) A check has been completed indicating that the aircraft performance requirements can be complied with for the flight to be undertaken; and

7) The required standards for operational flight planning have been met.

The Ghana civil aviation directives require that these standards are met by the following records—

- Aircraft journey and technical log;
- Deferred defects tracking record;
- Aircraft inspection and condition summary;
- Operational flight plan; and
- Load and performance manifest.

B. The international safety standard requires that the completed flight preparation forms must be retained by the operator for a period of 3 months.

The Ghana requirements for this retention vary depending on the type of record, but all of the records must be retained for at least 3 months.

- Advisory Circulars are intended to provide advice and guidance to illustrate a means, but not necessarily the only means, of complying with the directives, or to explain certain regulatory requirements by providing informative, interpretative and explanatory material.
- Where a directive contains the words “prescribed by the Authority,” the AC may consider to “prescribe” a viable method of compliance, but status of that “prescription” is always “guidance” (never a directive).

C. The operator and crew actions necessary to complete these records has been determined to have a significant effect on ensuring the safety of the flight.

- Each of these flight preparation records are critical to an accident investigation for the reconstruction of the initial phase of flight.
- They are also critical to the quality assurance audits for the on-going assessment of the effectiveness of the operator's flight planning.

1.4 APPLICABILITY

This advisory circular is applicable to commercial air transport operators and operators of large and turbojet aircraft. Other operators should consider the contents of these forms for use in their operations.

1.5 RELATED DIRECTIVES

The following directives are directly applicable to the guidance contained in this advisory circular—

- GCADs Part 08, Operations of Aircraft
- GCADs Part 09, AOC Certification and Administration

1.6 RELATED PUBLICATIONS

For further information on this topic, operators and individuals are invited to consult the following publications—

1) Ghana Civil Aviation Authority(GCAA)
   - ♦ AC 09-001, AOC Certification
   - ♦ AC 00-006, Approval of Computer Records

This advisory circular and copies of these regu-lations may be obtained from the GCAA Safety Directives Department.

2) International Civil Aviation Organization (ICAO)
   - ♦ Annex 6, Schedule I, International Commercial Air Transport – Aeroplanes
   - ♦ Document 9376-AN/914, Preparation of an Operations Manual

Copies may be obtained from Document Sales Unit, ICAO, 999 University Street, Montreal, Quebec, Canada H3C 5H7.

1.7 DEFINITIONS & ACRONYMS

A. The following definitions are used in this advisory circular—

1) **Aircraft Inspection & Condition Summary**. A summary document detailing the current airworthiness status for the aircraft.
2) **Aircraft Journey Log**. A document required by ICAO to record the details of the aircraft's journey.
3) **Aircraft Technical Log**. A document that allows the operator to consolidate the airworthiness information for a flight, record new information and track the information relating to the maintenance records.
4) **Deferred Defects Tracking Record.** A document used to record the deferrals of suspected or identified defects and track the status of those deferrals until they have been corrected.
5) **Load and Performance Manifest**. A phrase used to describe a consolidated document (or separate documents) that contain the critical information regarding the mass and balance and performance of the aircraft for a specific flight.

6) **Operational Flight Plan**. A phrase used to describe a consolidated document (or separate documents) that contain the critical information regarding the operational flight planning requirements for a specific flight.

B. The following acronyms are used in this advisory circular—

1) **AC** – Advisory Circular
2) **AOC** – Air Operator Certificate
3) **GCAA** – Ghana Civil Aviation Authority
4) **GCADs** – Ghana Civil Aviation Directives
5) **ICAO** – International Civil Aviation Organization
6) **MEL** – Minimum Equipment List
7) **PIC** - Pilot in Command
8) **SARPS** – ICAO Standards and Recommended Practices
9) **SRD** – GCAA Safety Directives Department

SECTION 2 GENERAL GUIDANCE

2.1 INSTRUCTIONS FOR THE COMPLETION OF THE RECORDS

A. The GCADs require that the instructions for completion (and interpretation) of most of these records be included in the Operations manual.

B. One of the most practical methods for instructions is to provided numbered text for each step that corresponds to numbers on the example record.

> The GCAA recommends that the numbered text be co-located with the example form, either on the same page or facing pages.

C. Where the operator uses the computer-generated text of the record, numbers corresponding to each step or element of the instructions text should be overlaid at the specific location on the record.

2.2 TRIP RECORDS RETENTION

A. Retaining the actual records available to the crew during the conduct of the flight is an excellent method for—

1) Compliance with the retention requirements; and
2) Facilitating quality audits to ensure that the associated critical procedures are effective.

> - The operator must ensure that a copy of the records is retained before the flight – most at the point of departure.
> - Once the series of flights are completed and the the trip records are in retention, the departure records may be destroyed.

B. The operator should have a process in their operations manual that outlines a chain of custody for the trip records and their movement to the retention point.

2.3 RESPONSIBILITY FOR RETENTION

A. The GCADs require the assignment of responsibility for the retention of these records to a specific person and location.

B. The name of this person and the location of each of these records will be a part of the operations specifications issued to the operator.

2.4 COMPUTER RECORDS

A. The operator may elect to have computer-generated records for the purpose of providing these the contents of these documents to the flight crew and persons involved in operational control functions.

Refer to AC 00-006 for the process for GCAA approval of a computer records system.

B. But the operator must also provide and use a hard-copy system of records that will be validated during the certification process.

The hard -copy system must be validated as effective before the GCAA will consider the initi-ation of the process for approval of a computer-generated system.

C. All computer-generated records to meet the flight preparation records requirements must have a—

1) Proven method of continuing backup of the data; and

2) Method for GCAA validation of the proper completion of the records.

SECTION 3 GCAA APPROVAL PROCESS

A. For initial certification of an operator, the approval of the submitted policies, procedures and instructions associated with these records will be accomplished during the document conformance phase.

- The pertinent manuals will be evaluated and accepted (or rejected) as a "whole" including the forms and instructions.
- But an actual copy of each proposed form must be submitted separately.

- The forms and instruction will be evaluated during the Document Conformance Phase.
- The use of these forms by operator personnel will be an emphasis item on the demonstration and/or validation flights.

B. Subsequent proposals (after issuance of an AOC) regarding the these forms and their instructions will be evaluated based on the proposed textual revisions only.

- These forms and their completion instructions will be accepted (or rejected) as a revision to a volume(s) of the operations manuals.

The use of these forms by operator personnel will be evaluated during in-flight inspections.

SECTION 4 REQUIRED OPERATOR SUBMISSIONS

4.1 IMPLEMENTATION OF PART 09 REQUIREMENTS

If the operator intends to comply with the GCAD Part 09 requirements regarding these records without exception, the following documents will be submitted with clear references to the records in the following documents—

1) A cover letter, if submitting a revision for previously approved documents;

2) A GCADs Part 09 Compliance Checklist;

A cover letter is not required if these documents are submitted with the original AOC application.

- ♦ The completed checklists should provide manual references and operator comments outlining how the operator will comply with the requirements for these forms/records.

3) Operations manual(s) [or appropriate revisions to the manual(s)];

   ♦ These documents should contain the full instructions by which the employees will comply with the requirements for flight preparation, use in flight and post-flight dissemination of the records,.

