NOT MEASUREMENT SENSITIVE

MIL-PRF-5920F(USAF)
11 July 1996
SUPERSEDING
MIL-M-5920E(USAF)
6 July 1993

PERFORMANCE SPECIFICATION

MANUALS, TECHNICAL: SAMPLE BASIC WEIGHT CHECKLISTS AND LOADING DATA

This specification is approved for use by the Department of the Air Force and is available for use by all departments and agencies of the Department of Defense.

1. SCOPE.

1.1 Scope. This specification covers the preparation of the Sample Basic Weight Checklists and Loading Data aircraft manuals. These manuals consist of TO 1X-XXXX-5-1, Sample Basic Weight Checklists (Chart A) and TO 1X-XXXX-5-2, Loading Data (Chart E) as approved for use in TO 1-1B-40 and development under provisions of MIL-W-25140. In addition to "paper" delivery, this specification provides for electronic delivery of data through the use of the Document Type Definitions (DTD) contained in Appendixes A and B.

1.2 Detail. The level of detail contained in this performance specification is necessary to comply with the requirements of the Joint Computer-aided Acquisition and Logistics Support (JCALS) system.

2. APPLICABLE DOCUMENTS.

2.1 General. The documents listed in this section are specified in sections 3 and 4 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3 and 4 of this specification, whether or not they are listed.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: HQ ESC/AV-2, 4027 Col Glenn Hwy, Suite 300, Dayton, OH 45431-1672 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC: F6921 **AREA TMSS**

Distribution Statement A. Approved for public release; distribution is unlimited.

2.2 Government documents.

2.2.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

SPECIFICATIONS

Military

MIL-W-25140 - Weight and Balance Control System (For Aircraft and Rotorcraft)

STANDARDS

Military

MIL-STD-38784 - Manuals, Technical: General Style and Format Requirements

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Standardization Documents Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.2.2 Other government documents, drawings, and publications. The following other government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation (see 6.2).

PUBLICATIONS

Air Force Technical Manuals

TO 1-1B-40 - Weight and Balance Data

TO 1-1B-50 - Basic Technical Order for USAF Aircraft Weight and Balance

(Copies of documents required by contractors in connection with specific procurement functions should be obtained from the acquiring activity or as directed by the contracting officer.)

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. **REQUIREMENTS**.

3.1 Source of technical data. Charts A and E shall be used as the contents of TO 1X-XXXX-5-1 (Sample Basic Weight Checklists) and TO 1X-XXXX-5-2 (Loading Data) manuals for the applicable Type/Model/Series aircraft or rotorcraft (see 6.2). The contractor shall prepare this data, using MIL-W-25140, for Air Force completion of the Weight and Balance Handbook. This data shall be for representative or individual aircraft as specified in TO 1-1B-50.

3.2 Development and preparation. The general manner of development and preparation for manuals shall be in accordance with the requirements of MIL-STD-38784.

3.3 Sample basic weight checklists (TO 1X-XXXX-5-1). The sample Basic Weight Checklists and diagrams shall be legible, either when the manual is viewed vertically (normal reading position), or when the manual is rotated 90 degrees clockwise from the vertical position.

3.3.1 Sample basic weight checklists manual arrangement. The contractor shall use the Document Type Definition (DTD) in Appendix A, if electronic delivery of this manual is required (see 6.2). Each sample Basic Weight Checklists manual shall consist of the following:

a. Front Matter

b. Chapter 1 - Introduction

c. Chapter 2 - Sample Basic Weight Checklists (Chart A)

3.3.1.1 Front matter. The front matter shall consist of a title page, list of effective pages, and table of contents in accordance with the requirements of MIL-STD-38784, with the following exceptions.

3.3.1.1.1 Sample basic weight checklists title. The words "SAMPLE BASIC WEIGHT CHECKLISTS" shall be used as the type of publication. The aircraft type designation shall be used as the prime title.

3.3.1.2 Chapter 1 - Introduction. Chapter 1 shall contain the foreword/preface/introduction requirements of MIL-STD-38784. In addition, it shall include an explanation of how to use and maintain the sample Chart A, and create a new Chart A (see Figure 1).

3.3.1.3 Chapter 2 - Sample basic weight checklists (chart A). Chapter 2 shall begin by identifying the sample Basic Weight Checklists contained in the manual (see Figure 2). The remainder of Chapter 2 shall consist of the sample Basic Weight Checklists. These lists shall be identical to the final approved Chart A, as specified in 3.1, except that the words "Sample Only" shall be printed immediately following the aircraft Type/Model/Series designation in the Model/Design/Series block and the "RECORD OF CHECKING" columns shall be blank. Unless otherwise specified by the acquiring activity, illustrations of the Chart A item locations shall be included, and shall be inserted as a facing page to the corresponding items listing (see Figure 3 and 6.2).

3.4 Loading data (TO 1X-XXXX-5-2). Loading Data, charts, tables, and diagrams shall be legible either when the manual is viewed vertically (normal reading position), or when the manual is rotated 90 degrees clockwise from the vertical position.

3.4.1 Loading data manual arrangement. The contractor shall use the Document Type Definition (DTD) in Appendix B, if electronic delivery of this manual is required (see 6.2). Each Loading Data manual shall consist of the following:

a. Front Matter

b. Chapter 1 - Introduction

c. Chapter 2 - Loading Data

3.4.1.1 Front matter. The front matter shall consist of a title page, list of effective pages, table of contents, list of illustrations, and list of tables in accordance with the requirements of MIL-STD-38784, with the following exceptions.

3.4.1.1.1 Loading data title. The words "LOADING DATA" shall be used as the type of publication. The aircraft type designation shall be used as the prime title.

