

# **Acceptance Data Package Requirements Specification**

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## **International Space Station Alpha Program**

**Revision A**

**October 26, 1994**

**National Aeronautics and Space Administration  
International Space Station Alpha Program  
Johnson Space Center  
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## PREFACE

SSP 30695, International Space Station Alpha Program Acceptance Data Package Requirements Specification, establishes the minimum data required to accompany Space Station hardware or software deliveries/transfers (via Form DD 250, DD 1149, or equivalent form) to assist in rapid determination of hardware or software status by the using organization.

The contents of this document are intended to be consistent with the tasks and products to be prepared by Program participants. The ISSA Acceptance Data Package Requirements shall be implemented on all new ISSA contractual and internal activities and shall be included in any existing contracts through contract changes. This document is under the control of the Space Station Control Board, and any changes or revisions will be approved by the Program Manager.

SSCD 000123

01-11-95

Program Manager  
International Space Station Alpha

Date

**INTERNATIONAL SPACE STATION ALPHA PROGRAM**  
**ISSA ACCEPTANCE DATA PACKAGE REQUIREMENTS SPECIFICATION**

**OCTOBER 26, 1994**

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**ISSA ACCEPTANCE DATA PACKAGE REQUIREMENTS SPECIFICATION**

**LIST OF CHANGES**

**OCTOBER 26, 1994**

All changes to paragraphs, tables, and figures in this document are shown below:

<b>SSCBD</b>	<b>ENTRY DATE</b>	<b>CHANGE</b>	<b>PARAGRAPHS</b>
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## **1.0 INTRODUCTION**

To support hardware or software deliveries for the International Space Station Alpha (ISSA), specific data must be provided to the using organizations as defined herein. The accumulation of this data in a hardware and/or software package is known as the Acceptance Data Package (ADP).

This ADP provides a complete and verified status, including the as-built configuration, of hardware or software, contains information pertinent to acceptance, and enables the continuation of required activities by the using organization. The ADP is prepared as part of the hardware or software acceptance/delivery criteria and maintained throughout the hardware or software life cycle after government acceptance, including integrated testing, ground processing, launch site processing, on orbit, postlanding, and maintenance/modification/refurbishment activities.

## **1.1 PURPOSE**

For hardware, this specification defines the minimum data required to accompany hardware delivery to a using organization and to establish the requirement for maintenance of this data by the organization having hardware custody.

For software, this specification defines the minimum data required to accompany software deliveries to a using organization via DD-250/1149 or equivalent form.

The data that makes up an ADP is required for assurance purposes and to facilitate integration, operational, or refurbishment/modification activities conducted by the organization receiving hardware or software custody.

## **1.2 SCOPE**

For hardware, this specification applies to all hardware items designated as ISSA deliverable flight, Orbital Support Equipment, Flight Support Equipment, Ground Support Equipment (GSE), and associated spares, mod kits, and loose equipment.

For software, this specification applies to all ISSA software products (and to their approved changes) designated as operational software, which is defined as flight software and ground software that (1) interfaces with on-orbit elements in real-time or (2) is critical to the mission (such as all control center, test and certification software), including associated models and simulations and Software Support Environment (SSE) Software which interfaces with on-orbit elements in real-time or is critical to the mission. A software delivery may include one or more Computer Software Configuration Items (CSCIs), a release.

Historical data for each deliverable hardware item or software delivery, which may or may not be required at a later date, is retained by the contractor/NASA procuring center and is subject to recall when and if additional data is required by the using site.

The requirements for engineering design data, drawings, specifications, operations and maintenance documentation, logistic data, and other data required by the using organizations,



which are required to be submitted in advance of hardware or software item deliveries, are not addressed in this specification.

### **1.3 PRECEDENCE**

This specification is the source for the definition of ADP requirements for all elements of the ISSA

## 2.0 APPLICABLE DOCUMENTS

The following documents of the date and issue shown include specifications, models, standards, guidelines, handbooks, and other special publications.

The documents in this paragraph are applicable to the extent specified herein. Inclusion of applicable documents herein does not in any way supersede the order of precedence specified in paragraph 1.3. The references show where each applicable document is cited in this document.

DOCUMENT NO.	TITLE
SSP 41170 23 March 1994	Configuration Management Requirements
ASME Section VIII–1971 Reference	ASME Code for Unfired Pressure Vessels Table 4.0–1
OSHA 29 CFR 1910.1200(G) Reference	Occupational Safety and Health Standards, Hazard Communication, Material Safety Data Sheets Table 4.0–1

### **3.0 REQUIREMENTS**

An ADP, as defined in this specification, shall be prepared and made available at acceptance for each applicable hardware item or software delivery (reference paragraph 1.2). The ADP shall reflect the status of the hardware or software at the time of acceptance and shall be delivered concurrently with the hardware item or software delivery. The organization having custody of the hardware or software shall maintain the associated ADP data elements in an up-to-date status.

ADPs for all Space Station hardware deliveries, which includes government and/or prime acceptance, for turnover of ground processing, turnover for launch site processing, return for maintenance/modification/refurbishments, and intersite delivery between Product Groups shall conform to the requirements and provisions of this document.

ADPs for all Space Station operational software delivered for government and/or prime acceptance, which may consist of one or more CSCIs, a specified release/mass storage device image, shall conform to the requirements and provisions of this document.

The requirements contained herein shall apply to all hardware items or software deliveries which are being delivered to NASA by a contractor, subcontractor, or government organization using a DD-250/1149 (or equivalent form).

When a task (or contract) results in several end items, the requirements shall apply to each end item encompassed by the task and delivered to NASA using a DD-250/1149 (or equivalent form).

#### **4.0 DELIVERABLE DATA**

The ADP, consisting of the applicable data items specified in Table 4.0–1, Hardware Data Items/Elements, and Table 4.0–2, Software Data Items/Elements, as a minimum, shall be accumulated by the contractor/supplier or government agency during the fabrication/development and testing of each hardware or software deliverable. Updating of the appropriate data elements by the organization having custody of the hardware or software shall continue throughout integrated testing, ground processing, launch site processing, on–orbit, postlanding, and maintenance/modification/refurbishment activities.

The forms, format, and methods of recording (i.e., manual, computer, or combination thereof) to be included in the ADP are optional unless specified in the contract. In those cases where the manual method of recording is used for an initial or subsequent ADP data submission and where an electronic or computer version exists, the custodian/contractor is requested, but not required, to also submit the electronic version. However, the minimum data elements to be included for each applicable data item are mandatory and are specified under “Data Elements” for each corresponding data item (Tables 4.0–1 and 4.0–2). Examples of preferred formats containing the minimum data elements are provided in Appendix C, Hardware Acceptance Data Package Formats, and Appendix D, Software Acceptance Data Package Formats.

**TABLE 4.0-1 HARDWARE DATA ITEMS/ELEMENTS (PAGE 1 OF 4)**

DATA ITEMS	DATA ELEMENTS
<b>Historical Log (Commencing with Acceptance Testing)/ Notes/Comments.</b> Used for documenting events in chronological order to include acceptance, tests performed, rework, modification, etc. Also used for documenting details of any unusual phenomenon, occurrence, difficulty, or questionable condition during fabrication and testing; may also be used for referencing any potential hazards to personnel or equipment. In addition, this section may be used for other data which may be beneficial at the using organization (e.g., maintenance manual/firmware support manual, special handling/storage requirements, alignment data, weight and center of gravity data, proof load data, ding charts, etc.). A computerized printout may be used.	<ul style="list-style-type: none"> <li>a. Deliverable item name, part number, CAGE code, and serial number.</li> <li>b. Class (Flight of GSE).</li> <li>c. Specify location if special instructions are included.</li> <li>d. Date, Location, and Historical Event.</li> <li>e. Notes/comments as applicable.</li> </ul>
<b>Waiver/Deviation Record.</b> Approved waivers and deviations to the contract and/or other requirements authorizing hardware use or variations as applicable to the physical/functional parameters of the item being delivered (i.e., form, fit, function).	<ul style="list-style-type: none"> <li>a. Deliverable item name, part number, CAGE code, and serial number.</li> <li>b. Waiver/Deviation number and affected item name, part number, CAGE code, and serial number.</li> <li>c. A copy of the actual waiver/deviation document with a detailed description and contract authority.</li> </ul>
<b>UA Record.</b> Provide a record of any Unexplained Anomalies (UAs) noted during fabrication and/or testing and use of the deliverable hardware item.	<ul style="list-style-type: none"> <li>a. Deliverable item name, part number, CAGE code, and serial number.</li> <li>b. Nonconformance Report number index with a copy of the actual Nonconformance Report with detailed description, troubleshooting, acceptance rationale, and authority.</li> <li>c. Nonconformance item name, part number, and serial number.</li> </ul>
<b>Shortages.</b> Identification of physical hardware shortages existing at the time of delivery and copy of inspection and test/retest requirements documentation received upon shortage installation.	<ul style="list-style-type: none"> <li>a. Deliverable item name, part number, and serial number.</li> <li>b. Part name, part number, and CAGE code of shortage item.</li> <li>c. Quantity short.</li> <li>d. Test procedure(s) and requirement paragraph number.</li> <li>e. Affected next-higher assembly part number and serial number.</li> </ul>
<b>Unplanned/Deferred Work.</b> Unaccomplished fabrication, test, inspection, or installation activities remaining to be completed at time of acceptance and delivery because of parts shortages, lack of schedule time, etc., including open Material Review actions, open nonconformance reports, open recurrence control actions, unincorporated engineering changes, mod kits, and other open work applicable to the hardware being delivered and copy of inspection and test/retest requirements per appropriate documentation to complete Unplanned/Deferred Work.	<ul style="list-style-type: none"> <li>a. Deliverable item name, part number, CAGE code, and serial number.</li> <li>b. Affected part number or specification, CAGE code and serial number.</li> <li>c. A listing and a copy of the unplanned/deferred work.</li> <li>d. Test procedure(s) and requirement paragraph number.</li> </ul>
<b>Preplanned/Assigned Work.</b> Description of work from manufacturing and/or test authorized for accomplishment after item delivery because of a Program decision to ship prior to completion, or deferral of work completion because of authorized shortages. Provide a copy of inspection and test/reject requirements documentation required to complete Preplanned/Assigned Work.	<ul style="list-style-type: none"> <li>a. Deliverable item name, part number, CAGE code, and serial number.</li> <li>b. Authorizing work document identification.</li> <li>c. Description and listing of Preplanned/Assigned Work.</li> <li>d. Test procedure(s) and requirement paragraph number.</li> </ul>