> Typically these forms and instructions will be described in different volumes of the operations manual, such as—
> - Flight Operations Manual (for general requirements)
> - Aircraft Operating Manual (for aircraft type-specific requirements.

4) Flight Operations Training Manual, or [appropriate revisions to the manual];

   ♦ This document should have curriculum segments containing training elements that indicate that the operations personnel are to receive training on their role, policies and procedures for compliance with the flight preparation and trip records requirements.
   ♦ The elements regarding completion of the load and performance manifest (as a single document or in multiple documents) may be included in the aircraft type-specific ground training.

5) Copies of actual forms proposed for the flight preparation planning, recording and tracking of events occurring in flight.

> Copies of these forms and their completion instructions will be found in appropriate volume of the operations manual.

6) If computer records are proposed, the plan for demonstration of capability and acceptable backup.

> Refer to AC 00-006 for additional guidance.

7) Software user instruction manual(s)

   ♦ This manual will be required if the operator proposes to use computer software to comply with any or all the requirements for flight preparation planning, recording and tracking specific to the records discussed in this AC.

SECTION 5 JOURNEY LOG

5.1 GENERAL

A. The journey log requirements are based on ICAO-SARPS that require the log and specific contents.

B. The information is required for all commercial air transport operations.

5.2 DISTRIBUTION & RETENTION

A. The journey logbook information will be used for the computation of flight duty time records.

B. The journey log information should be retained for at least 3 calendar months after the effective date.

   ● When consolidated with another record, the journey log information must be retained for the greater period of time.

5.3 CONTENTS OF JOURNEY LOG

When an operator is required to use a journey log, it should include the following information for each flight—

1) The operator's name;

2) Aircraft nationality and registration;

3) Names of crew members

> Refer to Appendices A, B and C for examples of hard-copy records than comply with these contents.

4) Duty assignments of crew members;
5) Signature of pilot-in-command.
6) Nature of flight (general aviation, aerial work, commercial air transport);

> The GCAA recommends that the contents of the journey log be included in the aircraft technical log.

7) A date column, followed by columns for (8) through (12) in a row format;
8) A column for the departure point;
9) A column for the arrival point;
10) A column for the out-of-chocks time of departure;
11) A column for the in-to-chocks time of arrival;
12) A column for the total hours of flight time;
13) A section for trip events and incidents

SECTION 6 AIRCRAFT TECHNICAL LOG

6.1 GENERAL

A. The aircraft technical log is internationally used to meet the flight preparation requirements of regarding the maintenance release, collection of maintenance records information and correction or deferral of maintenance defects.
B. This document is required for all commercial air transport operations.
C. The aircraft technical log will generally contain the journey log information and the contents of this Section.

6.2 DISTRIBUTION & RETENTION

A. During the operation of the aircraft, the aircraft technical log will be carried on the aircraft during the flight.
B. Unless otherwise approved by the GCAA, the duplicate pages of the aircraft technical log will be extracted and distributed as follows—
   1) To the aerodrome representative of the operator before departure or when a new maintenance release is signed.
   2) At the end of the flight, the PIC will ensure that a copy is included with the trip records and forwarded to the person responsible for operational control.
C. When the last page of the aircraft log is completed, the superseded logbook will be forwarded to operator's maintenance records section.
D. The aircraft technical log is considered a vital part of an operator's maintenance records and should maintained by the operator for 3 calendar months after the aircraft is—
   1) Sold;
   2) Returned to the lessor; or
   3) Destroyed.

6.3 CONTENTS OF THE AIRCRAFT TECHNICAL LOG

When the operator is required to use a aircraft technical log, it should include the following information—

1) The operator's name;
2) A unique page numbering system;
3) Left margin date entry column; preceding items (4) through (6) in a row format;
4) Airport entry column including the departure and arrival airport on the same row;
5) An In-service time per leg column, including takeoff and landing times on the same row,
6) Fuel and oil uplift columns, including, on the same row, the amounts for—
   (a) Uplift,
   (b) Takeoff total and
   (c) Enroute usage.
7) Method for entering defects found during flight in a column and row format, including—
   (a) A method for numbering each defect
   (b) Identifying the airport where it was entered;
   (c) A description of the defected noted;
   (d) A description of the correction or deferment of the defect;
   (e) The certificate number of the person making the correction; and
   (f) The signature or 3 letter initials of the person making the correction;
8) A method for collecting the critical summary information, such as airframe hours, landing gear cycles, etc.
9) A method for collecting any special inspection or maintenance status information that is applicable to the operator's operations, such as VOR receiver checks, ETOPS status, etc.
10) A separate provision for the current release to service, including—
    (a) The proper terminology for the release;
    (b) The name of qualified maintenance person.
11) A separate provision for the pilot's flight preparation certification that the document illustrates that the aircraft is airworthy, has the required operational equipment and proper release to service.
12) A provision for tracking the deferred defects, which may be included as a separate page or pages in the front or back of the technical log.

> Refer to Appendices A, B and C for examples of hard-copy records than comply with these con-tents.

SECTION 7 DEFERRED DEFECTS TRACKING

7.1 GENERAL

A. The deferred defects tracking form provides a methodology to control the recording and tracking of the deferral and subsequent of maintenance defects.

B. This information in this document is required to be carried on all commercial air transport operations.

7.2 DISTRIBUTION & RETENTION

A. At least 2 parallel copies of this document will be in use by the operator.

1) One copy will be carried in the aircraft with the aircraft technical log; and

2) One copy will be located at the operator's operational control location.

B. The superseded copies of this record will be maintained with the aircraft maintenance records for at least 3 calendar months after the last correction entry on the document.

7.3 CONTENTS OF THE DEFERRED DEFECTS TRACKING RECORD

A. When the operator intends to defer correction of a suspected defects in acquaintance with the MEL, these defects should be tracked in a log that includes—

1) The operator name;

2) The unique beginning and ending page numbers of the Aircraft Technical Log it is attached to;

3) For each defect—

(a) The operator's assigned tracking number;

(b) The page number of the Aircraft Technical Log containing the original entry;

(c) A description of the defect;

(d) A description of the basis for deferment;

(e) The target date of correction;

(f) The date of correction; and

(g) The page number of the Aircraft Technical Log containing the entry for the correction.

Refer to Appendix D for an example of a hard-copy form than complies with these contents.

SECTION 8 AIRCRAFT INSPECTION & CONDITION SUMMARY

8.1 GENERAL

A. The aircraft inspection and condition summary provides a method to provide a summary of the important airworthiness information required to establish the basic airworthiness of an aircraft.

B. The information in this document is required to be carried on-board during commercial air transport operations of small aircraft.

The GCAA recommends that this information be carried on all international flight of small air-craft.

8.2 DISTRIBUTION & RETENTION

A. At least 2 parallel copies of this document will be in use by the operator.

1) One copy will be carried in the aircraft with the aircraft technical log; and

2) One copy will be located at the operator's operational control location.

B. Superseded copies of this record will be maintained with the aircraft maintenance records for at least 3 calendar months after the record has been superseded.

