

MWI 4530.1
REVISION H

EFFECTIVE DATE: November 5, 2019
EXPIRATION DATE: November 5, 2024

MARSHALL WORK INSTRUCTION

AS01

FLIGHT HARDWARE SUPPORT OPERATIONS (FHSO) COMPONENT ACQUISITION, INVENTORY CONTROL, AND KITTING SERVICES

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DOCUMENT HISTORY LOG

Status (Baseline/ Revision/ Change/ Revalidation/ Canceled)	Document Revision/ Change	Effective Date	Description
Baseline		5/14/99	Document converted from MSFC-P06.1-C08 to a Directive. Previous history retained in system as part of canceled or superseded ISO Document files.
Revision	A	8/16/99	General rewrite to clarify operational instructions and address new processes. Includes changes to address use of new MSFC Form 4358 and changes to address new funding methodology (Appendix A).
Revision	B	10/1/00	Revised to reflect new applicable documents and corresponding document numbers. Paragraph 6.5.3 expanded to provide details of the disposition of nonconforming products procured by FHSO. Corrections to document flowcharts.
Revision	C	10/28/2004	Revised to reflect new applicable documents and corresponding documents numbers. Includes changes to address new funding methodology. MSFC directions to change document based on Headquarters on Center-specific requirements.
Revision	D	3/01/2007	Revised to update organizational codes, change titles, and define acronyms.
Revision	E	6/10/2010	Changed title of MWI 4500.1. Added reference to NPR 1441.1. Changed reference from Chief Financial Officer to Office of the Chief Financial Officer in the Appendix. Added definition of flight hardware. Added reference to MPD 2800.1, Management of Information Technology System and Services at MSFC. Added acronym for electrical, electronic, and electromechanical (EEE). Made other editorial changes. Updated applicability statement.
Revision	F	11/25/2014	Revised applicable documents and formatting. Clarified instructions. Added requirement in 5.2.6.6 for FHSO to utilize MSFC Form 57 when shipping or hand carrying government property off site. Added the process for transferring ownership from FHSO to the Government through the use of MSFC Form 4554.
Revision	G	9/27/2016	Made editorial changes. Added requirement 5.4.5.12 for FHSO's handling of shelf life items.
Change	I	5/2/2019	On 5/2/19, at the request of the OPRD, administrative changes were made to remove quotation marks around document and form titles, update 5.2.1 changing instruction for exceptions to the \$25,000 threshold per order from "that do not exceed \$100,000 per order." to "that follow the Simplified Acquisition Threshold (SAT) per order." Clarified Note at 5.2.2, and added a table in Appendix D, Records, for clarity.
Revision	H	11/5/2019	This is a Change Request. Comments will only be accepted for content changes at 5.4.2.24. In response to the 2018 QAAR NCR #1877, section 5.4.2.24 regarding vendor selection priority for FHSO procurements was revised. Administrative change: reformatted section 5.4.2.3 through 5.4.2.24; removed the shall statements and made those statements subparts (a through v) under requirement 5.4.2.2.

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1. PURPOSE

This MWI establishes the instructions for requesting and providing acquisition, kitting, storage, inventory management, and control services for flight-designated, qualification and MSFC project's associated hardware parts, components, and subassemblies throughout MSFC Logistics Services Office (LSO), Flight Hardware Support Operations (FHSO) as permitted by NPR 1400.1. The FHSO is specifically designed to provide dedicated support for MSFC flight projects and maximize the effectiveness of project engineers and scientists by reassigning and minimizing non-engineering-related tasks. MSFC flight projects are encouraged to fully utilize the prescribed services to maximize project efficiency.

2. APPLICABILITY

2.1 This MWI applies to Center personnel, programs, projects, and activities including contractors and resident agencies to the extent specified in their respective contracts or agreements. ("Contractors" for purposes of this paragraph include contractors, grantees, Cooperative Agreement recipients, Space Act Agreement partners, or other agreement parties.)

2.2 This MWI does not apply to Michoud Assembly Facility.

2.3 This MWI applies the following: all mandatory actions (i.e., requirements) are denoted by statements containing the term "shall." The terms: "may" or "can" denote discretionary privilege or permission, "should" denotes a good practice and is recommended, but not required, "will" denotes expected outcome, and "are/is" denotes descriptive material.