**TABLE 4.0-1 HARDWARE DATA ITEMS/ELEMENTS (PAGE 2 OF 4)**

DATA ITEMS	DATA ELEMENTS
<p><b>Identification — As Designed/As-Built Listing.</b> An indented parts list which provides a comparison of the as-designed/as-built configuration of the hardware being delivered. The configuration listing consists specifically of the following:</p> <ul style="list-style-type: none"> <li>a. Subsystem, assembly, and subassembly hardware (traceable and non-traceable);</li> <li>b. Parts procured to a Source Control Drawing (traceable and nontraceable); and</li> <li>c. Parts procured to a Specification Control Drawing (traceable only).</li> </ul> <p>For purposes of this specification, the as-designed/as-built configuration excludes specification control drawing parts and standard usage hardware which are exempt from traceability (e.g., nuts, bolts, washers, shims, pins).</p>	<ul style="list-style-type: none"> <li>a. Deliverable item name, part number, CAGE code and serial number.</li> <li>b. Part indeture level.</li> <li>c. Part number, CAGE code, part serial or lot number, including Government Furnished Equipment when applicable.</li> <li>d. Quantity.</li> <li>f. Drawing number and revision.</li> <li>g. Circuit reference designators (Electrical, Electronic, and Electromechanical parts).</li> </ul>
<p><b>Operating Time/Cycle.</b> Status at time of delivery of accumulated operating time and/or cycles of parts designated as time/cycle critical. This includes maintenance activities which are required based on operating time/cycle.</p>	<ul style="list-style-type: none"> <li>a. Deliverable item name, part number, CAGE code, and serial number.</li> <li>b. Time/cycle part name, part number, CAGE code, and serial number.</li> <li>c. Allowable (specification requirement) and remaining operating time and/or cycles from point of delivery.</li> </ul>
<p><b>Age-Sensitive/Time-Action Items.</b> Limited-life items that have a maximum life limit and are subject to replacement when specified limit is reached or exceeded. Included are time-action control items having a minimum periodic functional operating limit and are subject to replacement when one or more of specified limits are exceeded. This includes maintenance activities which are required based on Age-Sensitive/Time Actions.</p>	<ul style="list-style-type: none"> <li>a. Deliverable item name, part number, CAGE code, and serial number.</li> <li>b. Age-sensitive/time-action part name, part number, CAGE code, serial number, birth date, expiration date (action due date), and type of action required (i.e., replace, service, inspect, etc.).</li> <li>c. Last operation and/or servicing date and next operation and/or servicing due date (time action items only).</li> </ul>
<p><b>Nonstandard Calibration.</b> Records of measurement equipment, instrumentation, components, or systems having nonstandard calibration curves shall be provided at time of delivery.</p>	<ul style="list-style-type: none"> <li>a. Deliverable item name, part number, CAGE code, and serial number.</li> <li>b. Component/transducer/signal conditioner/gauge or meter, part name, part number, and serial number.</li> <li>c. Measurement Number.</li> <li>d. Range (engineering units), excitation volts (+/-), units stimulus (engineering units), and output volts or resistance.</li> <li>e. Temperature environment, calibration date, and stimuli values versus output expressed in engineering units or percent of full range.</li> <li>f. Actual calibration tabulated data points and/or calibration curves, as specified in the sensor/signal conditioner component procurement documents, will be required at time of delivery.</li> </ul>

**TABLE 4.0-1 HARDWARE DATA ITEMS/ELEMENTS (PAGE 3 OF 4)**

DATA ITEMS	DATA ELEMENTS
<p><b>Repair Limitations.</b> When repair limitations are imposed by the design agency (i.e., limits the number of times a specific hardware type can be repaired), then a status of these limited repair items which have had prior repair activity but have or have not reached the specific repair limit shall be identified at time of delivery.</p>	<ul style="list-style-type: none"> <li>a. Deliverable item name, part number, CAGE code and serial number.</li> <li>b. Type of repair (i.e., bent pins, brazed joints, etc.).</li> <li>c. Repair limitation requirement.</li> <li>d. The source of the requirement (i.e., specification, etc.).</li> <li>e. Identification method (i.e., painted, tagged, charted, etc.).</li> <li>f. Part name, part number, CAGE code, serial and/or lot number of the affected item.</li> <li>g. Physical location of affected item.</li> <li>h. The number of prior repairs.</li> </ul>
<p><b>Pressure Vessel Data.</b> A log of each pressure vessel's exposure to materials and pressures shall be provided at time of delivery (GSE exclusion – American Society of Mechanical Engineers (ASME) Code for Unfired Pressure Vessels. All GSE pressure Vessels which have been designed, fabricated, and tested to the requirements of the ASME Code for Unfired Pressure Vessels, Section VIII, 1971 Edition, are excluded from the log requirements. However, an ASME Form U-1, prepared in accordance with the ASME code, shall be provided at time of delivery. Requirements are specified on ASME Form U-1.).</p>	<ul style="list-style-type: none"> <li>a. Deliverable item name, part number, CAGE code, and serial number.</li> <li>b. Pressure vessel's part name, part number, CAGE code, and serial number.</li> <li>c. Limited-life requirements.</li> <li>d. Threshold Pressure (PSID at MSL).</li> <li>e. Pressure Limitations including threshold pressure, maximum operating pressure and proof pressure.</li> <li>f. Cycle Limitation for threshold pressure, maximum operating pressure and proof pressure.</li> <li>g. Chronological test and checkout history as listed below:               <ul style="list-style-type: none"> <li>1. Proof pressure data/certification,</li> <li>2. Leak test data,</li> <li>3. Cycling data,</li> <li>4. Peak pressure,</li> <li>5. Minimum pressure,</li> <li>6. Total number of pressure cycles,</li> <li>7. Type of pressurant (test media), and</li> <li>8. QC or operator stamp as required.</li> </ul> </li> </ul>
<p><b>Pyrotechnic Data.</b> Documented evidence that representatives of both NASA and the procuring agency have reviewed and accepted the described pyrotechnic devices on the basis of applicable NASA and procuring agency specification and requirements. This documentation consists of the lot certificate, which includes the certification statement and marriage records.</p> <p><b>Lot Certificate.</b> This certification reflects the current status of the device lot at time of acceptance and shall be provided with each device lot.</p>	<p>Minimum data to be included in the lot certification and marriage record is detailed in the Pyrotechnic Specification document.</p>