8.3 CONTENTS OF AIRCRAFT INSPECTION & CONDITION SUMMARY

A. When an operator is required to carry on the aircraft a copy of the current Aircraft Inspection and Condition Summary, this form should include—

1) The operator's name;

2) The date the summary was made;

3) The aircraft registration;

4) The aircraft make and model;

5) The engine(s) make and model;

6) Serial numbers of the—

(a) Airframe;

(b) Engine(s); and

(c) Propellers.

7) The total time on the—

(a) airframe;

(b) engines;

(c) propellers; and

(d) propeller governors.

8) The total cycles on the—

(a) landing gear; and

(b) pressure vessel.

9) The date, hours or cycles (as appropriate) the following events were performed and are next due—

(a) Annual inspection;

(b) 100 hour inspection;

(c) Required airframe component(s) replacement times/cycles;

(d) Engine(s) inspection;

(e) Engine(s) overhaul;

(f) Required engine component(s) replacement times/cycles;

(g) Propeller inspections;

(h) Propeller overhaul;

(i) Altimeter inspection

(j) Altimetry system Inspection

(k) Transponder inspection;

(l) Emergency equipment inspection and/or replacement;

(m) Emergency locator transmitter inspection and battery replacement

(n) Aircraft re-weighing;

(o) Recurring airworthiness directives by applicable numbers;

10) The reverse side of the form will include a summary of the airworthiness directives applicable to the aircraft and engine(s) by—

(a) Last date of compliance; and

(b) General description of airworthiness directives.

B. This summary may be grouped separately for the airframe, engine(s) and components.

SECTION 9 OPERATIONAL FLIGHT PLAN

9.1 GENERAL

A. The operational flight plan is used internationally to meet the flight preparation requirements of regarding the planned routing and selected aerodromes, calculation of estimated times and fuel supply and to ensure that pertinent weather and aeronautical information has been considered.

B. The operational flight plan and related information is required for all commercial air transport operations.

9.2 DISTRIBUTION & RETENTION

A. The operational flight plan will be carried on the aircraft during the flight.

B. Unless otherwise approved by the GCAA, the duplicate copies of the operational flight planning documents be extracted and distributed as follows—

1) To the aerodrome representative of the operator before departure.

2) At the end of the flight, the PIC will ensure that a copy is included with the trip records and forwarded to the person responsible for operational control.

If a bound logbook is used to collect the infor-mation, the superseded logbook will be for-warded to operator's operational control location when the last page is completed.

C. Unless otherwise required by the GCAA, the information required for the operational flight planning must be maintained by the operator for 3 calendar months after the flight.

9.3 CONTENTS OF AN OPERATIONAL FLIGHT PLAN

A. When an operator is required to have an operational flight plan for the flight, a complete plan must include the following items—

The method of compliance may be on a single form that collects all of the information or may be a series of forms and printouts.

Refer to Appendix E for an example of a hard-copy form than complies with these contents.

1) The operator name;

2) The date;

3) Flight number (if applicable);

4) Airports involved, including—

(a) Departure point;

(b) Destination; and

(c) Required alternate airports

5) Aircraft information, including—

(a) Registration number, and

(b) Aircraft make, model, type.

6) The operational status of the aircraft with respect to possible degradation of—

(a) Aircraft performance due to deferred items;

(b) All weather operational capability;

(c) Required navigation capability;

(d) Required height-keeping capability; or

(e) ETOPS airworthiness conformance.

7) Names of assigned crew members, including—

(a) Pilot in command;

(b) Second in command;

(c) Flight engineer (if applicable);

(d) Senior cabin attendant; and

(e) All other required cabin attendants.

8) The crew member status with respect to—

(a) Special airports

(b) Special routes and areas, and

(c) Lower than standard takeoff and landing minimums.

9) Name of person authorizing the flight (flight release)

10) Signature of the pilot-in-command certifying that this flight preparation document is satisfactory.

11) A breakdown of the legs of the route in row format, including columns for—

(a) Beginning fix;

(b) Route;

(c) Distance;

(d) Magnetic course;

(e) Altitude, and

(f) Ending or transition fix;

12) The wind information for each leg in the same row format, including columns for—

(a) True or magnetic direction;

(b) Velocity; and

(c) Temperature.

13) The fuel computations for each leg in the same row format, including columns for—

(a) Groundspeed;

(b) Estimated time enroute; and

(c) fuel burn.

- If the route will be over terrain that will require special routing in the event of enroute diversion due to engine failure or loss of pressurization, these routings will be shown as alternate courses of action in the same operational flight plan.
- A planned re-release will require a separate operational flight plan.

14) The total fuel computations (by either gallons, pounds, or kilograms)—
    (a) To destination;
    (b) To alternate(s)
    (c) Minimum required reserve; and
    (d) Total minimum for flight.
15) The notam information affecting the route or aerodromes to be used.
16) The weather information for the aerodromes, routes and possible diversions, including—
    (a) Terminal observations and reports,
    (b) Terminal forecasts;
    (c) Enroute winds;
    (d) Enroute area forecasts;
    (e) Significant weather for the aircraft to be used; and
    (f) High altitude weather features (if applicable).
17) The Air Traffic Service flight plan information; and
18) The filing status of the flight plan.

SECTION 10 LOAD & PERFORMANCE MANIFEST

10.1 GENERAL

A. The load and performance manifest is used to meet the flight preparation requirements of regarding the loading of the aircraft, distribution of mass and calculations of center of gravity and performance capability.
B. The information required for the completion of a load and performance manifest is required for all commercial air transport operations.

10.2 DISTRIBUTION & RETENTION

A. The load and performance manifest will be carried on the aircraft during the flight.
B. Unless otherwise approved by the GCAA, the duplicate copies of the load manifest information must be extracted and distributed as follows—
    1) To the aerodrome representative of the operator before departure after it has been certified by the PIC.
    2) At the end of the flight, the PIC will ensure that a copy is included with the trip records and forwarded to the person responsible for operational control.

> If a bound logbook is used to collect the infor-mation, the superseded logbook will be for-warded to operator's operational control location when the last page is completed.

C. Unless otherwise required by the GCAA, the information required for the completion of the load and performance manifest must be maintained by the operator for 3 calendar months after the flight.

10.3 CONTENTS OF LOAD & PERFORMANCE MANIFEST FORM

When an operator is required to complete a consolidated load and performance manifest (or multiple documents for this purpose), the document(s) should include—

1) The operator's name;
2) The flight number (if assigned);
3) The aircraft make, model and type to which the form applies;
4) The date that the form was completed;
5) The printed name of the person preparing the form;
6) The signature of the pilot certifying that the information contained in this flight preparation form is satisfactory;
7) The departure point, including—
   (a) Length of proposed runway to be used;
   (b) Pressure altitude;
   (c) Temperature at departure time; and
   (d) Wind.
8) The destination;
9) The initial entry information for the specific aircraft, including the—
   (a) Empty weight; or
   (b) Basic/dry operating weight (as appropriate).
10) For aircraft with passenger seating of 20 or less—
   (a) The name of the person assigned to each seat;
   (b) The weight of that person including any carryon articles;
   (c) The effect of each person(s) weight on the C.G. moment; and
   (d) Total passenger weight.
11) For aircraft with passenger seating for more than 20—
   (a) The name of the passenger may be recorded in a separate manner as prescribed by the Authority;
   (b) The numbers of the weight zone or station in the passenger cabin;
   (c) The total number and weight of all passengers and articles assigned to each weight zone or station;
   (d) The effect of the weight of each zone on the C.G. moment.
   (e) Total passenger weight.
12) A unique number for each cargo area, or if large cargo capacity, each weight zone or station necessary for accurate computation of a centre of gravity, including the—
   (a) Total weight loaded in that zone;
   (b) The effect of that total on the C.G. moment;
   (c) The total weight of the cargo, baggage and mail on the aircraft.
13) The fuel computation, including the—

Refer to Appendices F and G for examples of a hard-copy form than comply with these contents.