2.4 This MWI applies the following: all document citations are assumed to be the latest version unless otherwise noted.

3. AUTHORITY

NPR 1400.1, NASA Directives and Charters Procedural Requirements

4. APPLICABLE DOCUMENTS AND FORMS

4.1 NRRS 1441.1, NASA Records Retention Schedules

4.2 MPD 2800.1, Management of Information Technology and Services at MSFC

4.3 MPR 1280.2, Process Control

4.4 MPR 4000.2, Property Management

4.5 MPR 6000.1, Transportation

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- 4.6 MPR 7123.1, MSFC Systems Engineering Processes and Requirements
- 4.7 MPR 8730.1, Inspection and Testing
- 4.8 MWI 8550.5, Hazardous Material Management
- 4.9 MSFC-RQMT-2918, Requirements for Electrostatic Discharge Control
- 4.10 AS40-OI-024, Logistics Use of the Procurement Discrepancy Tracking System (PDTS)
- 4.11 MSFC Form 57, MSFC Shipping Document
- 4.12 MSFC Form 312, Parts Tag
- 4.13 MSFC Form 4358, Material Request/Quality Criteria Assignment
- 4.14 MSFC Form 4554, Transfer and Shipping Document

5. INSTRUCTIONS

5.1 Instructions for Requesting FHSO Capability Review.

Note: The MSFC FHSO Web site is <http://fhs> and includes a current listing of points of contact and phone numbers for requesting current information and capability reviews.

5.1.1 The project manager/systems engineer/organizational lead shall contact the FHSO Supervisor and request a review of FHSO capabilities when required.

5.1.2 The FHSO supervisor will meet with project personnel as requested to provide a written and oral review of FHSO and provide FHSO points of contact.

Note: FHSO services include flight hardware acquisitions, material issues, reservations, flight hardware warehousing, material and component kitting services, quotes, material costs, lead time estimations, facilitation of MSFC Safety and Mission Assurance (SMA) Directorate receiving inspection processes and acceptance, technical support services including alternative parts/component identification, and component application guidance.

5.2 Instructions for FHSO Acquisition Limitations.

5.2.1 The FHSO flight hardware acquisitions shall not exceed \$25,000 per order with the exception of electrical, electronic, and electromechanical (EEE) component parts and mechanical fasteners that follow the Simplified Acquisition Threshold (SAT) per order.

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5.2.1.1 Requests exceeding these limits shall be sent to the Contracting Officer for acquisition approval.

5.2.2 Shipping containers can be obtained through the LSO.

Note: To order shipping containers, customers can go to Explornet, and select 4-HELP, MSFC Logistics, Transportation, Packing and Crating, and contact the MLSS Contractor Service Owner listed for assistance.

5.2.3 FHSO shall not purchase any information technology (IT) items that are governed by MPD 2800.1.

5.2.4 FHSO acquisitions are for EEE components parts, noncapital assemblies; mechanical fasteners, connectors, commercially-available or build-to-print mechanical or electrical subassemblies; modified commercially-available parts, and commercially-available items incidental to the development of flight hardware. FHSO flight hardware acquisitions also include acquisitions of hardware procured from vendors who have been audited and/or formally approved by the MSFC (SMA) Directorate or the manufacturer's approved vendors list to provide flight and/or quality sensitive bare unpopulated printed circuit boards, custom magnetic assemblies, build-to-print circuit assemblies, build-to-print cable assemblies, build-to-print electronic enclosures, and mounting hardware; vendor modified commercially-available parts (such as hybrids that are modified by replacing an internal standard piece part with a space grade radiation-hardened piece part to meet the flight environment), subassemblies that may contain internal piece parts or kits of parts furnished to the vendor by MSFC through FHSO, and shop consumables (cleaning agents, epoxies, conformal coatings, inks, solders, flux, pastes, and any item considered a consumable for normal flight manufacturing processes).

5.2.4.1 Upon FHSO issuance of flight items to the customer, the customer assumes responsibility of item(s). Official transfer to the Government takes place monthly on a consolidated MSFC Form 4554 which contains that month's FHSO issuances.