**TABLE 4.0-1 HARDWARE DATA ITEMS/ELEMENTS (PAGE 4 OF 4)**

DATA ITEMS	DATA ELEMENTS
<b>Nonflight Hardware/Temporary Installations.</b> A listing of installed hardware, which is not part of the deliverable item configuration and must be removed prior to subsequent operations or flight, shall be provided.	<ul style="list-style-type: none"> <li>a. Deliverable item name, part number, CAGE code, and serial number.</li> <li>b. Identification method (painted, tagged, streamered, chartered, etc.). If tagged or streamered, indicate tag or streamer number.</li> <li>c. Listing of the temporarily installed part name, part number, CAGE code, and serial number.</li> <li>d. Physical location of the temporarily installed part and identification of when item is to be removed (i.e., prior to test, prior to continued integration, prior to flight, etc.).</li> </ul>
<b>Certifications.</b> Documented evidence attesting to the fact the delivered hardware meets specified requirements (i.e., proof load, proof pressure, cleanliness, flight, etc.). Supporting documentation [e.g. Verification Completion Notices (VCNs)], shall be available for review.	<ul style="list-style-type: none"> <li>a. Deliverable item name, part number, CAGE code, and Serial Number.</li> <li>b. Identification of certifying official.</li> <li>c. The qualification and acceptance requirements being satisfied. (Reference document number)</li> <li>d. Acceptance test procedure number.</li> <li>e. ATP report number.</li> </ul>
<b>MSDS Data.</b> Material Safety Data Sheet (MSDS) used to convey information about the potential health and physical hazards of materials/substances used in the work environment. [Reference OSHA 29 CFR 1910.1200(G), Occupational Safety and Health Standards, Hazard Communication, Material Safety Data Sheets]	<ul style="list-style-type: none"> <li>a. The chemical and common name of the material/substance.</li> <li>b. The physical properties of the material/substance.</li> <li>c. The hazards or other risks involved in the use of the material/substance, including fire and explosive potential, corrosivity, reactivity, and any known acute and chronic health effects related to exposure.</li> <li>d. Safe handling practices, necessary personal protective equipment, and other safety precautions.</li> <li>e. Emergency procedures for spill, fire, disposal, and first aid.</li> </ul> <p>Note: One MSDS per type of material/substance.</p>



**TABLE 4.0-2 SOFTWARE DATA ITEMS/ELEMENTS**

DATA ITEMS	DATA ELEMENTS
<b>Notes/Comments.</b> This section is used for pertinent notes, comments, or special instructions which would be beneficial to the software user.	a. Deliverable software identifier and version. b. Notes/Comments as applicable.
<b>Waiver/Deviation Record.</b> Approved waivers and deviations to the contract and/or other requirements authorizing software use or delivery with existing variations as applicable to the functional/operational parameters of the item being delivered, (i.e., form, fit, or function). Attach a copy of the actual waiver/deviation document with a detailed description and contract authority.	a. Deliverable software identifier and version. b. Waiver/deviation number index. c. Waiver/deviation title or comments.
<b>UA Record.</b> Provide a record of any UAs noted during acceptance through system testing and use of the deliverable software item, with a copy of the actual nonconformance report with a detailed description, troubleshooting, acceptance rationale, and authority.	a. Deliverable software identifier and version. b. Nonconformance report number index. c. Comments.
<b>Unplanned/Deferred Work.</b> Unaccomplished development, test, or activities remaining to be completed at time of acceptance and delivery due to lack of schedule time, etc., including open nonconformance reports, open recurrence control actions, and other open work, applicable to the software being delivered.	a. Deliverable software identifier and version. b. Affected program, module, or specification. c. Description of Unplanned/Deferred Work, including a list of open or unincorporated Engineering changes which should have been accomplished prior to delivery. d. Inspection and test/retest requirements per appropriate documentation to complete Unplanned/Deferred Work.
<b>Preplanned/Assigned Work.</b> Description of work from development and/or test authorized for accomplishment after delivery because the Program desires, is deferred for safety reasons, is required to restore the item from alterations/differences necessary for shipping, or is deferred to allow end item software delivery although module/component delivery schedules have been slipped.	a. Deliverable software identifier and version. b. Authorizing document identification (specification, test/plan procedure, etc.). c. Description of Preplanned/Assigned Work. d. Inspection/verification requirements per approved documentation to complete Preplanned/Assigned Work.
<b>Specification Documents.</b> A listing of the software specification documentation, including amendment and/or revision number.	Identified by software identifier and version.
<b>Program Listing.</b> The source code for all programs, subprograms/subroutines, procedures, tasks, and program modules in an electronically stored format (tape, disk, etc.).	Identified by software identifier and version.
<b>Version Description Document.</b> Establishes the as-built configuration items released and provides installation and adaptation information. Establishes the exact description of the actual configuration of the items as depicted by specifications, incorporated approved changes, approved exceptions, etc.	Identified by software identifier and version  (May point to the software VDD data requirement, if applicable.)
<b>User's Guide or System Operating Manual.</b> Provides program overview and all necessary instructions concerning the use and options of the software program. Document number includes amendment and/or revision.	Identified by software identifier and version.
<b>Certifications.</b> Documented evidence that delivered software meets specified requirements.	a. Deliverable software identifier and version. b. Identification of certifying official. c. The requirements being satisfied. d. The source of the requirement.

## 5.0 ACCEPTANCE DATA PACKAGE

The Title Page and Index Pages mandatory data elements are provided in Table 5.0–1, Title and Index Pages Formats/Elements. Appendix E provides recommended formats for these pages of the ADP.

### 5.1 STRUCTURE

The ADP shall be divided into separate sections with each section containing specific data. Each ADP will be assembled as follows (see Figure 5.1–1, Hardware Acceptance Data Package — Structure, or Figure 5.1–2, Software Acceptance Data Package — Structure). If a specific section is not applicable to the subject hardware or software, record “N/A” on the Index Page.

#### Hardware ADP Structure

Title Page

Index Page

Section I	Copy of Shipped/Delivery Document (DD250/1149 or equivalent form)
Section II	Historical Log/Notes/Comments
Section III	Waivers/Deviations
Section IV	Unexplained Anomalies
Section V	Shortages
Section VI	Unplanned/Deferred Work
Section VII	Preplanned/Assigned Work
Section VIII	Identification — As–Designed/As–Built Listing
Section IX	Operating Time/Cycle
Section X	Age–Sensitive/Time–Action Items
Section XI	Nonstandard Calibration Data
Section XII	Repair Limitation Data
Section XIII	Pressure Vessel Data
Section XIV	Pyrotechnic Data
Section XV	Nonflight Hardware/Temporary Installations
Section XVI	Certifications
Section XVII	MSDS Data–Material Safety Data Sheet

#### Software ADP Structure

Title Page

Index Page

Section I	Copy of Shipped/Delivery Document (DD250/1149 or equivalent form)
Section II	Notes/Comments

Section III	Waivers/Deviations
Section IV	Unexplained Anomalies
Section V	Unplanned/Deferred Work
Section VI	Preplanned/Assigned Work
Section VII	Specification Documents
Section VIII	Program Listing
Section IX	Version Description Document
Section X	User's Guide or System Operating Manual
Section XI	Certifications

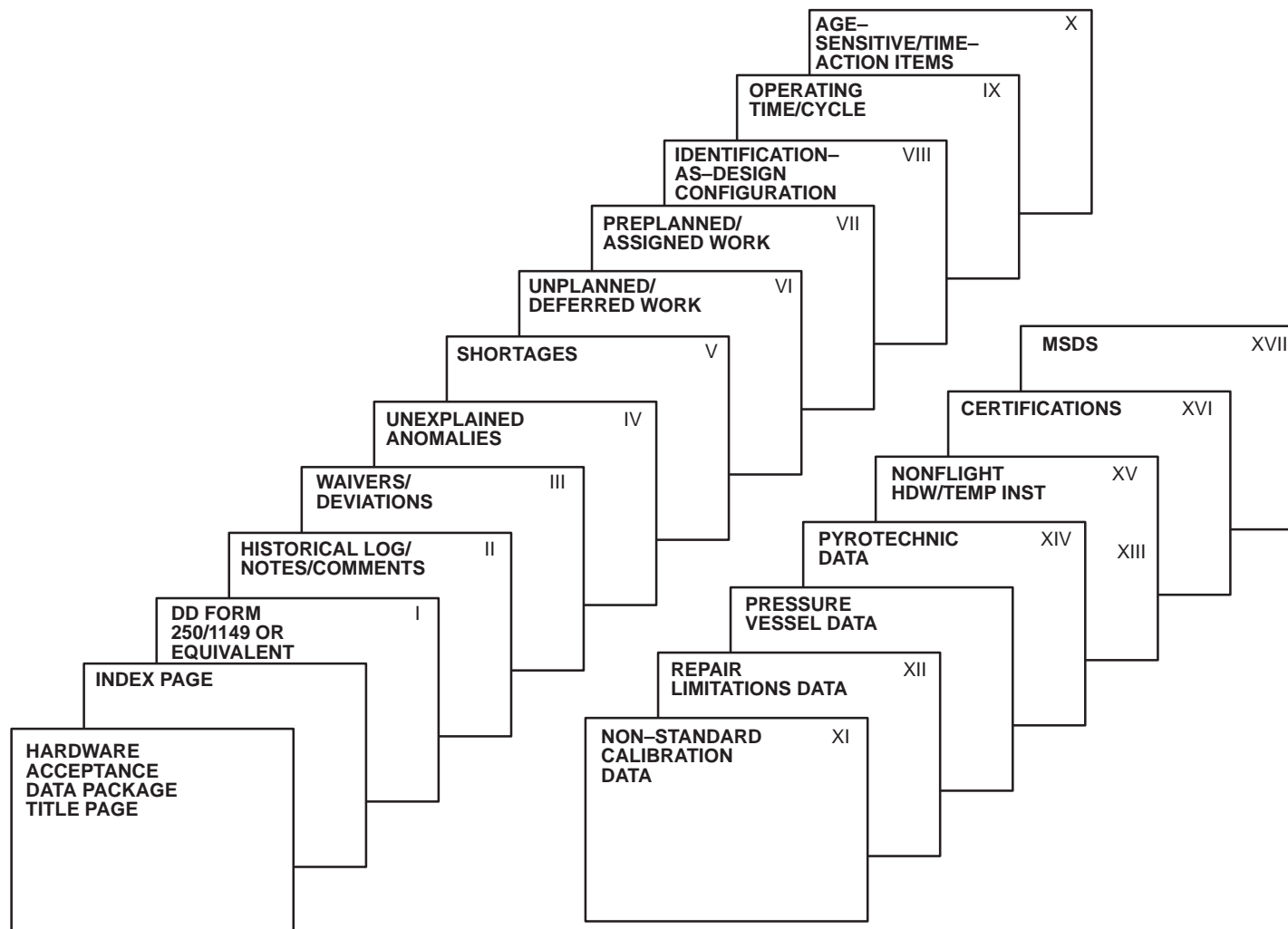
## 5.2 PREPARATION INSTRUCTIONS

In the event a data item for a given section is too voluminous to maintain an orderly package (i.e., several boxes of data for a particular section), the appropriate section shall reference and identify the location and quantity of the supporting documentation. In addition, this supporting documentation shall be packaged separately and shall be identified appropriately with cross reference to the parent ADP.