(a) Zero fuel weight; as opposed to the

(b) Maximum zero fuel weight;

(c) Taxi fuel (if a significant factor);

(d) Minimum total fuel required for flight;

(e) Any additional total fuel loaded;

(f) The total fuel on the aircraft;

(g) The effect of the total fuel weight in each tank on the C.G moment; and

(h) The effect of the fuel burn to destination and any required alternate on the C.G. moment;

14) A computed total for the actual loaded takeoff weight

15) A computed total for the planned landing weight;

16) The possible limiting weights, including the maximum based on—

(a) Maximum structural takeoff weight;

(b) Maximum weight limitation due to runway length and other factors;

(c) Maximum climb limitation weight due to obstacles and altitude; and

(d) Maximum landing weight limitation at destination or alternate airports based on structural or performance considerations.

17) A centre of gravity calculation displayed on a C.G. envelope, that includes the computed—

(a) C.G. for takeoff;

(b) C.G. at landing; and

(c) Takeoff stabilizer setting.

18) A method for computing the effects of any last minute changes to the passengers or cargo.

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APPENDIX A
Example Aircraft Technical Log [Reciprocating-Engine]

- This is an example of a hard-copy aircraft technical log that consolidates all of the information required by international standards on a single form.
- The operator had these aircraft technical log bound in a logbook and assigned to a specific aircraft.
- This logbook provided an efficient means for record retention control by a small operator.
- It contains collection points for required maintenance record information on a reciprocating-engined aircraft.
- Note the provision of small numbers to facilitate the instructions for completion of the form.

Anywhere Airlines, Ltd

Aircraft Registration: 1A
M/M/S: 1B

AIRCRAFT TECHNICAL & JOURNEY LOG

Log Page #

RELEASE TO SERVICE FROM A REQUIRED INSPECTION		
This aircraft has been inspected in accordance with the inspection indicated and was determined to be in airworthy condition [VAR Part 4]	Inspection:	2
	Signature:	3
	Certificate #	4
	Date:	5

PIC PRE-FLIGHT CERTIFICATION		
I certify that I am satisfied that the aircraft is airworthy and equipped for the intended flight(s). [VAR Part 10]	Date of Log Page:	7
	PIC Signature	8
	Certificate #	9

FLT INFO		AIRPORTS		BLOCK TIME			TIME-IN-SERVICE				FUEL			OIL ADDED		EVENT ENTRY
Flt #	Nature	To	From	Out	In	Total	Off	On	Total		Uplift	Total	Used	#1	#2	
10	11	12	13	14	15	16	17	18	19		20	21	22	23	24	25

TOTAL TIMES/CYCLES ACCUMULATED THIS PAGE	26	29	VOR CHECK	
TOTALS BROUGHT FORWARD FROM PREVIOUS PAGE	27	30	Location:	32
TOTAL TIMES AND CYCLES TO DATE	28	31	Bearing Error:	33

MECHANICAL IRREGULARITY OR MAINTENANCE			ACTION TAKEN				RETURN TO SERVICE APPROVAL	
# 1	Flt #: 34	Airport: 35	TAT: 36	ATA: 37	Airport: 38	Date: 39	Certificate#	41
							Signature:	42
							Part #	43
							Serial # Off	44
						Trk # 46	Serial # On	45
# 2	Flt #	Airport:	TAT:	ATA:	Airport:	Date:	Certificate#	
							Signature:	
							Part #	
							Serial # Off	
						Trk #	Serial # On	
# 3	Flt #	Airport:	TAT:	ATA:	Airport:	Date:	Certificate#	
							Signature:	
							Part #	
							Serial # Off	
						Trk #	Serial # On	

Form 594-R9 [1]2009
for recip-engine applications

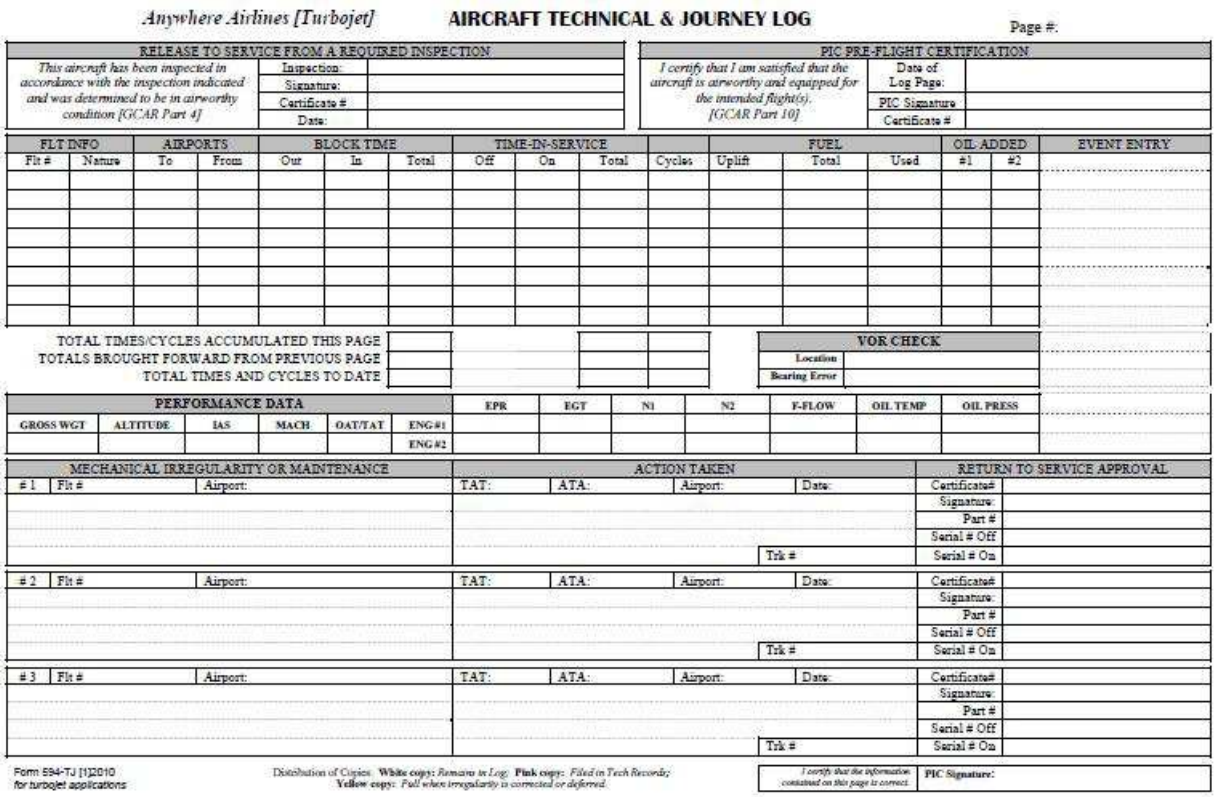
Distribution of Copies: **White copy**: *Remains in Log*; **Pink copy**: *Filed in maintenance records*; **Yellow copy**: *Pull and leave at location where irregularity is corrected or deferred.*

I certify that the information contained on this page is correct. | PIC Signature: 48

End of Appendix A

APPENDIX B
Example Aircraft Technical Log [Turboprop]

- This is an example of a hard-copy aircraft technical log that consolidates all of the information required by international standards on a single form.
- The operator had these aircraft technical log bound in a logbook and assigned to a specific aircraft.
- This logbook provided an efficient means for record retention control by a small operator.
- It contains collection points for required maintenance record information for turboprop-engined aircraft.
- Note the provision of small numbers to facilitate the instructions for completion of the form.