5.2.5 FHSO non-flight hardware acquisitions shall be limited to development versions of the items mentioned in 5.2.4 that are procured from sources as recommended by the requestor and as governed by procurement regulations and incidental items (stencils to MSFC artwork, certificates of compliance, attributes, travelers, test reports, etc., that document the pedigree of the flight hardware, and parts tags for any parts furnished by FHSO to the vendor for internal use) and shop consumables (cleaning agents, epoxies, conformal coatings, inks, solders, flux, pastes, and any item considered a consumable for normal flight manufacturing processes).

5.2.5.1 Upon FHSO issuance of non-flight items to the customer, the customer assumes responsibility of item(s). Official transfer to the Government takes place monthly on a consolidated MSFC Form 4554 which contains that month's FHSO issuances.

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5.2.5.2 Customers utilizing the FHSO program shall agree and provide justification that the materials acquisitioned as non-flight be used for the development and/or direct test of flight hardware.

5.2.6 The FHSO provides acquisitioned services to MSFC customers and shall be limited to design, fabrication, and test services (in-house or out-of-house), which supplement the flight hardware. These services are considered allowable if they are documented on the purchase order.

5.2.6.1 FHSO shall be allowed to render services for screening and/or analysis of flight hardware by government-approved testing facilities (in-house or out-of-house).

5.2.6.2 FHSO shall be allowed to send various components, including but not limited to, integrated circuit boards, resistors, capacitors, semiconductors, hybrids, custom magnetic assemblies, and printed circuit boards for in-house screening or to outside vendors for various types of testing and screening. Typical in-house screening includes particle impact noise detection (PIND) and radiography. Typical out-of-house screening includes destructive physical analysis (DPA), residual gas analysis (RGA), ionizing radiation testing, and/or additional screening that may be done by a Defense Supply Center Columbus (DSCC) approved screening house.

5.2.6.3 FHSO shall be allowed to provide services such as lead forming/tinning, board population from MSFC-furnished kits, cable/harness assembly from MSFC kits, and surface finish/plating of MSFC-provided mechanical hardware.

5.2.6.4 Other forms of services are considered on a case by case basis by the FHSO's Contracting Officer.

5.2.6.5 Customers utilizing the FHSO program shall agree and provide justification that the services acquisitioned be used for the development and/or direct test of the flight hardware.

5.2.6.6 FHSO shall utilize MSFC Form 57 when shipping or hand carrying government property (including flight hardware) off site per MPR 6000.1 and MPR 4000.2.

5.3 Instructions for Developing a Project Profile.

5.3.1 Each project to be supported by FHSO shall complete a project profile worksheet provided by the FHSO.

5.3.2 This worksheet shall be used to establish a database for the MSFC project within the MSFC Flight Hardware Request System (FHSRS).

5.3.3 Establishment of a project profile shall be completed prior to requesting services from the FHSO in order to maintain project-specific accountability.

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5.3.4 The following procedure shall be followed in requesting and completing a project profile worksheet.

5.3.4.1 The Project manager/systems engineer/organizational lead requests a project profile worksheet from the FHSO supervisor.

5.3.4.2 The FHSO supervisor, upon request, shall provide the project profile worksheet and provide guidance for completing the data whenever necessary.

5.3.4.3 The Project manager/systems engineer/organizational lead shall complete the worksheet, verify that all personnel authorized on the project profile are listed, and validate the information by signing the worksheet.

5.3.4.4 The Project manager/systems engineer/organizational lead shall fax or scan signed profile worksheet to the FHSO Supervisor.

5.3.4.5 The FHSO supervisor shall establish project profile in the MSFC FHSRS.

5.3.4.6 The FHSO supervisor shall assign a unique project identifier (PID) and notify project personnel of designation.

5.4 Instructions for Processing Material Quote Requests.

5.4.1 The FHSRS shall be used to request estimates and quotes for needed parts and materials. Instructions for completing the request in FHSRS is as follows:

5.4.1.1 Authorized Project Personnel shall enter “Date of Request,” “Requester Name,” “Requester Phone,” “Project Name,” and validate the project name and ID number.