The number of sections to be contained in a specific ADP is determined by the number of applicable data items required for the subject hardware/software being delivered (i.e., one or more data items, as shown in Table 4.0–1 or Table 4.0–2, may not be applicable to the item being delivered; in that event, only those sections which are applicable would be included in the ADP with the proper notation on the Index Page).

**TABLE 5.0–1 TITLE AND INDEX PAGES ELEMENTS**

DATA FORMATS	DATA ELEMENTS
<b>Title Page.</b> The cover page of the ADP will identify the hardware or software item being delivered. (See Figure E–1.)	a. For hardware, deliverable hardware item name, configuration item number (if applicable) part number, CAGE code, and serial number; for software, deliverable software identifier CSCI Number (if applicable) and version number. b. Model number (if applicable). c. Contract Number. d. Contractor/supplier name.
<b>Index Page.</b> This page identifies the type of hardware or software, associated data and applicable sections contained in the ADP. (See Figures E–2 and E–3.)	a. For hardware, deliverable hardware item name, part number, and serial number; for software, deliverable software identifier and version number. b. Identify type of hardware or software (Flight or Ground). c. Content (identified by checking the appropriate block) of the applicable data elements/section contained in the ADP. d. Appropriate ADP approval signatures, organization, and dates.



**FIGURE 5.1-1 HARDWARE ACCEPTANCE DATA PACKAGE — STRUCTURE**

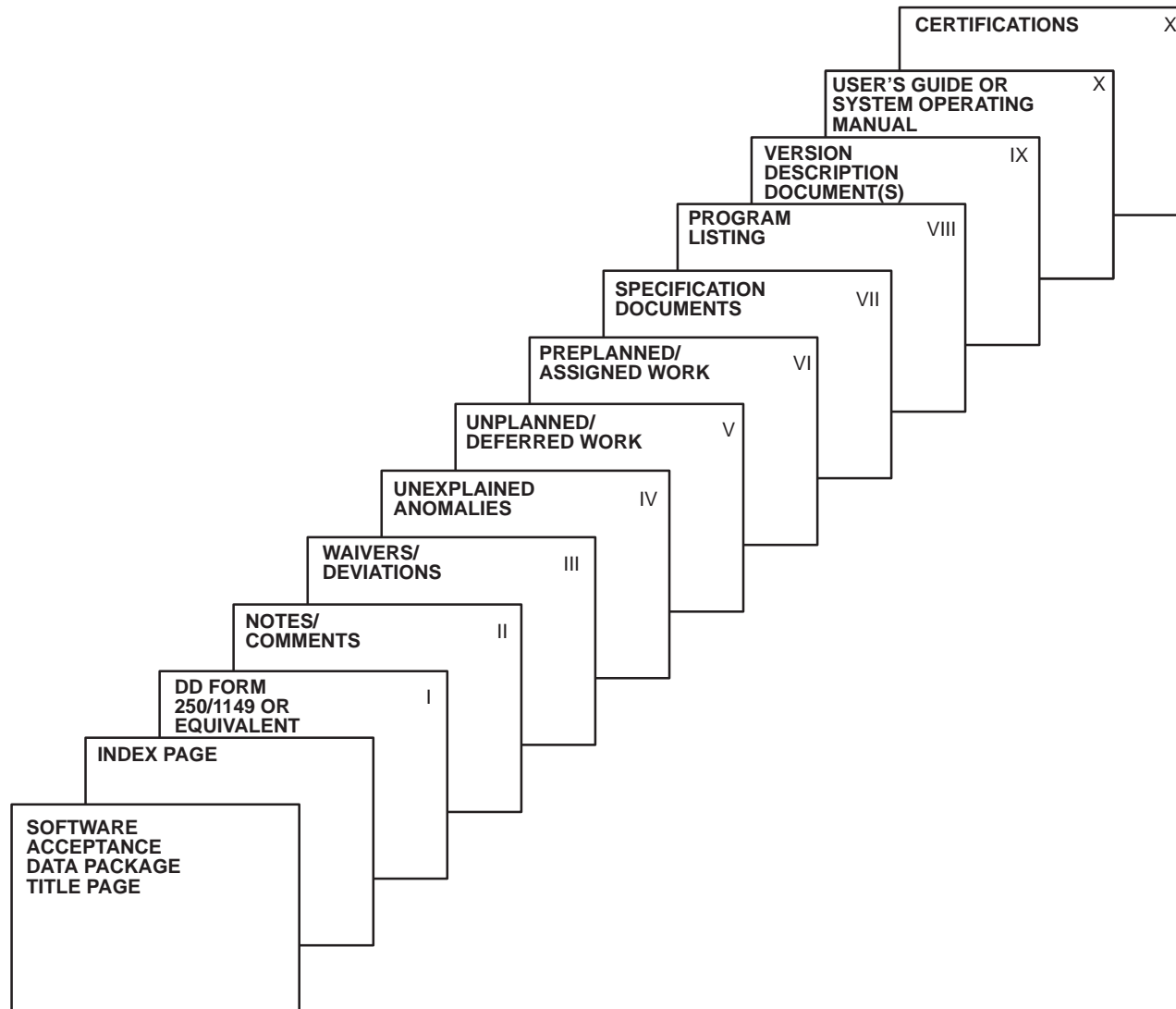


FIGURE 5.1-2 SOFTWARE ACCEPTANCE DATA PACKAGE — STRUCTURE

## **6.0 EQUIPMENT PARTS TAG**

An ADP shall also be prepared and delivered with spares, mod kits, and loose equipment. Because the management and accountability of these items are unique, the ADP requirements are as follows:

- a.** An ADP or an equipment parts tag shall be required for each article delivered to a using organization.
- b.** An equipment parts tag, such as the example in Appendix E, may be used in lieu of an ADP when none of the required or relevant data items (Table 4.0–1) are applicable to the deliverable article.
- c.** The equipment parts tag must contain the following information:
  - 1.** Part name,
  - 2.** Part number,
  - 3.** Serial/lot number,
  - 4.** Quantity,
  - 5.** Drawing number and revision,
  - 6.** Incorporated engineering change number,
  - 7.** Evidence of acceptance.

Instructions for completing the equipment parts tag are contained in Appendix F. It should be noted that use of the equipment parts tag does not negate the requirements of other hardware status tags which may be prepared prior to hardware delivery.

**NOTE:** Equipment parts tags are not to be used for software deliveries.

## APPENDIX A ABBREVIATIONS AND ACRONYMS

ADP	Acceptance Data Package
ASME	American Society of Mechanical Engineers
CAGE	Commercial and Government Entity
CEI	Contract End Item
CI	Configuration Item
CR	Change Request
CSCI	Computer Software Configuration Item
EEE	Electrical, Electronic, and Electromechanical
FSE	Flight Support Equipment
GFE	Government Furnished Equipment
GSE	Ground Support Equipment
ISSA	International Space Station Alpha
MOP	Maximum Operating Pressure
MSDS	Material Safety Data Sheet
MSL	Mean Sea Level
NASA	National Aeronautics and Space Administration
OSE	Orbital Support Equipment
OSHA	Occupational Safety and Health Act
PP	Proof Pressure
PPC	Proof Pressure Cycle
PSID	Pounds Per Square Inch Pressure Differential
QC	Quality Control
SPA	Software Product Assurance
SSCB	Space Station Control Board
SSE	Software Support Environment
TP	Threshold Pressure
UA	Unexplained Anomaly
VCN	Verification Completion Notice
VDD	Verification Description Document

## **APPENDIX B GLOSSARY OF TERMS**

### **ACCEPTANCE REVIEW**

An End Item Acceptance Review formally establishes the exact configuration for each hardware or software item at the time of acceptance/delivery by NASA or NASA designee.