Anywhere Airlines [Turbojet] **AIRCRAFT TECHNICAL & JOURNEY LOG** Page #:

RELEASE TO SERVICE FROM A REQUIRED INSPECTION			PIC PRE-FLIGHT CERTIFICATION		
This aircraft has been inspected in accordance with the inspection indicated and was determined to be in airworthy condition [GCAR Part 4]	Inspection:		*I certify that I am satisfied that the aircraft is airworthy and equipped for the intended flight(s). [GCAR Part 10]*	Date of Log Page:	
	Signature:			PIC Signature	
	Certificate #			Certificate #	
	Date:				

FLT INFO		AIRPORTS		BLOCK TIME			TIME-IN-SERVICE				FUEL			OIL ADDED		EVENT ENTRY
Flt #	Nature	To	From	Out	In	Total	Off	On	Total	Cycles	Uplift	Total	Used	#1	#2	
TOTAL TIMES/CYCLES ACCUMULATED THIS PAGE																
TOTALS BROUGHT FORWARD FROM PREVIOUS PAGE																
TOTAL TIMES AND CYCLES TO DATE																

VOR CHECK	
Location	
Bearing Error	

PERFORMANCE DATA						EPR	EGT	N1	N2	F-FLOW	OIL TEMP	OIL PRESS
GROSS WGT	ALTITUDE	IAS	MACH	OAT/TAT	ENG #1							
					ENG #2							

MECHANICAL IRREGULARITY OR MAINTENANCE		ACTION TAKEN				RETURN TO SERVICE APPROVAL	
# 1	Flt # / Airport:	TAT:	ATA:	Airport:	Date:	Certificate#	
						Signature:	
						Part #	
					Trk #	Serial # Off	
						Serial # On	
# 2	Flt # / Airport:	TAT:	ATA:	Airport:	Date:	Certificate#	
						Signature:	
						Part #	
					Trk #	Serial # Off	
						Serial # On	
# 3	Flt # / Airport:	TAT:	ATA:	Airport:	Date:	Certificate#	
						Signature:	
						Part #	
					Trk #	Serial # Off	
						Serial # On	

Form 594-TJ [1]2010 for turbojet applications

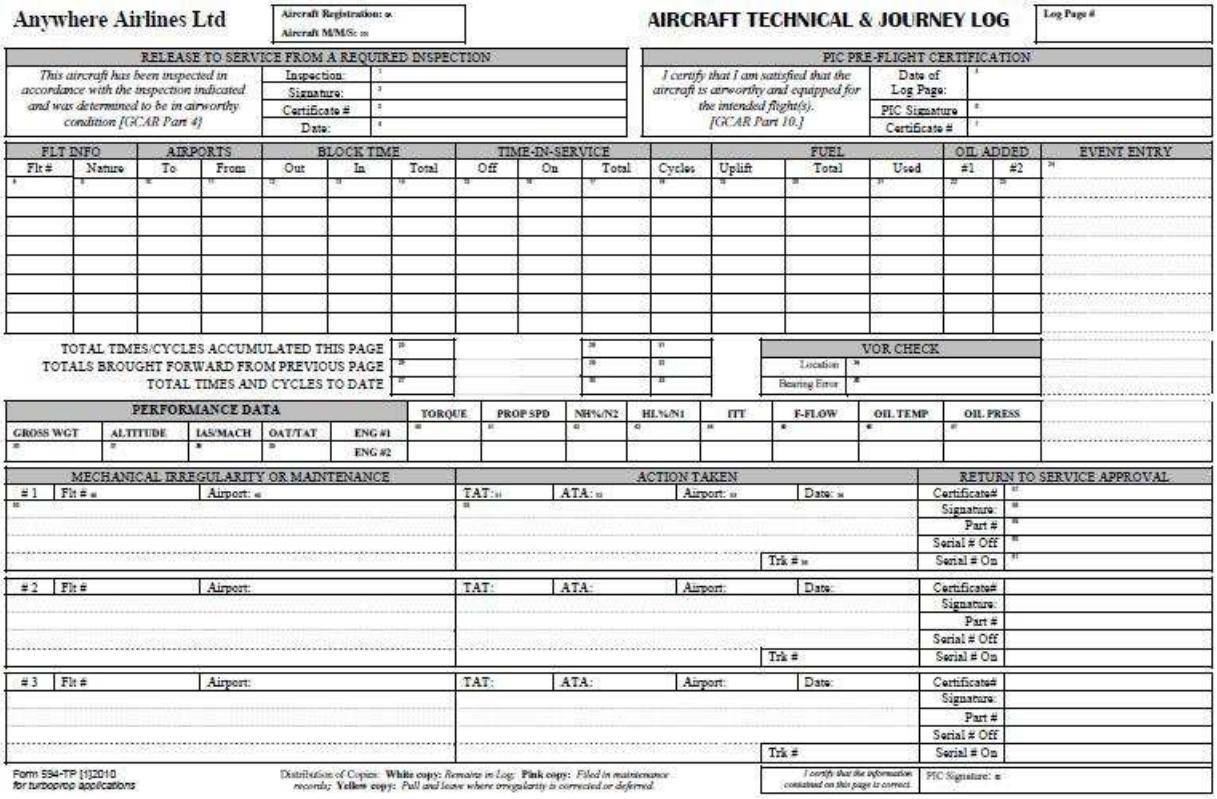
Distribution of Copies: **White copy:** *Remains in Log;* **Pink copy:** *Filed in Tech Records;* **Yellow copy:** *Pull when irregularity is corrected or deferred.*

I certify that the information contained on this page is correct. **PIC Signature:**

End of Appendix B

APPENDIX C
Example Aircraft Technical Log [Turbojet]

- This is an example of a hard-copy aircraft technical log that consolidates all of the information required by international standards on a single form.
- The operator had these aircraft technical log bound in a logbook and assigned to a specific aircraft.
- This logbook provided an efficient means for record retention control by a small operator.
- It contains collection points for required maintenance record information for turbojet-engined aircraft.