5.4.1.2 The FHSRS system assigns a “Request ID#” to the request. This identification number is unique to the request. The following format is used:

Requester’s Initials: 3 Places (i.e., John J. Smith = JJS)

Project Acronym: 3 Places (i.e., Oxygen Generator Assembly = OGA)

Sequential Number: (A/N) 3 Places (i.e., 001 = First quote request from John J. Smith)

Letter “Q” (Designator for Quote Request)

Note: In the example above, the “Request ID#” = “JJSOGA001Q”

5.4.1.3 If a change or revision to an original request is required, the revision field shall be populated by a sequential alpha character, i.e., Rev. A, B, C, by the FHSRS system.

5.4.1.4 The requester shall complete the “Need Date” and “Engineering Parts List (EPL) #” fields as applicable.

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5.4.1.5 Authorized project personnel shall identify the “Type of Request” and “Type of Material.”

5.4.1.6 Authorized project personnel shall complete the “Materials Required” section.

5.4.1.7 Authorized project personnel shall provide the following data as a minimum to speed FHSO response: Sequential item numbers, a complete and accurate part number, and a technical description of the part or material requested.

5.4.1.8 Authorized project personnel can recommend a suggested vendor(s) for the materials requested by entering additional data as a note.

5.4.1.9 Authorized project personnel forward quote requests for parts or materials intended for “flight use” or “quality-sensitive” to the assigned project quality engineer (QE).

5.4.1.10 E-mail quote request for parts or materials intended for “non-flight use” directly to the FHSO supervisor for processing.

5.4.1.11 Project QE shall enter name and phone number on the request.

5.4.1.12 Project QE shall denote whether parts tags are requested.

5.4.1.13 Project QE shall review, validate, and/or ensure that detailed quality criteria, traceability requirements, test, inspection, and acceptance requirements are provided and in accordance with project requirements. (Please see MPR 1280.2, MPR 7123.1 and MPR 8730.1.)

5.4.1.14 Project QE shall forward completed request to the FHSO supervisor via e-mail.

5.4.1.15 FHSO shall screen quote request against stocked materials meeting quality requirements and notes available items on request.

5.4.1.16 FHSO shall screen requested materials against Government Industry Data Exchange Program (GIDEP) alerts, suspend requisition if alert located, and review for alternate vendors.

5.4.1.17 FHSO shall notify the requester of the alert, provide any information obtained from review, and request disposition instructions.

5.4.1.18 FHSO shall obtain price and availability information as requested, and return the completed quote request to the requester.

5.4.2 Instructions for Processing Material Requisition Requests.

5.4.2.1 The FHSRS shall be used to request requisition of needed parts and materials.

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5.4.2.2 The following procedure shall be followed when submitting a material requisition:

a. Authorized project personnel enters “Date of Request,” “Request Name,” “Requester Phone,” “Project Name,” and verify “Project ID Number” and name.

b. The FHSRS assigns a “Request ID#” to the request. The following format is used:

Requester’s Initials: 3 Places (i.e., John J. Smith = JJS)

Project Acronym: 3 Places (i.e., Oxygen Generator Assembly = OGA)

Sequential Number: (A/N) 3 Places (i.e., 001 = First material requisition from John J. Smith)

Letter “R” (Designator for Requisition)

Note: In the example above, the “Request ID#” = “JJSOGA001R”

c. Authorized project personnel completes the “Rev.” field as appropriate. The “Rev.” field is reserved for revisions to a previously-submitted request.

d. If a change or revision to an original request is required, the “Rev.” field is populated by a sequential alpha character, i.e., Rev. A, B, and C, by the FHSRS system.

e. Authorized project personnel completes the “Need Date” for requisitions and “EPL#” fields as applicable.

f. Authorized project personnel identifies the “Type of Request” and “Type of Material.”

g. Authorized project personnel completes the “Materials Required” section.

h. Authorized project personnel provides the following data as a minimum to speed FHSO response: Sequential item numbers, a complete and accurate part number, and a technical description of the part or material requested.

i. Authorized project personnel may recommend a suggested vendor(s) for the materials requested by entering additional data as a note.

j. Authorized project personnel provides disposition instructions for requested materials. Disposition instructions are included in FHSRS or provided as an attachment to the request.

k. Authorized project personnel forwards requisition for parts or materials intended for “flight use” or “quality-sensitive” to the assigned project QE.

l. Authorized project personnel e-mails requisition for parts or materials intended for “non-flight use” directly to the FHSO supervisor for processing.

m. Project QE enters name and phone number on the request.