3.4.1.2 Chapter 1 -Introduction. Chapter 1 shall contain the foreword/preface/introduction requirements of MIL-STD-38784. In addition, it shall include a weight and balance classification reference, and an explanation of how to use the Chart E (see Figure 4).

3.4.1.3 Chapter 2 - Loading Data. Chapter 2 shall begin by delineating weight and balance control requirements, aircraft weighing requirements and intervals, and the contained Loading Data (Chart E). The weighing intervals shall be determined by the acquiring activity (see 6.2). (see Figures 5 and 6). The remainder of Chapter 2 shall consist of the Loading Data identical to the final approved Chart E as specified in 3.1. Chart E shall begin with general aircraft weighing instructions, aircraft diagram, and general notes affecting aircraft loading. The remaining Chart E content, such as loading tables, graphs, etc., shall appear in the order of use on the Form F - Weight and Balance Clearance Form (DD Form 365-4), as represented in Figures 5, 6, and 7. Necessary Chart E additions or deletions shall be made as specified or approved by the acquiring activity (see 6.2).

4. **VERIFICATION.**

4.1 Verification. Unless otherwise specified in the contract or purchase order:

a. Validity of the accuracy and scope of the weight and balance manuals, and user interface functionality shall be the responsibility of the contractor (see 6.4.1).

b. The contractor shall provide suitable facilities to perform the validation functions specified herein.

c. The contractor's existing quality assurance (QA) procedures shall be used.

d. The government reserves the right to review any of the verifications when such reviews are deemed necessary to ensure supplies and services conform to the prescribed contractual requirements.

4.1.1 Minimum verification requirements. As a minimum, verification shall ensure the following:

a. Suitability of the manual for the intended environment.

b. Usability by the intended users.

c. Compatibility with other government systems.

4.1.2 Compliance. All manuals shall meet all requirements of Sections 3 and 5 of this specification and the appropriate DTD appendix, as required by the acquiring activity (see 6.2). The requirements set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any requirements in this specification shall not relieve the contractor of the responsibility of ensuring that all products or supplies, submitted to the

government for acceptance, comply with all requirements of the contract. Use of sampling inspections shall be at the discretion of the contractor, and in accordance with commercially acceptable quality assurance procedures. However, use of sampling in QA procedures does not authorize submission of known defective material, either indicated or actual, nor does it commit the government to accept defective material.

5. **PACKAGING.**

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of material is to be performed by DoD personnel, these personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activity within the Military Department or Defense Agency, or within the Military Department's System Command. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

6. **NOTES.**

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. The technical manuals prepared in accordance with this document provide required information to service activities for the preparation of checklists that will be inserted into the Weight and Balance Handbook for individual aircraft. The necessary Loading Data and restrictions required to complete DD Form 365-4 will also be provided. These manuals provide guidance and instruction for specific Type/Model/Series aircraft to better facilitate compliance with weight and balance requirements. In addition, the Sample Basic Weight Checklists and Loading Data manuals serve as the baseline for updating individual aircraft Weight and Balance Handbooks.

6.2 Acquisition requirements. Acquisition documents must specify the following:

a. Title, number, and date of this document.

b. Issue of the DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.2.1, 2.2.2).

c. Charts A and E, as approved by the acquiring activity engineering personnel (see 3.1).

d. If electronic delivery of the manuals is required (see 3.3.1, 3.4.1).

e. If illustrations of the Chart A item locations are to be other than as specified in this document (see 3.3.1.3).

f. The weighing intervals to be included (see 3.4.1.3).

g. If Chart E additions or deletions are to be made (see 3.4.1.3).

h. If representative aircraft are within ± percent MAC CG and ± pounds (see Figure 5, 2.1.1.2).

i. Address of logistics center assigned maintenance engineering responsibility for the specific type aircraft (see Figures 5 and 6, 2.1.3).

j. If specific weighing requirements are to be specified as subparagraphs (see Figure 6, 2.1.2.1).

k. Packaging requirements (see 5.1).

6.3 Acronyms. The acronyms used in this document are defined as follows:

AFI	- Air Force Instruction
CG	- Center of Gravity
DD	- Defense Department
DOD	- Department of Defense
DODISS	- Department of Defense Index of Specifications and Standards
DTD	- Document Type Definition
MAC	- Mean Aerodynamic Chord
TCTO	- Time Compliance Technical Order
TO	- Technical Order

6.4 Definitions. To clarify the terms used throughout this specification, the following definitions are given:

6.4.1 Verification. Verification (section 4), in the context of this specification equates to the contractor's quality assurance program for validating the content of the manuals. Suggested validation methods include:

a. Actual performance. Using production configured equipment, hands-on performance of the procedure using the technical instructions as written.

b. Simulation. Using production configured equipment and the manual, simulate the actions required by the task steps.

c. Table top analysis. Primarily for nonprocedural data, compare the technical content to source data to ensure the technical accuracy and depth of coverage.

6.4.2 Mean aerodynamic chord. An engineering term which represents an airfoil's chord in aircraft design. It is a constant length which is used in the calculation of center of gravity locations in terms of percent of MAC.

6.5 Aircraft weight and balance classification. Aircraft weight and balance classifications (Class 1 and Class 2 aircraft) are defined in MIL-W-25140 and TO 1-1B-50.

6.6 Charts A and E. Chart A is the DD Form 365-1, Basic Weight Checklist Record. Chart E is not a standard form, but may be any of the graphs, charts, or tables that are contained in TO 1X-XXXX-5-2 that provides loading data.

6.7 Technical manuals. The requirement for technical manuals should be considered when this specification is applied on a contract. If technical manuals are required, specifications and standards that have been cleared and listed in DoD 5010.12-L, Acquisition Management Systems and Data Requirements Control List (AMSDL) must be listed on a separate Contract Data Requirements List (DD Form 1423), which is included as an exhibit to the contract. The technical manuals must be acquired under a separate contract line item in the contract.