Anywhere Airlines Ltd — Aircraft Registration: — Aircraft M/M/S: — **AIRCRAFT TECHNICAL & JOURNEY LOG** — Log Page #

RELEASE TO SERVICE FROM A REQUIRED INSPECTION		PIC PRE-FLIGHT CERTIFICATION	
This aircraft has been inspected in accordance with the inspection indicated and was determined to be in airworthy condition [GCAR Part 4]	Inspection:	*I certify that I am satisfied that the aircraft is airworthy and equipped for the intended flight(s). [GCAR Part 10.]*	Date of Log Page:
	Signature:		PIC Signature
	Certificate #		Certificate #
	Date:		

FLT INFO		AIRPORTS		BLOCK TIME			TIME-IN-SERVICE				FUEL			OIL ADDED		EVENT ENTRY
Flt #	Nature	To	From	Out	In	Total	Off	On	Total	Cycles	Uplift	Total	Used	#1	#2	

TOTAL TIMES/CYCLES ACCUMULATED THIS PAGE
TOTALS BROUGHT FORWARD FROM PREVIOUS PAGE
TOTAL TIMES AND CYCLES TO DATE

VOR CHECK: Location — Bearing Error

PERFORMANCE DATA					TORQUE	PROP SPD	NH%/N2	HL%/N1	ITT	F-FLOW	OIL TEMP	OIL PRESS
GROSS WGT	ALTITUDE	IAS/MACH	OAT/TAT	ENG #1								
				ENG #2								

MECHANICAL IRREGULARITY OR MAINTENANCE			ACTION TAKEN				RETURN TO SERVICE APPROVAL	
# 1	Flt #	Airport:	TAT:	ATA:	Airport:	Date:	Certificate#	
							Signature:	
						Trk #	Part #	
							Serial # Off	
							Serial # On	
# 2	Flt #	Airport:	TAT:	ATA:	Airport:	Date:	Certificate#	
							Signature:	
						Trk #	Part #	
							Serial # Off	
							Serial # On	
# 3	Flt #	Airport:	TAT:	ATA:	Airport:	Date:	Certificate#	
							Signature:	
						Trk #	Part #	
							Serial # Off	
							Serial # On	

Form 594-TP [1]2010 for turboprop applications

Distribution of Copies: **White copy:** *Remains in Log;* **Pink copy:** *Filed in maintenance records;* **Yellow copy:** *Pull and leave where irregularity is corrected or deferred.*

I certify that the information contained on this page is correct. — PIC Signature:

End of Appendix C

APPENDIX D
Deferred Defects Tracking Log

This example form was found to be in compliance with the international and GCAD requirements for tracking the deferral of a defects in accordance with the MEL.

- Note the provision of small numbers to facilitate the instructions for completion of the form.

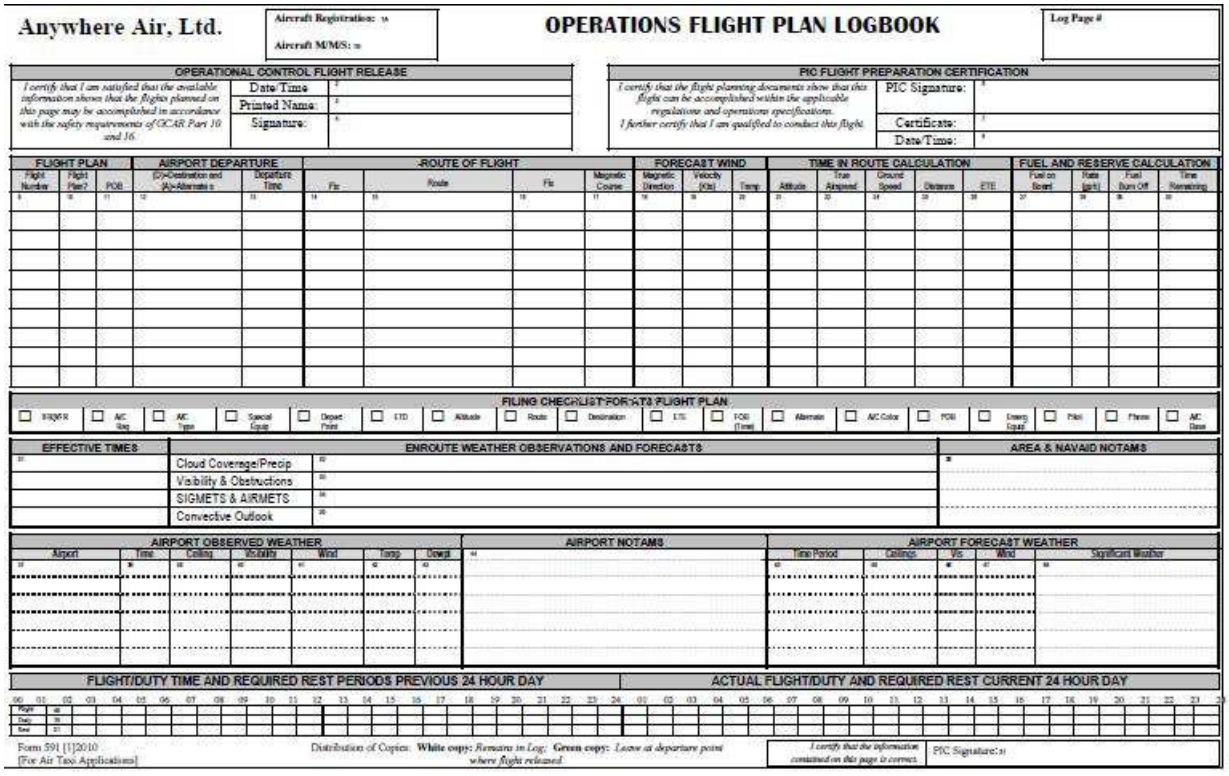
DEFERRED DEFECT LOG

TRACKING # / MEL REF #	DEFERRED DEFECT	Item # / ATJL Page #	Date Deferred / Station	Correct-by Date / MEL Category	Date Corrected / ATJL Page #
1 / 2	3	4 / 5	6 / 7	8 / 9	10 / 11

End of Appendix D

APPENDIX E
Example Operations Flight Plan

- This is an example of a hard-copy operations flight plan that consolidates all of the information required by international standards on a single form.
- The operator had these operations flight plan forms bound in a logbook and assigned to a specific aircraft.
- This logbook provided an efficient means for record retention control by a small operator.
- Note the provision of small numbers to facilitate the instructions for completion of the form.



Anywhere Air, Ltd.

Aircraft Registration: 9
Aircraft M/M/S: 10

OPERATIONS FLIGHT PLAN LOGBOOK

Log Page #

OPERATIONAL CONTROL FLIGHT RELEASE

I certify that I am satisfied that the available information shows that the flights planned on this page may be accomplished in accordance with the safety requirements of CCAR Part 10 and 16.

Date/Time: 1
Printed Name: 2
Signature: 3

PIC FLIGHT PREPARATION CERTIFICATION

I certify that the flight planning documents show that this flight can be accomplished within the applicable regulations and operations specifications.
I further certify that I am qualified to conduct this flight.