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- n. Project QE denotes whether parts tags are required.
- o. Project QE reviews, validates, and/or ensures that detailed quality criteria, traceability requirements, test, inspection, and acceptance requirements are provided and in accordance with project requirements. (Please see MPR 1280.2, MPR 7123.1, and MPR 8730.1.)
- p. Project QE forwards completed request to the FHSO supervisor via e-mail.
- q. Project QE prints and signs a copy of MSFC Form 4358 and fax to FHSO. It is recommended that the QE retain a copy of the electronic request for their records and reference.
- r. FHSO screens request against stocked materials meeting quality requirement; note available items on request; and assign a local stock number(s) or denote existing Federal stock number(s) for each item to be procured.
- s. FHSO screens requested materials against GIDEP alerts, suspends requisition if alert located, reviews for alternate vendors, and notifies buyers of alert requirements.
- t. FHSO procures requested parts and material in accordance with prescribed quality/inspection requirements and denotes cost and delivery schedule on request.
- u. Ensure that if hazardous materials or environmentally sensitive equipment are purchased, the instructions in MWI 8550.5 are followed.
- v. When making procurements, FHSO shall select vendors from the SMA provided Evaluated Vendors List, if qualified sources are required by the quality requirements. If qualified sources are not required per the quality requirements, then FHSO shall select vendors with which it has had prior experience or otherwise determine can meet applicable requirements.

5.4.3 Facilitation of SMA Directorate Receiving Inspections and Acceptance.

5.4.3.1 Prior to submission to SMA Directorate, FHSO personnel shall perform an initial inspection on all materials, components, and pedigree documentation received, and update the FHSRS.

- a. For items procured by the Marshall Logistics Support Services contract (MLSS) and determined to be nonconforming during initial inspection, FHSO shall disposition discrepant materials in accordance with contractor procedures.
- b. For items procured by the MSFC Office of Procurement and received by FHSO, but found to be nonconforming, disposition shall be coordinated through an Inbound Discrepancy Report (IDR) in Procurement Discrepancy Tracking System (PDTs).

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Note: In each case, disposition of discrepant materials is coordinated through the responsible QE, requesting organization, and the Contracting Officer.

5.4.3.2 All items requiring flight certification are forwarded to MSFC SMA Directorate for parts tag (MSFC Form 312, "Inspection and Receiving Report") assignment. Any hardware discrepancy discovered during SMA acceptance and/or testing shall be reported and dispositioned through the PDTS in accordance with AS40-OI-024.

5.4.3.3 Whenever requested materials have been designated for "flight use," "quality-sensitive," and/or require SMA inspection and acceptance, the following procedure shall apply:

a. Inspection/testing of residual and/or stocked materials and components:

(1) The FHSO supervisor/supply technician shall review each request for completeness and ensures that acceptance criteria and traceability requirements have been provided.

(2) The FHSO supply technician/material expediter shall generate issue of stock materials and corresponding acceptance data package (ADP) for those items meeting specified acceptance and traceability requirements.

(3) The FHSO supervisor/supply technician shall generate inspection and acceptance report (IAR) within the PDTS.

(4) The FHSO supply technician/material expediter shall ensure material(s), corresponding ADP(s), and copy of request containing acceptance, test, and inspection criteria are delivered to SMA Directorate, Building 4705, for subsequent acceptance, test, and parts tag assignment.

(5) The SMA Quality Assurance Representative (QAR) shall perform inspection per acceptance criteria and applicable SMA procedures.

(6) SMA shall update the IAR in the PDTS and places items and assigned parts tag in designated FHSO pickup location.

(7) SMA shall denote/certify test results on MSFC Form 312 and update PDTS IAR request status.