### **AS-BUILT CONFIGURATION**

An actual, physical configuration of a unit of hardware or software.

### **AS-DESIGNED CONFIGURATION**

A configuration formally approved and released by NASA or contractor engineering release authority.

### **COMPUTER FIRMWARE**

An assembly composed of a hardware unit and a computer program integrated to form a functional entity whose configuration cannot be altered during normal operation. The computer program is stored in the hardware unit as an integrated circuit with a fixed logic configuration that will satisfy a specific application or operational requirement.

### **COMPUTER SOFTWARE CONFIGURATION ITEM**

The CSCI is a designation applied to software, or any of its discrete portions, which satisfies an end user function and is designated by NASA as a deliverable item. CSCIs shall be formally accepted on a DD Form 250 or its equivalent.

### **CONTRACT END ITEM**

The Contract End Item (CEI) is a designation applied to an aggregation of hardware or software, or any of its discrete portions, which satisfies an end user function and is designated by the contract as a deliverable item. CEIs shall be formally accepted on a DD Form 250 or its equivalent. CEIs are line items in the contract or furnished by NASA in-house design activities.

### **DEVIATION**

A specific authorization, granted before the fact, to depart from a particular baseline requirement for a limited application.

### **HARDWARE**

Items of identifiable equipment, including piece parts, components, assemblies, subsystems, and systems.

### **MODIFICATION**

A physical change to delivered hardware and/or software, including spares.

### **NONCOMPLIANCE**

A condition that exists or will exist when a deliverable item or its related documentation is not in accordance with the baseline at the time of established contractual events.



## **NONCONFORMANCE**

A condition of any article or material or service in which one or more characteristics do not conform to requirements. This includes failures, discrepancies, defects, and malfunctions.

## **OPERATIONAL SOFTWARE**

Flight and ground software that either (1) interfaces with on-orbit elements in real-time or (2) is critical to the mission (such as all control center test and certification software) including associated models and simulations and SSE software which interfaces with on-orbit elements in real time or is critical to the mission.

## **PRESSURE VESSEL CYCLE**

A pressure vessel cycle is recorded when pressure increases by an amount exceeding the absolute value of Threshold Pressure (TP) and then decreases by an amount exceeding the absolute value of TP. NOTE: Pressure increases and decreases need not be continuous and small increases/decreases can exist within a recordable pressure cycle.

## **SOFTWARE**

Computer programs required to design, test, check out, maintain, or operate program hardware.

## **THRESHOLD PRESSURE**

Minimum pressure at which theoretical cyclic flow growth can occur. Pressurization below TP does not result in reduction of vessel pressure cycle life.

## **UNEXPLAINED ANOMALY**

An anomaly (ghost or phantom) which cannot be repeated or for which a cause cannot be determined.

## **WAIVER**

A written authorization to accept an item that is found during production, or after having been submitted for technical review, tests, or inspection to depart from a particular performance or design requirement of a specification, drawing, or other contract document. The authorization is granted for a specified number of items and/or a specific period of time. The item(s) is/are considered suitable for use "as is" for a specified period of time or quantity of items.

## APPENDIX C PREFERRED HARDWARE ACCEPTANCE DATA PACKAGE FORMATS

### FIGURES

FIGURE		PAGE
C-1	SPACE STATION HARDWARE ACCEPTANCE DATA PACKAGE HISTORICAL LOG/NOTES/COMMENTS .....	C - 2
C-2	SPACE STATION HARDWARE ACCEPTANCE DATA PACKAGE WAIVER/DEVIATION LISTING .....	C - 3
C-3	SPACE STATION HARDWARE ACCEPTANCE DATA PACKAGE UNEXPLAINED ANOMALIES .....	C - 4
C-4	SPACE STATION HARDWARE ACCEPTANCE DATA PACKAGE SHORTAGES .....	C - 5
C-5	SPACE STATION HARDWARE ACCEPTANCE DATA PACKAGE UNPLANNED/DEFERRED WORK .....	C - 6
C-6	SPACE STATION HARDWARE ACCEPTANCE DATA PACKAGE PREPLANNED/ASSIGNED WORK .....	C - 7
C-7	SPACE STATION HARDWARE ACCEPTANCE DATA PACKAGE IDENTIFICATION — AS-DESIGNED/AS-BUILT LISTING .....	C - 8
C-8	SPACE STATION HARDWARE ACCEPTANCE DATA PACKAGE OPERATION TIME/CYCLE .....	C - 9
C-9	SPACE STATION HARDWARE ACCEPTANCE DATA PACKAGE AGE SENSITIVE/TIME ACTION ITEMS .....	C - 10
C-10	SPACE STATION HARDWARE ACCEPTANCE DATA PACKAGE NONSTANDARD CALIBRATION RECORD .....	C - 11
C-11	SPACE STATION HARDWARE ACCEPTANCE DATA PACKAGE REPAIR LIMITATIONS ....	C - 12
C-12	SPACE STATION HARDWARE ACCEPTANCE DATA PACKAGE PRESSURE VESSEL DATA LOG .....	C - 13
C-13	FORM U-1 MANUFACTURERS' DATA REPORT FOR UNFIRED PRESSURE VESSELS ....	C - 14
C-14	SPACE STATION HARDWARE ACCEPTANCE DATA PACKAGE PYROTECHNIC CERTIFICATION .....	C - 16
C-15	SPACE STATION HARDWARE ACCEPTANCE DATA PACKAGE NONFLIGHT HARDWARE/TEMPORARY INSTALLATIONS .....	C - 17
C-16	SPACE STATION HARDWARE ACCEPTANCE DATA PACKAGE MATERIAL SAFETY DATA SHEET .....	C - 18







**SPACE STATION  
 HARDWARE ACCEPTANCE DATA PACKAGE  
 SHORTAGES**

ITEM NAME	PART NUMBER	CAGE CODE	SERIAL NUMBER				
PART NAME	PART NUMBER	CAGE CODE	QTY SHORT	INSPECTION AND TEST/RETEST REQUIREMENTS		NEXT HIGHER ASSEMBLY	
				TEST PROCEDURES	REQUIREMENT PARAGRAPH NUMBER	PART NUMBER	SERIAL NUMBER

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**FIGURE C-4 SPACE STATION HARDWARE ACCEPTANCE DATA PACKAGE SHORTAGES**

**SPACE STATION  
 HARDWARE ACCEPTANCE DATA PACKAGE  
 UNPLANNED/DEFERRED WORK**

\_\_\_\_\_

**ITEM NAME**                      **PART NUMBER**                      **CAGE CODE**                      **SERIAL NUMBER**

PART NUMBER OR SPECIFICATION	CAGE CODE	SERIAL NUMBER	DESCRIPTION OF UNPLANNED/DEFERRED WORK	INSPECTION AND TEST/RETEST REQUIREMENTS	
				TEST PROCEDURES	REQUIREMENT PARAGRAPH NUMBER

PAGE \_\_\_\_ OF

**FIGURE C-5 SPACE STATION HARDWARE ACCEPTANCE DATA PACKAGE UNPLANNED/DEFERRED WORK**

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**SPACE STATION  
 HARDWARE ACCEPTANCE DATA PACKAGE  
 PREPLANNED/ASSIGNED WORK**

\_\_\_\_\_

**ITEM NAME**                      **PART NUMBER**                      **CAGE CODE**                      **SERIAL NUMBER**

AUTHORIZING WORK DOCUMENT IDENTIFICATION	DESCRIPTION OF PREPLANNED/ASSIGNED WORK	INSPECTION AND TEST/RETEST REQUIREMENTS	
		TEST PROCEDURES	REQUIREMENT PARAGRAPH NUMBER

PAGE \_\_\_\_ OF

**FIGURE C-6 SPACE STATION HARDWARE ACCEPTANCE DATA PACKAGE PREPLANNED/ASSIGNED WORK**

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**SPACE STATION  
 HARDWARE ACCEPTANCE DATA PACKAGE  
 OPERATING TIME/CYCLE**

\_\_\_\_\_

**ITEM NAME**                      **PART NUMBER**                      **CAGE CODE**                      **SERIAL NUMBER**

TIME/CYCLE		CAGE CODE	SERIAL NUMBER	OPERATING TIME						CYCLE	
PART NAME	PART NUMBER			ALLOWABLE			REMAINING			ALLOWABLE	REMAINING
				HRS.	MIN.	SEC.	HRS.	MIN.	SEC.		