6.8 Subject term (key word) listing.

Arm
Chart A
Chart E
Class 1 Aircraft
Class 2 Aircraft
DD Form 365
Form F
Loading Data
Moment
Weight and Balance
Percent MAC

6.9 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

CHAPTER 1 INTRODUCTION

1.1 PURPOSE AND SCOPE.

This technical manual contains Sample Basic Weight Checklists (Charts A) which are applicable to model F-15 aircraft. These charts are intended to assist using personnel in complying with the requirements of TO 1-1B-50 by providing data for insertion into the Weight and Balance Handbook.

1.2 HOW TO USE SAMPLE CHARTS A.

The Sample Charts A are tabulations of all fixed operating equipment items which have definite locations, may be installed, or are alternate installations for standard equipment items in the aircraft. The weight, arm, and simplified moment are given for each Chart A item. The Sample Charts A presented herein are intended to be used only as a guide in preparing a new Basic Weight Checklist for insertion into the Weight and Balance Handbook for representative or individual aircraft. Do not use sample Chart A to inventory equipment on the aircraft. Detailed procedures for preparing and maintaining Basic Weight Checklists (Chart A) are contained in TO 1-1B-40.

1.3 CREATING NEW CHARTS A.

When it is necessary to create a new Chart A, use the enclosed Sample Basic Weight Checklist in the Weight and Balance Handbook by deleting or crossing out the words "SAMPLE ONLY" on each page, and adjusting the items to match the individual aircraft configuration. Do this by crossing out those items not applicable to the aircraft, and adding new items, as appropriate. When the Sample Basic Weight Checklists are converted to the individual aircraft configuration, maintain it as a checklist, not as part of TO 1X-XXXX-5-1.

1.4 ROUND OFF.

The weights and arms are rounded to whole numbers. Simplified moments are rounded to one decimal place. Use the arm for inventorying the aircraft, and the weight and moment for weight tracking. Because of the round off error, multiplying weight times arm may not reflect the published moment; likewise, a moment divided by weight may not reflect the published arm.

1.5 RECORD OF APPLICABLE TIME COMPLIANCE TECHNICAL ORDERS (TCTO).

The record of applicable time compliance technical orders is a list of all TCTOs which affect the technical content (text or illustrations) of this manual. The Change/Revision/Supplement Data column lists the date of issue when each change was (or will be) incorporated into this manual. Only currently effective changes are listed. A TCTO is deleted from the list when either the applicable equipment configuration is no longer covered in the publication, or it is rescinded, superseded, or replaced.

1-6 YOUR RESPONSIBILITY TO LET US KNOW.

Every effort is made to keep the manual current; however, we cannot correct an error unless we know of its existence. In this regard it is essential that you do your part. Comments, corrections, and questions regarding this manual, or any phase of the basic weight and loading data, are welcome. These should be forwarded on AF Form 847 as directed by AFI 11-215 through your command headquarters.

FIGURE 1. Example chapter 1, introduction - sample basic weight checklists manual.

CHAPTER 2 SAMPLE BASIC WEIGHT CHECKLISTS (CHARTS A)

2.1 PURPOSE.

The Sample Basic Weight Checklists contained herein are to be used only as guides for preparing new Charts A for insertion into the Weight and Balance Handbook for representative or individual aircraft. Preparation procedures for Chart A are found in T.O. 1-1B-40.

2.2 SAMPLE CHART A, F-15A, 72-113 THRU 72-115 AND 72-119.

Figure 2-1 contains Chart A data which reflects an aircraft configuration which is representative of Air Force Serial Number 72-113 thru 72-115 and 72-119 aircraft. The physical location of each fixed equipment item is shown in the view on the facing page opposite the Chart A listing.

2.3 SAMPLE CHART A, F-15A 73-085 AND UP.

Figure 2-2 contains Chart A data which reflects an aircraft configuration which is representative of Air Force Serial Number 73-085 and up aircraft. The physical location of each fixed equipment item is shown in the view on the facing page opposite the Chart A listing.

2.4 SAMPLE CHART A, TF-15A 73-108 AND UP.

Figure 2-3 contains Chart A data which reflects a model TF-15A aircraft configuration and is representative of Air Force Serial Number 73-108 and up aircraft. The physical location of each fixed equipment item is shown in the view on the facing page opposite the Chart A listing.

FIGURE 2. Example chapter 2 lead-in, sample basic weight checklists manual.