(8) The FHSO supply technician shall close electronic IAR and dispositions materials per request.

b. Inspection/testing of procured parts and materials:

(1) The FHSO material expeditor/designee, upon receipt, shall conduct an initial receiving inspection of materials for count, condition, part verification, and completeness of ADP enclosures and initiate corrective action in FHSRS if parts/materials fail inspection.

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- (2) The FHSO supervisor/supply technician shall generate electronic IAR within the PDTS.
- (3) The FHSO supervisor/supply technician shall have materials, corresponding ADP, and copy of request containing acceptance and inspection criteria delivered to SMA Directorate, Building 4705, for subsequent acceptance and parts tag assignment.
- (4) The SMA QAR shall perform inspection per acceptance criteria and applicable SMA Directorate procedures.
- (5) When required, SMA shall forward materials to responsible MSFC testing organization for acceptance and/or function tests based on project requirements stated in the FHSRS.
- (6) SMA shall denote/certify test results on MSFC Form 312 and update PDTS IAR request status.
- (7) SMA shall update electronic IAR in the PDTS and places item and assigned parts tags in designated FHSO pickup location.
- (8) The FHSO material expediter shall pick up part/material from SMA pickup location.
- (9) The FHSO supply technician shall close electronic IAR and dispositions materials per request.

5.4.4 Instructions for Requesting FHSO Kitting Services.

5.4.4.1 FHSO shall provide component and material kitting services upon request from MSFC projects. The following procedure applies when requesting kitting services:

- a. Authorized project personnel shall request that reserved or requisitioned components and materials be provided by completing an electronic kitting request via the FHSO home page and/or providing written instructions to the FHSO supervisor.
- b. FHSO shall kit and package the requested materials and components per provided instruction.

Note: Disposition of the kitted materials is performed in accordance with project instructions.

5.4.5 Instructions for Storage, Reservation, or Sequestering of Flight-Certified and Noncertified Components/Materials.

5.4.5.1 FHSO shall maintain a record of all flight pedigree documentation, test reports, certifications of compliance, and MSFC Form 312 on a per-part basis to ensure compliance with project and MSFC SMA Directorate acceptance. Flight certifications/pedigrees are maintained until the corresponding parts have been depleted through the issue process. Original parts tag

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(MSFC Form 312) is issued with the part(s) as the last quantity is issued. The issuance of parts and materials by FHSO is performed in accordance with contractor procedures.

5.4.5.2 The handling, storage, and maintenance of electrostatic discharge sensitive (ESDS) components and materials shall be performed by FHSO in accordance with MSFC-RQMT-2918.

5.4.5.3 FHSO's electrostatic discharge (ESD)-protective storage areas shall be initially inspected, certified, and audited per MSFC-RQMT-2918 by SMA Directorate.

5.4.5.4 MSFC flight projects shall request that procured or stocked components/materials be reserved or sequestered for sole use by the project in the request disposition instructions.

5.4.5.5 Reservations shall be performed in accordance with lot/batch, serialized, and/or reflight requirements prescribed by the project.

5.4.5.6 FHSO shall reserve and/or sequester the designated materials per project instructions in the project's assigned PID and maintain those materials until otherwise directed by the project.

5.4.5.7 FHSO shall develop asset records within the FHSRS database for each item reserved/sequestered by the project.

5.4.5.8 FHSO shall develop individual asset records for each traceable asset consistent with the part or materials traceability and/or certification.

5.4.5.9 Traceable assets shall be identified via unique bar-coded labeling and not comingled with similar assets.

5.4.5.10 Authorized project personnel shall be permitted to withdraw flight and non-flight components and materials from the FHSO component storage facilities located in MSFC Building 4631 by requesting issue through e-mail to the FHSO supervisor.

Note: The project/residual FHSO inventory is viewable through the FHSRS query engine accessible through the MSFC network at <http://fhs>.

5.4.5.11 FHSO shall review all materials in inventory for applicability of current Alerts, and notify the appropriate project manager/systems engineer/organizational lead.

5.4.5.12 As materials in inventory that have shelf life dates reach the end of their shelf life, the materials shall either be issued to the project or excessed per MPR 4000.2.