PAGE \_\_\_\_ OF

**FIGURE C-8 SPACE STATION HARDWARE ACCEPTANCE DATA PACKAGE OPERATING TIME/CYCLE**

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**SPACE STATION  
 HARDWARE ACCEPTANCE DATA PACKAGE  
 AGE-SENSITIVE/TIME-ACTION ITEMS**

\_\_\_\_\_

**ITEM NAME**                      **PART NUMBER**                      **CAGE CODE**                      **SERIAL NUMBER**

PART NAME	PART NUMBER	CAGE CODE	SERIAL NUMBER	BIRTH DATE	ACTION DUE DATE	REQUIRED ACTION	LAST OPERATIONAL AND/OR SERVICING DATE	OPERATIONAL AND/OR SERVICING DUE DATE

PAGE \_\_\_\_ OF \_\_\_\_

**FIGURE C-9 SPACE STATION HARDWARE ACCEPTANCE DATA PACKAGE AGE-SENSITIVE/TIME-ACTION ITEMS**

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**SPACE STATION  
 HARDWARE ACCEPTANCE DATA PACKAGE  
 NONSTANDARD CALIBRATION RECORD**

<b>ITEM NAME</b>	<b>PART NUMBER</b>	<b>CAGE CODE</b>	<b>SERIAL NUMBER</b>
------------------	--------------------	------------------	----------------------

<b>COMPONENT/TRANSDUCER/SIGNAL CONDITIONER/GAUGE/METER</b>					
<b>PART NAME</b>			<b>PART NUMBER</b>		
<b>SERIAL NUMBER</b>			<b>MEAS. NUMBER</b>		
RANGE (ENG UNITS)	EXCITATION VOLTS + -	UNITS (ENG UNITS) STIMULUS	OUTPUT VOLTS OR RESISTANCE		
<b>RUN NUMBER 1</b>			<b>RUN NUMBER 2</b>		
<b>TEMP. ENV</b>		<b>DATE</b>		<b>TEMP. ENV</b>	
<b>TEMP. ENV</b>		<b>DATE</b>		<b>TEMP. ENV</b>	
STIMULUS	STEP NO., UNITS OR % FULL SCALE	OUTPUT VOLTS OR RESISTANCE	STIMULUS	STEP NO., UNITS OR % FULL SCALE	OUTPUT VOLTS OR RESISTANCE

PAGE \_\_\_ OF

**FIGURE C-10 SPACE STATION HARDWARE ACCEPTANCE DATA PACKAGE  
 NONSTANDARD CALIBRATION RECORD**

**HARDWARE ACCEPTANCE DATA PACKAGE  
 REPAIR LIMITATIONS**

\_\_\_\_\_

**ITEM NAME**                      **PART NUMBER**                      **CAGE CODE**                      **SERIAL NUMBER**

TYPE OF REPAIR	REPAIR LIMITATION REQUIREMENT	REQUIREMENT SOURCE
		IDENTIFICATION METHOD

PART NAME	PART NUMBER	CAGE CODE	SERIAL/LOT NUMBER	PHYSICAL LOCATION	TIMES REPAIRED

PAGE \_\_\_\_ OF

**FIGURE C-11 SPACE STATION HARDWARE ACCEPTANCE DATA PACKAGE REPAIR LIMITATIONS**

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**HARDWARE ACCEPTANCE DATA PACKAGE  
 PRESSURE VESSEL DATA**

\_\_\_\_\_  
**ITEM NAME**                      **PART NUMBER**                      **CAGE CODE**                      **SERIAL NUMBER**

PART NAME		PART NUMBER		CAGE CODE		SERIAL NUMBER					
LIMITED LIFE			THRESHOLD PRESSURE (PSID)					DATE INSTALLED			
PRESSURE LIMITATIONS: TP:    OP:    PP:				CYCLE LIMITATIONS: MOPC:				PPC:			
FACILITY	TEST NAME (PROOF PRESS, LEAK TEST)	TYPE OF PRESSURANT	DATE	PEAK PRESSURE	MINIMUM PRESSURE	TIME		CYC	CUM	TOTALS	QC/OPER
						HRS	MIN		TIME	CYCLES	STAMP
THIS PRESSURE VESSEL IS CERTIFIED TO MEET ALL CONTRACT REQUIREMENTS, UNLESS OTHERWISE NOTED, AND IS ACCEPTABLE FOR FLIGHT <input type="checkbox"/> GSE USE <input type="checkbox"/>											
_____ DATE						_____ CONTRACTOR/SUPPLIER SIGNATURE					

**FIGURE C-12 SPACE STATION HARDWARE ACCEPTANCE DATA PACKAGE PRESSURE VESSEL DATA LOG**

SSP 30695, Revision A

October 26, 1994

## FORM U-1 MANUFACTURERS' DATA REPORT FOR UNFIRED PRESSURE VESSELS

As required by the Provisions of the ASME Code Rules

1. Manufactured by \_\_\_\_\_  
(Name and address of Manufacturer)
2. Manufactured for \_\_\_\_\_  
(Name and address of Purchaser)
3. Type \_\_\_\_\_ Kind \_\_\_\_\_ Vessel No. \_\_\_\_\_ Natl. Bd. No. \_\_\_\_\_ Yr. Built \_\_\_\_\_  
(Horiz. or Vert.) (Tank, Jacketed, Heat Exch.) (Mfrs. Serial) (State & State No.)

Items 4-9 incl. to be completed for single wall vessels (such as air tanks), jackets of jacketed vessels, or shells of heat exchangers.

4. SHELL: Material \_\_\_\_\_ T.S. \_\_\_\_\_ Nominal Thickness \_\_\_\_\_ In. Allowance \_\_\_\_\_ In. Diam. \_\_\_\_\_ Ft. \_\_\_\_\_ In. Length \_\_\_\_\_ Ft. \_\_\_\_\_ In.  
(Kind and Spec. No.) (Fig. or F.B. & Spec. Min. T.S.)
5. SEAMS: Long \_\_\_\_\_ H.T. \_\_\_\_\_ X.R. \_\_\_\_\_ Sectioned \_\_\_\_\_ Efficiency \_\_\_\_\_ %  
(Welded, Dbl., Single, Lap, Butt) (Yes or No) (Spot or Complete) (Yes or No)  
Girth \_\_\_\_\_ H.T. \_\_\_\_\_ X.R. \_\_\_\_\_ Sectioned \_\_\_\_\_ No. of Courses \_\_\_\_\_  

If riveted, describe seams fully on reverse side of form.
6. HEADS (a) Material \_\_\_\_\_ T.S. \_\_\_\_\_ (b) Material \_\_\_\_\_ T.S. \_\_\_\_\_  
Location (Top, bottom, ends) Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diameter Site to Pressure (Convex or Concave)  
(a) \_\_\_\_\_  
(b) \_\_\_\_\_  
If removable, bolts used \_\_\_\_\_ Other Fastening \_\_\_\_\_  
(Material, Spec. No., T.S., Size, Number) (Describe or Attach Sketch)
7. STAYBOLTS: \_\_\_\_\_ If hollow \_\_\_\_\_ Attachment \_\_\_\_\_ Pitch \_\_\_\_\_ Diam. \_\_\_\_\_  
(Material) (Size of Hole) (Threaded, Welded) (Horiz.) (Vert.) (Nominal)
8. JACKET CLOSURE: \_\_\_\_\_  
(Describe as ogee & weld, bar, etc. If bar, give dimensions, if bolted, describe or sketch)
9. Constructed for max. allowable working press.<sup>3</sup> \_\_\_\_\_ psi at max. temp. \_\_\_\_\_ °F Min. temp. (when less than -20°) \_\_\_\_\_ °F  
Hydrostatic Test Press \_\_\_\_\_ psi  
Pneumatic Test Press \_\_\_\_\_ psi  
Combustion Test Press \_\_\_\_\_ psi

Items 10 and 11 to be completed for tube sections.

10. TUBE SHEETS: Stationary, Material \_\_\_\_\_ Diam. \_\_\_\_\_ In. Thickness \_\_\_\_\_ In. Attachment \_\_\_\_\_  
(Kind & Spec. No.) (Subject to Code) (Welded, Bolted)  
Floating, Material \_\_\_\_\_ In. Thickness \_\_\_\_\_ In. Attachment \_\_\_\_\_  
(Kind & Spec. No.)
11. TUBES: Material \_\_\_\_\_ O.D. \_\_\_\_\_ In. T. \_\_\_\_\_ In. Gage Number \_\_\_\_\_ Type \_\_\_\_\_  
(Kind & Spec. No.) (Straight or U)

Items 12-15 incl. to be completed for inner chambers of jacketed vessels or shells of heat exchangers.