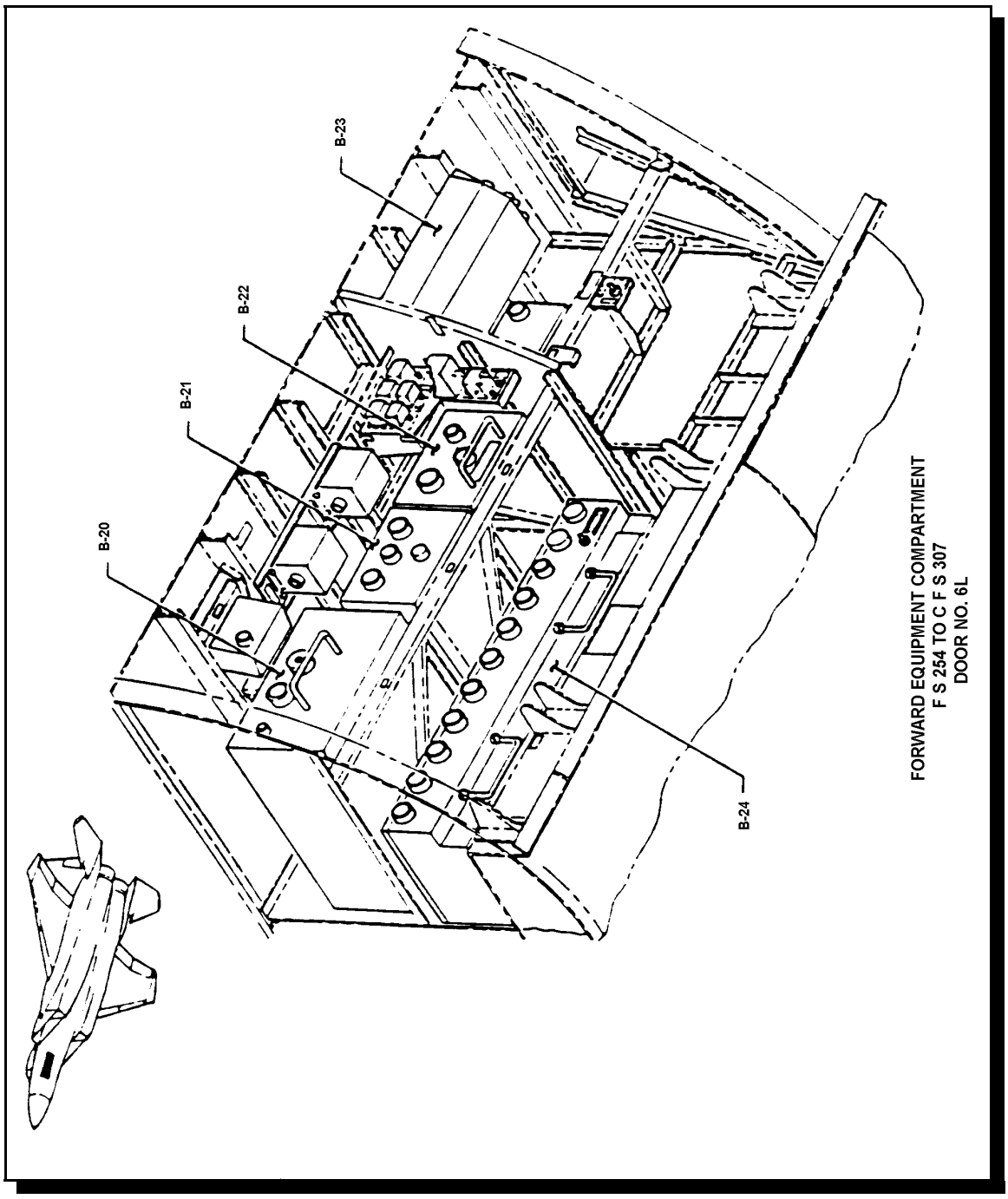

FIGURE 3. Example chapter 2, sample basic weight checklists - sample basic weight checklists manual.

Form Approved. OMB No. 0704-0188

FOR USE WITH T.O. 1-1B-40, NAVAIR 01-1B-40, AND TM-55-1500-342-23

CHART A - BASIC WEIGHT CHECKLIST RECORD

Public reporting burden for this collection of information is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

PAGE OF PAGES	MODEL/DESIGN/SERIES	SERIAL NUMBER
	F-15 A (SAMPLE ONLY)	

COMPARTMENT AND ITEM NUMBER	ITEMS AND LOCATION *(Grouped by compartment)*	WEIGHT	ARM	MOMENT 1000 *(Enter constant used below line)*
B	FORWARD EQUIPMENT COMPARTMENT F S 254 to 307			
	DOOR NO. 6L			
B-20	Central Computer	40	262	10.5
B-21	Processor - Signal Data VSD CP-1088/A	21	274	5.8
B-22	Symbol Generator Unit HUD CP-1111/AVQ	17	283	4.8
B-23	Panel - Circuit Breaker 68A870697	6	296	1.8
B-24	Converter Programmer ACS	38	273	10.4

RECORD OF CHECKING *(Enter Date) (YYMMDD)*

1		2		3		4		5		6		7		8		9	
IN AIRCRAFT	CHART C ENTRY	IN AIRCRAFT	CHART C ENTRY	IN AIRCRAFT	CHART C ENTRY	IN AIRCRAFT	CHART C ENTRY	IN AIRCRAFT	CHART C ENTRY	IN AIRCRAFT	CHART C ENTRY	IN AIRCRAFT	CHART C ENTRY	IN AIRCRAFT	CHART C ENTRY	IN AIRCRAFT	CHART C ENTRY

DD Form 365-1, FEB 90 (EG) *Previous editions are obsolete.* Designed using Perform Pro, WHS/DIOR, Feb 95

FIGURE 3. Example chapter 2, sample basic weight checklists - sample basic weight checklists manual - Continued.

CHAPTER 1 INTRODUCTION

1.1 PURPOSE AND SCOPE

This technical manual contains Loading Data (Chart E) which are applicable to Model F-15A aircraft. These charts are intended to assist using personnel in complying with the requirements of TO 1-1B-50 by providing data for insertion into the DD365 series forms for *(representative/ individual) aircraft. This information is of a specific nature and, except where specifically stated herein, does not relieve any of the general requirements for USAF aircraft weight and balance found in TO 1-1B-50. *(Contractor, insert the correct term as applicable per TO 1-1B-50, Section IV.)

1.2 WEIGHT AND BALANCE CLASSIFICATION

In accordance with the criteria presented in TO 1-1B-50, the weight and balance classification of clearance will be as required by TO 1-1B-50 for Class *___ aircraft.

*NOTE

The contractor shall fill in the aircraft model and the weight and balance classification in accordance with that specified in Section IV of TO 1-1B-50. TO 1-1B-50 is the controlling document for USAF aircraft weight and balance classification. Recommendations for changing aircraft weight and balance classification will be made on AF Form 847 in accordance with AFI 11-215.