PIC Signature: 4
Certificate: 5
Date/Time: 6

FLIGHT PLAN | AIRPORT DEPARTURE | ROUTE OF FLIGHT | FORECAST WIND | TIME IN ROUTE CALCULATION | FUEL AND RESERVE CALCULATION

Flight Number | Flight Plan? | POB | (D)=Destination and (A)=Alternate s | Departure Time | Fix | Route | Fix | Magnetic Course | Magnetic Direction | Velocity (Kts) | Temp | Altitude | True Airspeed | Ground Speed | Distance | ETE | Fuel on Board | Rate (gph) | Fuel Burn Off | Time Remaining

FILING CHECKLIST FOR ATS FLIGHT PLAN

☐ IFR/VFR | ☐ A/C Reg | ☐ A/C Type | ☐ Special Equip | ☐ Depart Point | ☐ ETD | ☐ Altitude | ☐ Route | ☐ Destination | ☐ ETE | ☐ POB (Time) | ☐ Alternate | ☐ A/C Color | ☐ POB | ☐ Emerg Equip | ☐ Pilot | ☐ Phone | ☐ A/C Base

EFFECTIVE TIMES 37

ENROUTE WEATHER OBSERVATIONS AND FORECASTS

Cloud Coverage/Precip	40
Visibility & Obstructions	39
SIGMETS & AIRMETS	38
Convective Outlook	36

AREA & NAVAID NOTAMS 35

AIRPORT OBSERVED WEATHER

Airport | Time | Ceiling | Visibility | Wind | Temp | Dewpt

AIRPORT NOTAMS 44

AIRPORT FORECAST WEATHER

Time Period | Ceilings | Vis | Wind | Significant Weather

FLIGHT/DUTY TIME AND REQUIRED REST PERIODS PREVIOUS 24 HOUR DAY

00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Flight 48
Duty 49
Rest 51

ACTUAL FLIGHT/DUTY AND REQUIRED REST CURRENT 24 HOUR DAY

00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Form 591 [1]2010
[For Air Taxi Applications]

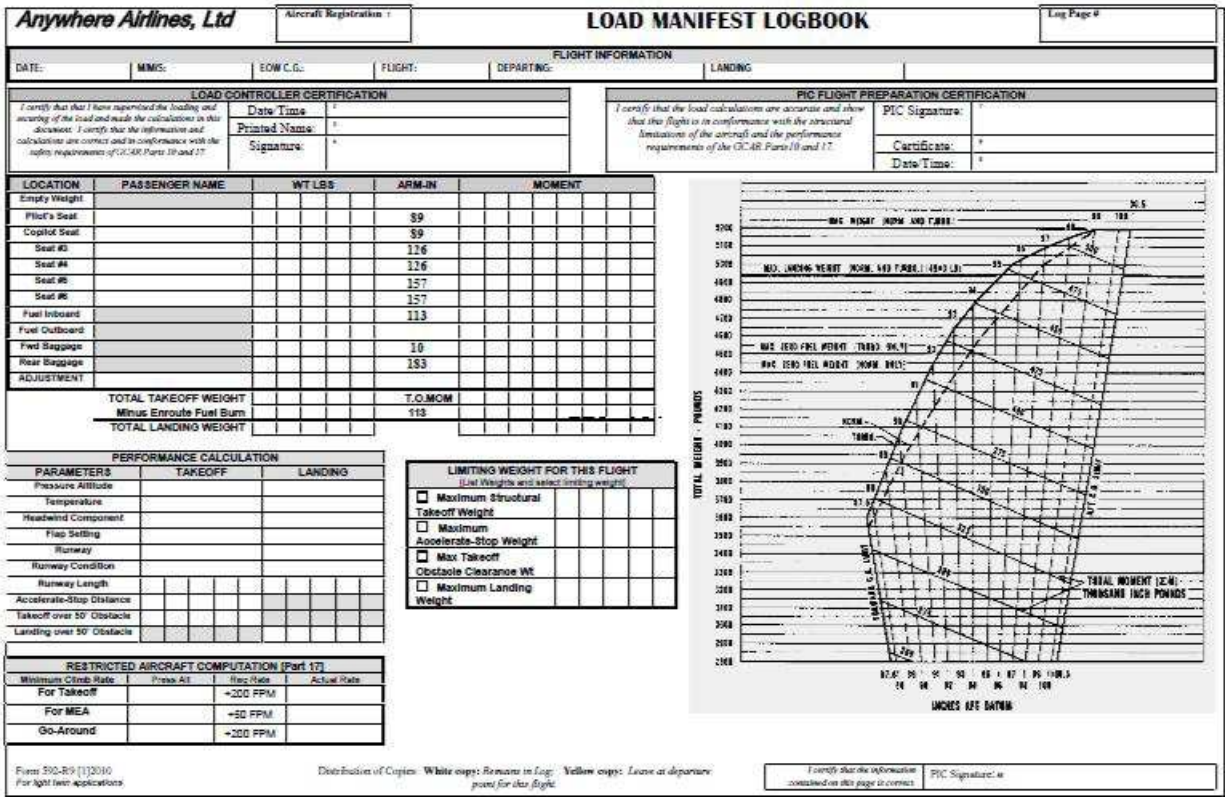
Distribution of Copies: **White copy:** *Remains in Log;* **Green copy:** *Leave at departure point where flight released.*

I certify that the information contained on this page is correct. PIC Signature: 52

End of Appendix E

APPENDIX F
Example Load & Performance Manifest [Light-Twin]

- This is an example of a hard-copy load and performance manifest that consolidates all of the information required by international standards on a single form.
- The operator had these manifest forms bound in a logbook and assigned to a specific aircraft.
- This logbook provided an efficient means for record retention control by a small operator.



Anywhere Airlines, Ltd

Aircraft Registration :

LOAD MANIFEST LOGBOOK

Log Page #

FLIGHT INFORMATION

DATE: | MMS: | EOW C.G.: | FLIGHT: | DEPARTING: | LANDING

LOAD CONTROLLER CERTIFICATION

I certify that that I have supervised the loading and securing of the load and made the calculations in this document. I certify that the information and calculations are correct and in conformance with the safety requirements of CCAR Parts 10 and 17

Date/Time:

Printed Name:

Signature:

PIC FLIGHT PREPARATION CERTIFICATION

I certify that the load calculations are accurate and show that this flight is in conformance with the structural limitations of the aircraft and the performance requirements of the CCAR Parts 10 and 17.

PIC Signature:

Certificate:

Date/Time:

LOCATION	PASSENGER NAME	WT LBS	ARM-IN	MOMENT
Empty Weight				
Pilot's Seat			89	
Copilot Seat			89	
Seat #3			126	
Seat #4			126	
Seat #5			157	
Seat #6			157	
Fuel Inboard			113	
Fuel Outboard				
Fwd Baggage			10	
Rear Baggage			183	
ADJUSTMENT				
TOTAL TAKEOFF WEIGHT			T.O.MOM	
Minus Enroute Fuel Burn			113	
TOTAL LANDING WEIGHT				

PERFORMANCE CALCULATION

PARAMETERS	TAKEOFF	LANDING
Pressure Altitude		
Temperature		
Headwind Component		
Flap Setting		
Runway		
Runway Condition		
Runway Length		
Accelerate-Stop Distance		
Takeoff over 50' Obstacle		
Landing over 50' Obstacle		

LIMITING WEIGHT FOR THIS FLIGHT

(List Weights and select limiting weight)

- ☐ Maximum Structural Takeoff Weight
- ☐ Maximum Accelerate-Stop Weight
- ☐ Max Takeoff Obstacle Clearance Wt
- ☐ Maximum Landing Weight

RESTRICTED AIRCRAFT COMPUTATION (Part 17)

Minimum Climb Rate	Press Alt	Req Rate	Actual Rate
For Takeoff		+200 FPM	
For MEA		+50 FPM	
Go-Around		+200 FPM	

TOTAL WEIGHT - POUNDS

TOTAL MOMENT (Z-M) - THOUSAND INCH POUNDS

INCHES AFT DATUM

Form 590-R9 [1]2010 For light twin applications

Distribution of Copies: White copy: Remains in Log; Yellow copy: Leave at departure point for this flight.