Note: If expired shelf life items are issued to the project, the project can go through the necessary steps to extend the shelf life of the items and turn them back in to FHS for tracking and storage.

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5.4.6 Instructions for requesting FHSO Technical Support Services.

5.4.6.1 FHSO shall provide technical support services to include alternative parts identification, guidance on component application, and packaging upon request from an established MSFC project.

5.4.6.2 Requests for these services shall be submitted through the FHS supervisor via oral or e-mail request.

5.5 Instructions for Funding Acquisitions of Project Components and Materials.

5.5.1 Funding for acquisitions shall be transferred and approved by the contract specialist that supports the MLSS before acquisitions can be made by FHSO.

5.5.2 Requester, program/project, and appropriate directorate managers or designees shall establish funding estimates for each approved flight project and/or flight experiment(s) to be supported.

5.5.3 Requester, program/project, and appropriate directorate managers or designees shall notify and consult with the program/project resource personnel to obtain Work Breakdown Structure (WBS) data.

5.5.4 WBS data shall be provided to the contract specialist that supports the MLSS and the collocated resource analyst.

6. CANCELLATION

MWI 4530.1G-1, Flight Hardware Support Operations (FHSO) Component Acquisition, Inventory Control, and Kitting Services, dated September 27, 2016.

Electronically signed by

Jody Singer
Director

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APPENDIX A DEFINITIONS

Authorized Project Personnel. Project personnel authorized to requisition, replenish, and stock components and materials.

Flight Hardware Request System (FHSRS). An electronic, Web-based inventory control database accessible through the MSFC network at <http://fhs>.

Kitting. Gathering individual requested components and/or materials and providing them in a packaged 'kit' per project instructions.

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APPENDIX B ACRONYMS

ADP – Acceptance Data Package

DPA – Destructive Physical Analysis

DSCC – Defense Supply Center Columbus

EEE – Electrical, Electronic, and Electromechanical

EPL – Engineering Parts List

ESD – Electrostatic Discharge

ESDS – Electrostatic Discharge Sensitive

FHSO – Flight Hardware Support Operations

FHSRS – Flight Hardware Support Request System

GIDEP – Government Industry Data Exchange Program

IAR – Inspection Acceptance Report

ID – Identification

IDR – Inbound Discrepancy Report

IT – Information Technology

LSO – Logistics Services Office

MLSS – Marshall Logistics Support Services

MPD – Marshall Policy Directive

MPR – Marshall Procedural Requirements

MSFC – Marshall Space Flight Center

MWI – Marshall Work Instruction

NISM – NASA Integrated Service Management

Marshall Work Instruction AS01		
Flight Hardware Support Operations (FHSO) Component Acquisition, Inventory Control, and Kitting Services	MWI 4530.1	Revision: H
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NPR – NASA Procedural Requirements

NRRS – NASA Records Retention Schedules

OGA – Oxygen Generator Assembly

OI – Organizational Issuance

PDTS – Procurement Discrepancy Tracking System

PID – Project Identifier

PIND – Particle Impact Noise Detection

QAR – Quality Assurance Representative

QE – Quality Engineer

RGA – Residual Gas Analysis

SMA – Safety and Mission Assurance

SRM – Service Request Management

WBS – Work Breakdown Structure

Marshall Work Instruction AS01		
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**APPENDIX C
VERIFICATION METRIX (Reserved)**

NONE

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APPENDIX D RECORDS

Description	Retention	Authority
<ul style="list-style-type: none"> • MSFC Form 312, Parts Tag • MSFC Form 4358 Material Request/Quality Criteria Assignment • All flight pedigree documentation, test reports, certifications of compliance 	Permanent, handle as permanent pending retention approval	Unscheduled

D.1 All records associated with items procured through the FHSO are maintained by FHSO while the item is in active inventory.

D.1.1 Upon issue of the final item from inventory and/or the cancellation of a PID, all records for items procured by and/or stored in FHSO inventory will be transferred to the responsible project or organization.

D.1.2 The responsible project or organization maintains the records per NRRS 1441.1, Schedule 8/101, 8/103 or 8/107 as appropriate.