1.3 HOW TO USE CHART E

Chart E provides data necessary to comply with DD Form 365-4 (Form F) Weight and Balance Clearance requirements. Weight and simplified moments are obtained from Chart E for all the variable load items and are added, in the appropriate reference on Form F, to the aircraft's current basic weight and simplified moment from Chart C (DD Form 365-3). This total represents the gross weight and simplified moment of the loaded aircraft. In-flight center of gravity effects, such as fuel and bomb expenditures, are checked by subtracting the weights and simplified moments of such items from the takeoff condition. The resultant new weight and simplified moment are checked to ensure that the center of gravity remains within limits during the entire flight. Detailed instructions for preparing the DD Form 365-4 are contained in TO 1-1B-40.

1.4 RECORD OF APPLICABLE TIME COMPLIANCE TECHNICAL ORDERS (TCTOS)

The record of applicable time compliance technical orders is a list of all TCTOs which affect the technical content (text or illustrations) of this manual. The Change/Revision/Supplement Data column lists the date of issue when each change was (or will be) incorporated into this manual. Only current TCTOs are listed. A TCTO is deleted from the list when either the applicable equipment configuration is no longer covered in the publication, or it is rescinded, superseded, or replaced.

1.5 YOUR RESPONSIBILITY TO LET US KNOW

Every effort is made to keep the manual current; however, we cannot correct an error unless we know of its existence. In this regard it is essential that you do your part. Comments, corrections, and questions regarding this manual, or any phase of the basic weight and loading data are welcome. These should be forwarded on AF Form 847 as directed by AFI 11-215 through your command Headquarters.

FIGURE 4. Example chapter 1, introduction - loading data.

CHAPTER 2 LOADING DATA

2.1 WEIGHT AND BALANCE REQUIREMENTS.

2.1.1 General. This chapter provides specific requirements for weight and balance control of Model T-37B aircraft in accordance with the general requirements found in TO 1-1B-50. This information is of a specific nature and, except where specifically stated herein, does not relieve any of the general requirements of TO 1-1B-50.

2.1.1.1 Maintaining Manuals. Weight and Balance personnel (per TO 1-1B-50) will maintain a current Weight and Balance Handbook for each representative aircraft.

NOTE

A representative aircraft is one which serves to represent all aircraft that are within ± ___*___ percent MAC center of gravity and ± ___*___ pounds of the representative aircraft basic weight center of gravity location and basic weight. To satisfy these criteria, more than one representative aircraft may be required for proper weight and balance monitoring of all assigned aircraft. *(Shall be determined by acquiring activity, see 6.2h.)

2.1.1.2 Specific Requirements. Specific weight and balance requirements will be listed here as subparagraphs.

2.1.2 Weighing Requirements. In addition to the general weighing requirements specified in Section IV of TO 1-1B-50, T-37B model aircraft will be inventoried and weighed at least once every 48 months. This time interval weighing is required to ensure that the cumulative effects, of minor modifications and repairs, on the aircraft basic weight and center of gravity location, are accurately known. Aircraft time interval weighing should be scheduled in conjunction with the scheduled phase inspection which will precede the 48-month time interval limit.

2.1.3 Weighing Record. After completion of the Aircraft Weighing Record (DD Form 365-2), forward one copy to:

List the address of the Logistics Center which is assigned the maintenance engineering management responsibility for the aircraft (see 6.2i).

2.1.4 Chart E, T-37B 59-256 and up. Figure 2-1 contains the Chart E Loading Data, applicable to model T-37B aircraft Serial Numbers 59-256 and up, which are necessary for computing aircraft weight and balance, and for completion of DD Form 365-4 Weight and Balance Clearance Form F, when required.

FIGURE 5. Example chapter 2 lead-in, loading data manual (class 1 aircraft).

CHAPTER 2 LOADING DATA

2.1 WEIGHT AND BALANCE REQUIREMENTS

2.1.1 General. This chapter provides specific requirements for weight and balance control of Model F/TF-15A aircraft in accordance with the general requirements found in TO 1-1B-50. This information is of a specific nature and, except where specifically stated herein, does not relieve any of the general requirements of TO 1-1B-50.

2.1.1.1 Maintaining Manuals. Weight and balance personnel (per TO 1-1B-50) will maintain a current Weight and Balance Handbook for each aircraft.

2.1.1.2 Center of Gravity. It is possible to exceed the center of gravity limits of the aircraft with certain store configurations. Therefore, weight and balance clearance (DD Form 365-4), in accordance with Section IV of TO 1-1B-50, will be accomplished prior to each flight.

2.1.1.3 Specific Requirements. Specific weight and balance requirements will be listed here as subparagraph.

2.1.2 Weighing Requirements. In addition to the general weighing requirements specified in Section IV of TO 1-1B-50, F/TF-15A model aircraft will be inventoried and weighed at least once every 36 months. This time interval weighing is required to ensure that the cumulative effects, of minor modifications and repairs, on the aircraft basic weight and center of gravity location, are accurately known. Aircraft time interval weighing should be scheduled in conjunction with the scheduled phase inspection which will precede the 36-month time interval limit.

2.1.2.1 Specific Weighing Requirements. When required by the acquiring activity, specific weighing requirements such as after engine change, etcetera, will be specified here as subparagraphs (see 6.2j).

2.1.3 Weighing Record. After completion of the Aircraft Weighing Record (DD Form 365-2), forward one copy to:

List the address of the Air Logistics Center which is assigned the maintenance engineering management responsibility for the aircraft (see 6.2i).