12. SHELL Material \_\_\_\_\_ T.S. \_\_\_\_\_ Nominal Thickness \_\_\_\_\_ In. Allowance \_\_\_\_\_ In. Diam. \_\_\_\_\_ Ft. \_\_\_\_\_ In. Length \_\_\_\_\_ Ft. \_\_\_\_\_ In.  
(Kind and Spec. No.) (Fig. or F.B. & Spec. Min. T.S.)
13. SEAMS: Long \_\_\_\_\_ H.T. \_\_\_\_\_ X.R. \_\_\_\_\_ Sectioned \_\_\_\_\_ Efficiency \_\_\_\_\_ %  
(Welded, Dbl., Single, Lap, Butt) (Yes or No) (Spot or Complete) (Yes or No)  
Girth \_\_\_\_\_ H.T. \_\_\_\_\_ X.R. \_\_\_\_\_ Sectioned \_\_\_\_\_ No. of courses \_\_\_\_\_  

If riveted, describe seams fully on reverse side of form.
14. HEADS (a) Material \_\_\_\_\_ T.S. \_\_\_\_\_ (b) Material \_\_\_\_\_ T.S. \_\_\_\_\_ (c) Material \_\_\_\_\_ T.S. \_\_\_\_\_  
Location (Top, bottom, ends) Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diameter Site to Pressure (Convex or Concave)  
(a) Top, bottom, ends \_\_\_\_\_  
(b) Channel \_\_\_\_\_  
(c) Floating \_\_\_\_\_  
If removable, bolts used \_\_\_\_\_ Other fastening \_\_\_\_\_  
(Material, Spec. No., T.S., Size, Number) (Describe or Attach Sketch)
15. Constructed for max. allowable working press.<sup>3</sup> \_\_\_\_\_ psi at max. temp. \_\_\_\_\_ °F Min. temp. (when less than -20°) \_\_\_\_\_ °F  
Hydrostatic Test Press \_\_\_\_\_ psi  
Pneumatic Test Press \_\_\_\_\_ psi  
Combustion Test Press \_\_\_\_\_ psi

Items below to be completed for all vessels where applicable.

16. SAFETY VALVE OUTLETS: Number \_\_\_\_\_ Size \_\_\_\_\_ Location \_\_\_\_\_
17. NOZZLES  

Purposes (Inlet, Outlet, Drain)	Number	Diam. or Size	Type	Material	Thickness	Reinforcement Material	How Attached

(Items 18 through 20 continued on back)

<sup>1</sup> If posted    <sup>2</sup>    <sup>3</sup> List under remarks other internal or external pressures with coincident temperature when applicable.

(Over)

**FIGURE C-13 FORM U-1 MANUFACTURERS' DATA REPORT FOR UNFIRED PRESSURE VESSELS (FRONT SIDE) (PAGE 1 OF 2)**

October 26, 1994

## Form U-1 (back)

18. INSPECTION Manholes, No.	_____	Size _____	Location _____
OPENINGS: Handholes, No.	_____	Size _____	Location _____
Threaded, No.	_____	Size _____	Location _____

19. SUPPORTS: Skirt \_\_\_\_\_ Lugs \_\_\_\_\_ Legs \_\_\_\_\_ Other \_\_\_\_\_ Attached \_\_\_\_\_  
(Yes or No) (Number) (Number) (Describe) (Where or How)

20. REMARKS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(Brief description of purpose of the vessel, as Air Tank, After Cooler, Jacketed Cooker, etc. State contents of each part.)

We certify that the statements made in this report are correct and that all details of design, material, construction, and workmanship of this vessel conform to ASME Code for Unfired Pressure Vessels.

Date \_\_\_\_\_ 19 \_\_\_\_\_ Signed \_\_\_\_\_  
(Manufacturer)

Certificate of Authorization Expires \_\_\_\_\_

**CERTIFICATE OF SHOP INSPECTION**

VESSEL MADE BY \_\_\_\_\_ at \_\_\_\_\_

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State of \_\_\_\_\_ and employed by \_\_\_\_\_ of \_\_\_\_\_

\_\_\_\_\_ have inspected the pressure vessel described in this manufacturers' data report on \_\_\_\_\_, 19\_\_\_\_, and state that to best of my knowledge and belief, the manufacturer has constructed this pressure vessel in accordance with the applicable sections of the ASME Boiler and Pressure Vessel Code.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this manufacturer's data report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date \_\_\_\_\_ 19\_\_\_\_

\_\_\_\_\_  
Inspector's Signature

\_\_\_\_\_  
Commissions

\_\_\_\_\_  
Nat'l Board or State and No.

**CERTIFICATE OF FIELD ASSEMBLY INSPECTION**

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or of the State of \_\_\_\_\_ and employed by \_\_\_\_\_ have compared the statements in this manufacturers' data report with the described vessel and state that parts referred to as data items \_\_\_\_\_ not included in the certificate of shop inspection have been inspected by me and that to the best of my knowledge and belief the manufacturer has constructed and assembled this pressure vessel in accordance with the applicable sections of the ASME Boiler and Pressure Vessel Code. The described vessel was inspected and subjected to a hydrostatic test of \_\_\_\_\_ psi. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this manufacturer's data report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date \_\_\_\_\_ 19 \_\_\_\_\_

\_\_\_\_\_  
Inspector's Signature

\_\_\_\_\_  
Commissions \_\_\_\_\_ Nat'l Board or State and No.

**FIGURE C-13 FORM U-1 MANUFACTURERS' DATA REPORT FOR UNFIRED PRESSURE VESSELS  
(BACK SIDE) (PAGE 2 OF 2)**



**SPACE STATION  
HARDWARE ACCEPTANCE DATA PACKAGE  
PYROTECHNIC CERTIFICATION**

NOMENCLATURE \_\_\_\_\_ PART NO. \_\_\_\_\_ CAGE CODE \_\_\_\_\_

QUANTITY \_\_\_\_\_ LOT NO. \_\_\_\_\_

EXPIRATION DATE (THIS DEVICE) \_\_\_\_\_  
(BASED ON OLDEST EXPLOSIVE COMPONENT)

THESE PYROTECHNIC DEVICES WERE ACCEPTED BY REPRESENTATIVES OF  
THE (PROCURING AGENCY) AND THE NATIONAL AERONAUTICS AND SPACE  
ADMINISTRATION ON (DATE), AND ARE CERTIFIED AS BEING IN COMPLIANCE  
WITH APPLICABLE (PROCURING AGENCY) AND NASA REQUIREMENTS, EXCEPT  
AS INDICATED BY APPROVED WAIVER OR DEVIATION (WAIVER/DEVIATION  
NUMBER).

\_\_\_\_\_  
DESIGN ENGINEERING  
(PROCURING AGENCY)

\_\_\_\_\_  
QUALITY ASSURANCE  
(PROCURING AGENCY)

\_\_\_\_\_  
SUBSYSTEM MANAGER  
(NASA)

\_\_\_\_\_  
QUALITY ASSURANCE  
(NASA)

**FIGURE C-14 SPACE STATION FREEDOM HARDWARE ACCEPTANCE DATA PACKAGE  
PYROTECHNIC CERTIFICATION**

**SPACE STATION  
 HARDWARE ACCEPTANCE DATA PACKAGE  
 NONFLIGHT HARDWARE/TEMPORARY INSTALLATIONS**

ITEM NAME		PART NUMBER		CAGE CODE		SERIAL NUMBER
STREAMER/ TAG NUMBER	PART NAME	PART NUMBER	CAGE CODE	SERIAL NUMBER	PHYSICAL LOCATION	REMOVAL EVENT

PAGE \_\_\_ OF

**FIGURE C-15 SPACE STATION HARDWARE ACCEPTANCE DATA PACKAGE  
 NONFLIGHT HARDWARE/TEMPORARY INSTALLATIONS**

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**SPACE STATION  
HARDWARE ACCEPTANCE DATA PACKAGE  
MSDS DATA**

\_\_\_\_\_

**ITEM NAME**                      **PART NUMBER**                      **CAGE CODE**                      **SERIAL NUMBER**

CHEMICAL/COMMON NAME	PHYSICAL PROP.	HAZARDS OR OTHER RISKS	SAFE HANDLING	ENGINEERING PROBLEMS

PAGE \_\_\_\_ OF

**FIGURE C-16 SPACE STATION HARDWARE ACCEPTANCE DATA PACKAGE  
MATERIAL SAFETY DATA SHEET (MSDS)**

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SSP 30695 Revision A

October 26, 1994



**SPACE STATION  
SOFTWARE ACCEPTANCE DATA PACKAGE  
WAIVER/DEVIATION LISTING**

**SOFTWARE IDENTIFIER**

**VERSION**

<b>WAIVER/DEVIATION NUMBER INDEX</b>	<b>WAIVER/DEVIATION TITLE/COMMENTS</b>	<b>CONTRACT AUTH</b>

**PAGE \_\_\_ OF**

**FIGURE D-2 SPACE STATION SOFTWARE ACCEPTANCE DATA PACKAGE  
WAIVER/DEVIATION LISTING**

**SPACE STATION  
SOFTWARE ACCEPTANCE DATA PACKAGE  
UNEXPLAINED ANOMALIES RECORD**

**SOFTWARE IDENTIFIER**

**VERSION**

<b>NONCONFORMANCE REPORT NUMBER</b>	<b>COMMENTS</b>

**PAGE \_\_\_ OF**

**FIGURE D-3 SPACE STATION SOFTWARE ACCEPTANCE DATA PACKAGE  
UNEXPLAINED ANOMALIES RECORD**

**SPACE STATION  
SOFTWARE ACCEPTANCE DATA PACKAGE  
UNPLANNED/DEFERRED WORK**

SOFTWARE IDENTIFIER		VERSION	
SPECIFICATION, TEST PLAN/ PROCEDURE NUMBER (ETC.)	DESCRIPTION OF UNPLANNED/DEFERRED WORK	INSPECTION AND TEST/RETEST REQUIREMENTS	
		TEST PROCEDURES	REQUIREMENT PARAGRAPH NUMBER