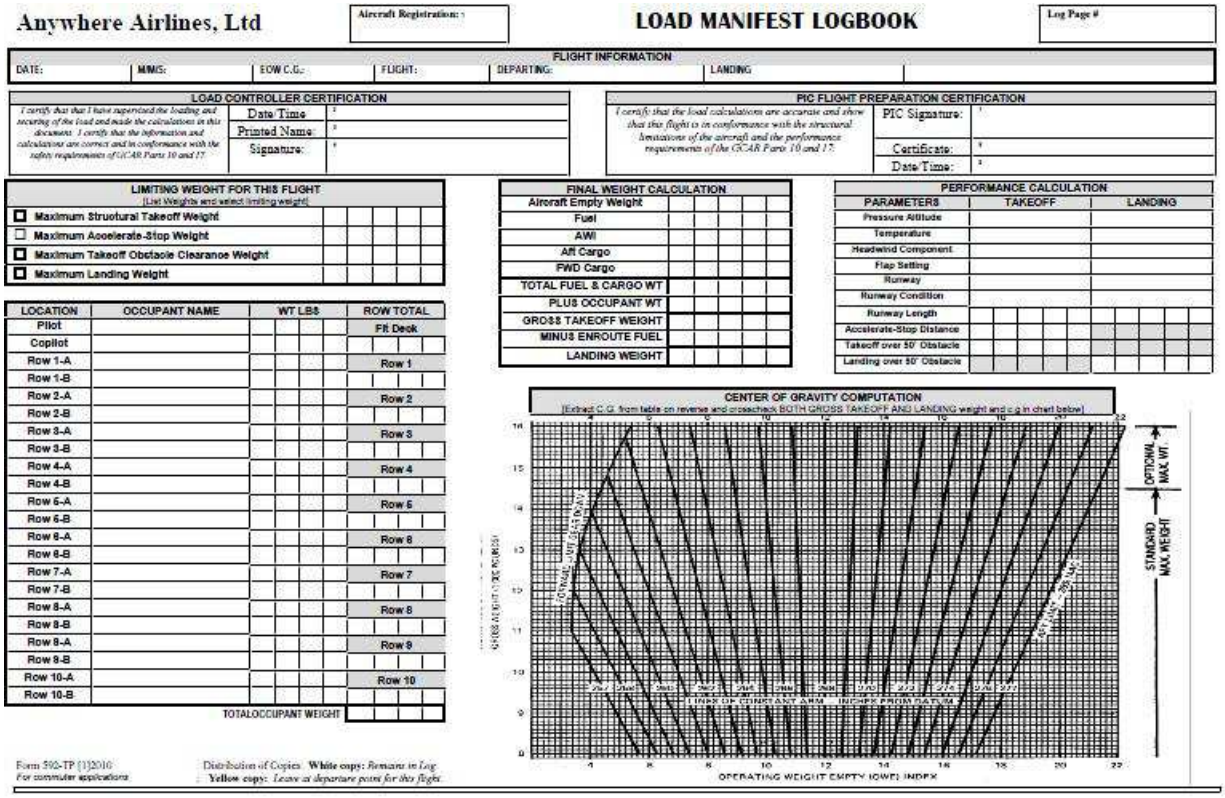
I certify that the information contained on this page is correct.

PIC Signature:

End of Appendix F

APPENDIX G
Example Load & Performance Manifest [Commuter]

- This is an example of a hard-copy load and performance manifest that consolidates all of the information required by international standards on a single form.
- The operator had these manifest forms bound in a logbook and assigned to a specific aircraft.
- This logbook provided an efficient means for record retention control by a small operator.



Anywhere Airlines, Ltd — Aircraft Registration: — **LOAD MANIFEST LOGBOOK** — Log Page #

FLIGHT INFORMATION

DATE:	MMS:	EOW C.G.:	FLIGHT:	DEPARTING:	LANDING

LOAD CONTROLLER CERTIFICATION

I certify that that I have supervised the loading and securing of the load and made the calculations in this document. I certify that the information and calculations are correct and in conformance with the safety requirements of GCAR Parts 10 and 15.

Date/Time	
Printed Name	
Signature:	

PIC FLIGHT PREPARATION CERTIFICATION

I certify that the load calculations are accurate and show that this flight is in conformance with the structural limitations of the aircraft and the performance requirements of the GCAR Parts 10 and 15.

PIC Signature:	
Certificate:	
Date/Time:	

LIMITING WEIGHT FOR THIS FLIGHT
[List Weights and select limiting weight]

- ☐ Maximum Structural Takeoff Weight
- ☐ Maximum Accelerate-Stop Weight
- ☐ Maximum Takeoff Obstacle Clearance Weight
- ☐ Maximum Landing Weight

FINAL WEIGHT CALCULATION

Aircraft Empty Weight	
Fuel	
AWI	
Aft Cargo	
FWD Cargo	
TOTAL FUEL & CARGO WT	
PLUS OCCUPANT WT	
GROSS TAKEOFF WEIGHT	
MINUS ENROUTE FUEL	
LANDING WEIGHT	

PERFORMANCE CALCULATION

PARAMETERS	TAKEOFF	LANDING
Pressure Altitude		
Temperature		
Headwind Component		
Flap Setting		
Runway		
Runway Condition		
Runway Length		
Accelerate-Stop Distance		
Takeoff over 50' Obstacle		
Landing over 50' Obstacle		

LOCATION	OCCUPANT NAME	WT LBS	ROW TOTAL
Pilot			Flt Deck
Copilot			
Row 1-A			Row 1
Row 1-B			
Row 2-A			Row 2
Row 2-B			
Row 3-A			Row 3
Row 3-B			
Row 4-A			Row 4
Row 4-B			
Row 5-A			Row 5
Row 5-B			
Row 6-A			Row 6
Row 6-B			
Row 7-A			Row 7
Row 7-B			
Row 8-A			Row 8
Row 8-B			
Row 9-A			Row 9
Row 9-B			
Row 10-A			Row 10
Row 10-B			
	TOTAL OCCUPANT WEIGHT		

CENTER OF GRAVITY COMPUTATION
[Extract C.G. from table on reverse and cross-check BOTH GROSS TAKEOFF AND LANDING weight and c.g. in chart below]

Form 592-TP (1)2010 — For commuter applications

Distribution of Copies: **White copy:** *Remains in Log* — **Yellow copy:** *Leave at departure point for this flight.*

End of Advisory Circular

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