2.1.4 Chart E, F/TF-15A 72-113 and up. Figure 2-1 contains the Chart E Loading Data, applicable to model F/TF-15A aircraft Serial Numbers 72-113 and up, which are necessary for computing aircraft weight and balance, and for completion of DD Form 365-4 Weight and Balance Clearance Form F, when required.

FIGURE 6. Example chapter 2 lead-in, loading data manual (class 2 aircraft).

Weight and Balance Requirements
Weighing Requirements
Weighing Record
General Weighing Instructions
    Aircraft Conditions
    Fuel Drains
    Engine Oil
    Procedures
    Leveling
    Measuring
Aircraft Diagram
  * Jack Points
    Dimensions Pertaining to Aircraft Weight and Balance
    Fuel Tank Arrangement
Notes Affecting Aircraft Loading
    Engine Oil Table
    Crew Tables
    Ammunition Tables
    Stores Tables and Diagrams
    Fuel Tables
    Water Injection Fluid Tables
    Miscellaneous Data Tables
    Center of Gravity Limits
    Instructions for Loading
        Sample Form F
        Forward CG Calculations
        Aft CG Calculations
    Typical Service Load Conditions
    Takeoff and Landing Gross Weight Restrictions
    Center of Gravity and Percent MAC Calculations
    Moment/Weight CG Conversion Table
    Gross Weight vs. CG Position Plots

* Identify if nose or tail jack points were used, and which points were used to calculate weight and CG position.

FIGURE 7. Example order for chart E data loading data manual.

APPENDIX A

SAMPLE BASIC WEIGHT CHECKLISTS
DOCUMENT TYPE DEFINITION (DTD) SUBSET

A.1 SCOPE.

A.1.1 Scope. The markup tags described herein are based on rules outlined in MIL-PRF-28001 and the Information Processing - Text and Office Systems - Standard Generalized Markup Language (SGML) document, International Organization for Standardization (ISO) 8879, as incorporated in Federal Information Processing Standards (FIPS) PUB 152. The Document Type Definition (DTD) subset within this appendix provides the structure and content of documents prepared in accordance with this specification. Digital copies of the DTD (see A.4.1), Tag Description Table (see A.4.2), and Attribute Description Table (see A.4.3) are available (see A.5). This appendix is a mandatory part of this specification. The information contained herein is intended for compliance.

A.2 APPLICABLE DOCUMENTS.

A.2.1 Government documents.

A.2.1.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

SPECIFICATIONS

Military

MIL-PRF-28001 - Markup Requirements and Generic Style Specification for Electronic Printed Output and Exchange of Text

STANDARD

Federal Information Processing Standards

FIPS PUB 152 - Standard Generalized Markup Language (SGML)

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

(Copies of Federal Information Processing Standards (FIPS) are available to Department of Defense activities from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094. Others must request copies from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161-2171.)

A.3 DOCUMENT TYPE DEFINITION SUBSET.

A.3.1 SGML document type definition subset. Data to be delivered digitally in accordance with this specification shall be SGML tagged using the DTD found in MIL-STD-38784 as modified by the DTD subset in this section. The procedure for accomplishing this is found in MIL-PRF-28001 and FIPS PUB 152 (ISO 8879).

A.3.2 Template document type for Sample Basic Weight Checklists. The DTD subset for the Sample Basic Weight Checklists DTD is as follows:

```
<!-- ************************* START OF FILE ***************************** -->

<!-- SUPPLEMENT NOTICE:  This file is made available to provide the user with
a digital representation of the DTD found in Appendix A of MIL-PRF-5920F.
This file is incomplete without MIL-PRF-5920F. -->

<!-- NOTE: The start and end of this file are marked with a row of asterisks.
If these rows are not present the file may not be complete! -->

<!-- The following set of declarations may be referred to by
using a public entity as follows:

<!ENTITY % m5920f-a PUBLIC "-//USA-DOD//DTD MIL-PRF-5920F BWGT//EN" >
%m5920f-a;
-->

<!-- NOTE: In order to parse the following DTD subset alone,
append the following statement to the beginning of the file:

     <!DOCTYPE docbaswgtcl [

and the associated "]>" to the end of the file. -->

<!-- ENTITY DECLARATIONS -->

<!ENTITY % m38804c PUBLIC "-//USA-DOD//DTD MIL-PRF-38804C//EN" >

%m38804c;

<!ENTITY % bodyele "(basintro, baswgtcl)" >

<!ENTITY % frnt "(idinfo, lep, verstat?, contents, safesum?)" >

<!-- ELEMENT and ATTRIBUTE LIST DECLARATIONS -->

<!ELEMENT   basintro       - - (%fpi;, usecharta) >
<!ATTLIST   basintro       %verified; >


<!ELEMENT   baswgtcharta   - o ((compartment, (%wb;)+)+)
                           +(note) >
<!ATTLIST   baswgtcharta   constant NUMBER #REQUIRED >
```

```
<!ELEMENT   baswgtcl       - - (%parazero;, baswgtcharta)  +(figure |
                           table) >
<!ATTLIST   baswgtcl       %chapatt; >

<!ELEMENT   docbaswgtcl    - -  (front, body, rear?)  +(pgbrk |
                           brk | subjinfo | line | modreq | location) >
<!ATTLIST   docbaswgtcl    service %service; 'AF'
                           %secur;
                           %docatt; >

<!ELEMENT   usecharta      - o (%parazero;, subpara1*)  +(figure | table) >
<!ATTLIST   usecharta      %para0att; >

<!-- ************************** END OF FILE ************************** -->
```

A.4 DETAILED DESCRIPTION.

A.4.1 Document type definition. The DTD within this appendix provides the structure and content of documents prepared in accordance with this specification. The DTD is available in a digital format. See A.5, for information on obtaining the file.