PAGE \_\_ OF

**FIGURE D-4 SPACE STATION SOFTWARE ACCEPTANCE DATA PACKAGE UNPLANNED/DEFERRED WORK**

**SPACE STATION  
SOFTWARE ACCEPTANCE DATA PACKAGE  
PREPLANNED/ASSIGNED WORK**

SOFTWARE IDENTIFIER		VERSION	
SPECIFICATION, TEST PLAN/ PROCEDURE NUMBER (ETC.)	DESCRIPTION OF PREPLANNED/ASSIGNED WORK	INSPECTION AND TEST/RETEST REQUIREMENTS	
		TEST PROCEDURES	REQUIREMENT PARAGRAPH NUMBER

PAGE \_\_\_\_ OF

**FIGURE D-5 SPACE STATION SOFTWARE ACCEPTANCE DATA PACKAGE PREPLANNED/ASSIGNED WORK**



**APPENDIX E TITLE AND INDEX PAGES FORMATS**

**SPACE STATION  
PROGRAM  
ACCEPTANCE  
DATA  
PACKAGE**

<b>ITEM NAME</b>	
<b>PART NUMBER</b>	
<b>CONFIGURATION ITEM NO.</b>	
<b>CAGE CODE</b>	
<b>SERIAL NUMBER</b>	
<b>MODEL NUMBER</b>	
<b>CONTRACT NUMBER</b>	
<b>CONTRACTOR/SUPPLIER</b>	

or

<b>SOFTWARE IDENTIFIER</b>	
<b>CSCI NUMBER</b>	
<b>VERSION NUMBER/LETTER</b>	
<b>SYSTEM NAME</b>	
<b>CONTRACT NUMBER</b>	
<b>CONTRACTOR/SUPPLIER</b>	

**FIGURE E-1 SPACE STATION PROGRAM  
ACCEPTANCE DATA PACKAGE**

**SPACE STATION  
 PREFERRED HARDWARE ACCEPTANCE DATA PACKAGE  
 INDEX PAGE**

ITEM NAME	CI NO.	PART NUMBER	CAGE CODE	SERIAL NUMBER
-----------	--------	-------------	-----------	---------------

☐ **FLIGHT HARDWARE**                      ☐ **GROUND SUPPORT EQUIPMENT**

**DOCUMENTS INCLUDED IN THIS DATA PACKAGE**

INCLUDED	NONE	REFERENCE	SECTION	INDEX
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	I	DD FORM 250/1149 OR EQUIVALENT
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	II	HISTORICAL LOG/NOTES/COMMENTS
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	III	WAIVERS/DEVIATIONS
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	IV	UNEXPLAINED ANOMALIES
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	V	SHORTAGES
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VI	UNPLANNED/DEFERRED WORK
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VII	PREPLANNED/ASSIGNED WORK
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VIII	IDENTIFICATION — AS-DESIGNED CONFIGURATION
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	IX	OPERATING TIME/CYCLE
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X	AGE SENSITIVE/TIME ACTION ITEMS
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	XI	NON-STANDARD CALIBRATION DATA
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	XII	REPAIR LIMITATIONS DATA
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	XIII	PRESSURE VESSEL DATA
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	XIV	PYROTECHNIC DATA
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	XV	NONFLIGHT HARDWARE/TEMPORARY INSTALLATIONS
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	XVI	CERTIFICATIONS
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	XVII	MSDS
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	XVIII	ACCEPTANCE REQUIREMENTS

**ACCEPTANCE DATA PACKAGE APPROVAL**

CONTRACTOR/SUPPLIER, QUALITY ASSURANCE	DATE
NASA QUALITY ASSURANCE	DATE

**FIGURE E-2 HARDWARE ACCEPTANCE DATA PACKAGE INDEX PAGE**

**SPACE STATION  
SOFTWARE ACCEPTANCE DATA PACKAGE  
INDEX PAGE**

**SOFTWARE IDENTIFIER**

**CSCI NO.**

**VERSION**

☐

**FLIGHT SOFTWARE**

☐

**GROUND SUPPORT  
SOFTWARE**

**DOCUMENTS INCLUDED IN THIS DATA PACKAGE**

<b>INCLUDED</b>	<b>NONE</b>	<b>REFERENCE</b>	<b>SECTION</b>	<b>INDEX</b>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	I	DD FORM 250/1149 OR EQUIVALENT
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	II	NOTES/COMMENTS
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	III	WAIVERS/DEVIATIONS
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	IV	UNEXPLAINED ANOMALIES
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	V	UNPLANNED/DEFERRED WORK
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VI	PREPLANNED/ASSIGNED WORK
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VII	SPECIFICATION DOCUMENTS
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VIII	PROGRAM LISTING
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	IX	VERSION DESCRIPTION DOCUMENT(S)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X	USER'S GUIDE OR SYSTEM OPERATING MANUAL
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	XI	CERTIFICATIONS
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	XVII	MSDS

**ACCEPTANCE DATA PACKAGE APPROVAL**

\_\_\_\_\_  
CONTRACTOR/SUPPLIER, PRODUCT ASSURANCE

\_\_\_\_\_  
DATE

\_\_\_\_\_  
NASA PRODUCT ASSURANCE

\_\_\_\_\_  
DATE

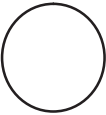
**FIGURE E-3 SOFTWARE ACCEPTANCE DATA PACKAGE INDEX PAGE**

## APPENDIX F INSTRUCTIONS FOR THE PREPARATION OF THE EQUIPMENT PARTS TAG

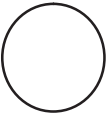
An Equipment Parts Tag may be used in lieu of preparing an ADP when the data items (reference Table 4.0–1) are not applicable or relevant to the item(s) being delivered.

The following instructions are for preparation of the tag [see Figure F–1, Space Station Equipment Parts Tag (Front View/Back View)].

Part Name	The name of the deliverable part(s).
Part Number	The part number of the deliverable part(s).
CAGE Code	Identify CAGE Code of Supplier
Serial/Lot Number	The serial number or lot number of the deliverable part(s).
Quantity	The quantity of identical part numbers being delivered.  NOTE: A separate tag is required for each serial or lot number.
DWG C/L (Drawing Change Letter)	The drawing change letter to which the part(s) were fabricated.
Incorporated Engineering Change Numbers	The incorporated Engineering Change number applicable to the drawing change letter to which the part(s) were fabricated.  NOTE: If the Identification —As–Built Configuration is required below the level of this deliverable item(s) (see Table 4.0–1, Identification — As–Built Configuration), then an ADP is required.
Type of Hardware (Flight or GSE)	Defines the intended use of the hardware.
Notes/Comments	Recordings of any pertinent data which would be beneficial to the using site.
Acceptance Approval Signature/Stamp	The cognizant Quality organization and the NASA or delegated organization responsible for the acceptance of the deliverable part(s). The signature/stamp, date, and organizations signify the data items listed on the backside of the tag are not applicable or relevant to the deliverable part(s).

 <b>SPACE STATION EQUIPMENT PARTS TAG</b>		
<b>PART NAME</b>	<b>PART NUMBER</b>	
<b>CAGE CODE</b>		
<b>SERIAL/LOT NUMBER</b>	<b>QTY</b>	<b>DWG</b>
<b>INCORPORATED ENGINEERING CHANGE NUMBERS</b>		
<b>TYPE OF HARDWARE</b>		
<b>FLIGHT</b> <input type="checkbox"/> <b>GSE</b> <input type="checkbox"/>		
<b>NOTES/COMMENTS</b>		
<div style="border: 1px solid black; padding: 5px; transform: rotate(-15deg); display: inline-block;"> <b>REWORK</b> </div>		
<b>ACCEPTANCE APPROVAL SIGNATURE/STAMP</b>		
<b>COMPANY QUALITY</b>		
<b>NASA</b>		

**FRONT VIEW**

 <b>THE FOLLOWING DATA ITEMS ARE NOT APPLICABLE TO THIS HARDWARE*</b>
<b>WAIVERS/DEVIATIONS/UAs</b> <b>UNPLANNED/DEFERRED WORK</b> <b>PREPLANNED/ASSIGNED WORK</b> <b>IDENTIFICATION-AS-BUILT CONFIGURATION</b> <b>OPERATING TIME/CYCLE</b> <b>AGE SENSITIVE/TIME ACTION</b> <b>NON-STANDARD CALIBRATION DATA</b> <b>REPAIR LIMITATIONS DATA</b> <b>PRESSURE/VESSEL DATA</b> <b>PIROTECHNIC DATA</b> <b>MSDS DATA</b>
<b>* WHEN ONE OR MORE OF THE ABOVE DATA ITEMS ARE APPLICABLE TO THE DELIVERABLE HARDWARE, THEN AN ACCEPTANCE DATA PACKAGE IS REQUIRED.</b>

**BACK VIEW**

**FIGURE F-1 SPACE STATION EQUIPMENT PARTS TAG (FRONT VIEW/BACK VIEW)**