A.4.2 Tag description table. The tag description table provides detailed descriptions of the tags above. It provides the element tagging structure, full element name, tag minimization requirements, element structure, referencing elements, source paragraph, and attribute descriptions unique to the element. See A.5, for information on obtaining this table.

A.4.3 Attribute description table. The Attribute Description Table provides detailed descriptions of the attributes above. See A.5, for information on obtaining this table.

A.5 OBTAINING FILES.

A.5.1 Obtaining files. The DTD, attribute, and tag description tables are available as ASCII files (see A.5.1.1 and A.5.1.2). In the event of a conflict between the text of this document and any downloaded files, the text of this document takes precedence. These files are for convenience and informational purposes only.

A.5.1.1 File Transfer Protocol (FTP). The procedures for obtaining files via FTP are as follows:

a. Connect to “WPCDSO1.wpafb.af.mil” using the FTP software available at your site. For example, if your FTP software is invoked using the “ftp” command, type “ftp WPCDSO1.wpafb.af.mil.” Do not attempt to log-in to this site using a “telnet” connection. If this connection fails, connect using “129.52.152.8.”

b. Log-in (log-in, name, remote user name, etc.) as “ftp” and press “enter.”

c. For password, type electronic mail (E-mail) name, followed by “@” (at) and press “enter.”

d. Type “cd pub/tmss-web” (or the command your system requires to change to “pub/tmss-web” directory) and press “enter.” At this point, a short new user's message will normally appear. If the new user's message does not appear, it should be downloaded and read. Download file by typing “get.message” (or command your system requires to download a file) and press “enter.”

e. Type “get filelist.txt” (or the command your system requires to download a file) and press “enter.” This file contains a list of all files available. This file is updated as new items are added, therefore it should be downloaded and read before downloading any other file.

f. If the needed file ends with “.zip,” see g. below, otherwise type “asc” (or the command your system requires for an ASCII transfer) and press “enter”. Type “get XXXXXX.XXX” (where XXXXXX.XXX is the name of the file to be downloaded) and press “enter” to download needed file. Repeat for each file to be downloaded.

g. If the needed file ends with “.zip,” type “bin” (or the command your system requires for a binary transfer) and press “enter.” Type “get XXXXXX.XXX” (where XXXXXX.XXX is the name of the file to be downloaded) and press “enter” to download the needed file. Repeat for each file to be downloaded. Zipped files were compressed using PKZIP Version 2.04.

h. File “nc.txt” contains information on the naming conventions used on all files in this directory. Type “get nc.txt” to download this file.

A.5.1.2 World Wide Web (WWW). Obtain files via the Air Force Product Data Systems Modernization (PDSM) Program Office (AFPPO) home page at “http://www.pdsm.wpafb.af.mil/.” Select TMSS from the graphical menu and follow the directions presented.

APPENDIX B

LOADING DATA MANUAL
DOCUMENT TYPE DEFINITION (DTD) SUBSET

B.1 SCOPE.

B.1.1 Scope. The markup tags described herein are based on rules outlined in MIL-PRF-28001 and the Information Processing - Text and Office Systems - Standard Generalized Markup Language (SGML) document, International Organization for Standardization (ISO) 8879, as incorporated in Federal Information Processing Standards (FIPS) PUB 152. The Document Type Definition (DTD) subset within this appendix provides the structure and content of documents prepared in accordance with this specification. Digital copies of the DTD (see B.4.1), Tag Description Table (see B.4.2), and Attribute Description Table (see B.4.3) are available (see A.5). This appendix is a mandatory part of this specification. The information contained herein is intended for compliance.

B.2 APPLICABLE DOCUMENTS.

B.2.1 Government documents.

B.2.1.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

SPECIFICATIONS

Military

MIL-PRF-28001 - Markup Requirements and Generic Style Specification for Electronic Printed Output and Exchange of Text

STANDARDS

Federal Information Processing Standards

FIPS PUB 152 - Standard Generalized Markup Language (SGML)

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Standardization Documents Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

(Copies of FIPS are available to Department of Defense activities from the Standardization Documents Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094. Others must request copies of FIPS from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161-2171.)

B.3 DOCUMENT TYPE DEFINITION SUBSET.

B.3.1 SGML document type definition subset. Data to be delivered digitally in accordance with this specification shall be SGML tagged using the DTD found in MIL-STD-38784 as modified by the DTD subset in this section. The procedure for accomplishing this is found in MIL-PRF-28001 and FIPS PUB 152 (ISO 8879).

B.3.2 Template document type for Loading Data Manual. The DTD subset for the Loading Data Manual DTD is as follows:

```
<!-- ************************* START OF FILE ************************** -->

<!-- SUPPLEMENT NOTICE:  This file is made available to provide the user with
a digital representation of the DTD found in Appendix B of MIL-PRF-5920F.
This file is incomplete without MIL-PRF-5920F. -->

<!-- NOTE: The start and end of this file are marked with a row of asterisks.
If these rows are not present the file may not be complete! -->

<!-- The following set of declarations may be referred to by
using a public entity as follows:

<!ENTITY % m5920f-b PUBLIC
"-//USA-DOD//DTD MIL-PRF-5920F LD//EN" >
%m5920f-b;
-->

<!-- NOTE: In order to parse the following DTD subset alone,
append the following statement to the beginning of the file:

     <!DOCTYPE docloadata [

and the associated "]>" to the end of the file. -->

<!-- ENTITY DECLARATIONS -->

<!ENTITY % bodyele "(ldintro, loadata)" >

<!ENTITY % frnt "(idinfo, lep, verstat?, contents, illuslist?,
tablelist?, safesum?)" >

<!ENTITY % m38784STD PUBLIC "-//USA-DOD//DTD MIL-STD-38784//EN">

%m38784STD;

<!-- ELEMENT and ATTRIBUTE LIST DECLARATIONS -->

<!ELEMENT   acrftdiag      - o  (%text;) >
<!ATTLIST   acrftdiag      %secur; >
```

APPENDIX B

```
<!ELEMENT   acrftwgtinv    - o  (%parazero;, subpara1*) >
<!ATTLIST   acrftwgtinv    %para0att; >

<!ELEMENT   acrftwgtreq    - o  (%parazero;, subpara1*) >
<!ATTLIST   acrftwgtreq    %para0att; >

<!ELEMENT   charte         - o  (weighinst, acrftdiag, %text;)
                           +(warning | caution | note) >
<!ATTLIST   charte         %secur;>

<!ELEMENT   docloadata     - -  (front, body, rear?)  +(pgbrk |
                           brk | subjinfo | line | modreq | location) >
<!ATTLIST   docloadata     service %service; 'AF'
                           %secur;
                           %docatt; >

<!ELEMENT   ldintro        - -  (%fpi;, wgtbalclass, usecharte,
                           (%parazero;, subpara1*)?, tctolist)  +(figure |
                           table) >
<!ATTLIST   ldintro        %chapatt; >

<!ELEMENT   loadata        - -  (wghtbalreq, acrftwgtreq, acrftwgtinv,
                           charte)  +(figure | table | foldout) >
<!ATTLIST   loadata        %chapatt; >

<!ELEMENT   usecharte      - o  (%parazero;, subpara1*) >
<!ATTLIST   usecharte      %para0att; >

<!ELEMENT   weighinst      - o  (%text;) >
<!ATTLIST   weighinst      %secur; >

<!ELEMENT   wghtbalreq     - o  (%parazero;, subpara1*) >
<!ATTLIST   wghtbalreq     %para0att; >

<!ELEMENT   wgtbalclass    - o  (%parazero;, subpara1*) >
<!ATTLIST   wgtbalclass    %para0att; >

<!-- ************************** END OF FILE ************************** -->
```

B.4 DETAILED DESCRIPTION.

B.4.1 Document type definition. The DTD subset within this appendix provides the structure and content of documents prepared in accordance with this specification. The DTD is available in a digital format. See A.5, for information on obtaining the file.

B.4.2 Tag description table. The Tag Description Table provides detailed descriptions of the tags above. It provides the element tagging structure, full element name, tag minimization requirements, element structure, referencing elements, source paragraph, and attribute descriptions unique to the element. See A.5, for information on obtaining this table.

B.4.3 Attribute description table. The Attribute Description Table provides detailed descriptions of the attributes above. See A.5, for information on obtaining this table.

INDEX

INDEX

CONCLUDING MATERIAL

Custodian:
Air Force - 16

Preparing Activity:
Air Force - 16

Reviewers:
Air Force - 01, 10, 99

(Project TMSS-F629)

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

INSTRUCTIONS

1. The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.
2. The submitter of this form must complete blocks 4, 5, 6, and 7.
3. The preparing activity must provide a reply within 30 days from receipt of the form.

NOTE: This form may not be used to request copies of documents, nor to request waivers, or clarification of requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waiver any portion of the referenced document(s) or to amend contractual requirements.

I RECOMMEND A CHANGE:	1. DOCUMENT NUMBER	2. DOCUMENT DATE (YYMMDD)
	MIL-PRF-5920F(USAF)	96/07/11

3. DOCUMENT TITLE

Performance Specification, Technical Manuals: Sample Basic Weight Checklists and Loading Data

4. NATURE OF CHANGE *(Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)*

5. REASON FOR RECOMMENDATION

6. SUBMITTER

a. NAME *(Last, First, Middle Initial)*	b. ORGANIZATION	
c. ADDRESS *(include Zip Code)*	d. TELEPHONE *(Include Area Code)* (1) Commercial (2) AUTOVON *(If applicable)*	e. DATE SUBMITTED *(YYMMDD)*

8. PREPARING ACTIVITY

a. NAME	b. TELEPHONE *(Include Area Code)*	
Det 2, HQ ESC/AV-2C	(1) Commercial (513) 257-3085	(2) AUTOVON 787-3085
c. ADDRESS *(Include Zip Code)* 4027 Col Glenn HWY, Suite 300 Dayton, OH 45431-1672	**IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT:** Defense Quality and Standardization Office 5203 Leesburg Pike, Suite 1403, Falls Church, VA 22041-3466 Telephone (703) 756-2340 AUTOVON 289-2340	

INSTRUCTIONS: In a continuing effort to make our standardization documents better, the DoD provides this form for use in submitting comments and suggestions for improvement. All users of military standardization documents are invited to provide suggestions. This form may be detached, folded along the lines indicated, taped along the loose edges *(DO NOT STAPLE)*, and mailed. In block 5, be as specific as possible about particular problem areas such as wording which required interpretation, was too rigid, restrictive, loose, ambiguous, or was incompatible, and give proposed wording changes which would alleviate the problems. Enter in block 6 any remarks not related to a specific paragraph of the document. If block 7 is filled out, an acknowledgement will be mailed to you within 30 days to let you know that your comments were received and are being considered.

NOTE: This form may not be used to request copies of documents, nor to request waivers, deviations, or clarifications of specification requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document or to amend contractual requirements.

(Fold along this line)

(Fold along this line)

DEPARTMENT OF THE AIR FORCE

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE
$300

BUSINESS REPLY MAIL
FIRST CLASS PERMIT NO. 73236 WASHINGTON D.C.

POSTAGE WILL BE PAID BY THE DEPARTMENT OF THE AIR FORCE

Det 2, HQ ESC/AV-2C
4027 Col Glenn Hwy, Suite 300
Dayton, OH 45433-1672