

MPG 8040.3

REVISION B

EFFECTIVE DATE: July 10, 2000

EXPIRATION DATE: July 10, 2005

MARSHALL PROCEDURES AND GUIDELINES

ED01

PRODUCT TRACEABILITY

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DOCUMENT HISTORY LOG

Status (Baseline/ Revision/ Canceled)	Document Revision	Effective Date	Description
Baseline		5/14/99	Document converted from MSFC-P08.2 to a Directive. Previous history retained in system as part of canceled or superseded ISO Document files.
Revision	A	8/20/99	Changes made to reflect new MSFC reorganization. Changed paragraph P.2 to read "This MPG applies to all MSFC organizational elements involved in the design, procurement, fabrication, inspection, test, and operation of hardware for MSFC projects."
Revision	B	7/10/00	<p>Changed OPR to ED01.</p> <p>P.1: Changed to read: "This Marshall Procedures and Guidelines (MPG) provides for the definition of traceability requirements for in-house produced or procured configuration items, parts, material, and software while under MSFC's control (i.e., manufacturing, delivery, operations, storage, etc.). This procedure implements the requirements of MPD 1280.1, "Marshall Management Manual."</p> <p>P.2: Changed to read: "This MPG applies to all MSFC organizational elements involved in the design, procurement, fabrication, inspection test, and operation of hardware/software for MSFC projects. It shall be used for MSFC developed flight hardware, flight software, and flight associated ground support equipment products. Traceability, if required, for nonflight items controlled by MPG 8060.2 and facility items controlled by MPG 8823.1 shall be jointly decided by the design control process owner and the program/project manager/customer/user."</p> <p>P.4: Deleted (MPD 1280.1 and MPG 1050.1) paragraphs a. and b. and renumbered paragraphs.</p> <p>P.5: Deleted a.,b.,c., and added MPG 8060.2 and MPG 8823.1 as reference.</p> <p>1. Added statement: (The definitions in MPG 8040.2 apply.)</p> <p>Removed paragraphs 1.2, 1.5, 1.5.1 and 1.5.2 and renumbered paragraphs accordingly.</p> <p>Replaced para 1.3 with: "<u>Parts Tag MSFC Form 312 (formerly Inspection Report)</u>. A quality control document which remains with the part and records parts identification and inspection verification during manufacture, test, assembly and storage."</p> <p>1.4 added: "from the first stage of use to end item use, and the reverse" at the end of sentence.</p> <p>1.5.3: Changed to read: "A number assigned to raw material (e.g., Heat Number), etc., for traceability..."</p> <p>2.2: Changed to read: "...traceability identification..."</p> <p>2.4 Changed "QA" to "S&MA."</p> <p>3.2 Changed to read: "The requester either for in-house or for procurements.....and</p>

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			<p>include them in the design definition documentation." Deleted reference to MPG 1050.1.</p> <p>3.4 Added "Maintain" and deleted "uniquely."</p> <p>Reworded para below 3.5 to read: "Traceability, when required, shall be maintained in conjunction with MPG 8040.2, Product Identification."</p> <p>3.5: Changed "QA" to "S&MA." Reworded sentence: "Quality Assurance will maintain product inspection documentation (including traceability) in accordance with MPG 8730.1.</p> <p>4. Changed to read: "Product traceability is documented as required by the records generated in MPG 8060.1, MPG 8730.1, MPG 6410.1, and MPG 1280.2." 5. Revised blocks 3.2, 3.4, and 3.5.</p> <p>[Footer URL updated 01/14/2004 by Directives Manager.]</p>

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PREFACE

P.1 PURPOSE

This Marshall Procedures and Guidelines (MPG) provides for the definition of traceability requirements for in-house produced or procured configuration items, parts, material, and software while under Marshall Space Flight Center's (MSFC) control (i.e., manufacturing, delivery, operations, storage, etc.).

This procedure implements the requirements of MPD 1280.1, "Marshall Management Manual."

P.2 APPLICABILITY

This MPG applies to all MSFC organizational elements involved in the design, procurement, fabrication, inspection, test, and operation of hardware and software for MSFC projects. It shall be used for MSFC-developed flight hardware, flight software, and flight-associated ground support equipment products. Traceability, if required, for nonflight items controlled by MPG 8060.2 and facility items controlled by MPG 8823.1 shall be jointly decided by the design control process owner and the program/project manager/customer/user.

P.3 AUTHORITY

MPD 1280.1, "Marshall Management Manual" (MMM)

P.4 APPLICABLE DOCUMENTS

- a. MPG 8060.1, "Flight Systems Design Control"
- b. MPG 8040.2, "Product Identification"
- c. MPG 1280.2, "Process Control"
- d. MPG 8730.1, "Inspection and Testing"
- e. MPG 6410.1, "Handling, Storage, Packaging, Preservation, and Delivery"
- f. MWI 8040.4, "Application Guidance for Traceability"
- g. MSFC-STD-555, "MSFC Engineering Documentation Standard"

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P.5 REFERENCES

- a. MPG 8060.2, "Non-Flight and Non-Facility Design Control"
- b. MPG 8823.1, "Design Control of Facilities"

P.6 CANCELLATION

MPG 8040.3A dated August 20, 1999

Original Signed by
Sidney P. Saucier for

A. G. Stephenson
Director

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DOCUMENT CONTENT

1. DEFINITIONS (The definitions in MPG 8040.2 apply.)

1.1 Date Code. A number which indicates a specific date in code. A date code may consist of a series of numbers that indicate day, week, month, and year.

1.2 Identification Decal. A decal which may be used as necessary to record product and configuration identification information when actual size, shape, and/or material properties do not permit direct marking of the product. The decal is applied to the package containing the product.

1.3 Parts Tag MSFC Form 312 (Formerly Inspection Report). A quality control document that remains with the part and records parts identification and inspection verification during manufacture, test, assembly, and storage.

1.4 Traceability. The ability to trace the history, application, or location of a product, part, or material by means of recorded identifications, from the first stage of use to end item use, and the reverse.

1.5 Trace Number. A number assigned to raw material (e.g., heat number), etc., for traceability identification prior to fabrication and subsequent lot or serial number assignment.

2. RESPONSIBILITIES

2.1 Project Manager. Project manager is responsible for developing and documenting technical and quality requirements for MSFC-supplied products which clearly define product identification and traceability requirements.

2.2 Hardware Handling Directorates. Hardware handling directorates are responsible for implementing traceability identification requirements when hardware is in their control.

2.3 Design Organizations. Design organizations will specify traceability requirements on the lowest-level drawing and engineering parts list per MSFC drawing standard requirements (MSFC-STD-555).

2.4 Safety and Mission Assurance (S&MA) Office. S&MA will ensure traceability requirements are implemented for hardware/software in accordance with design documentation, procurement documents, and the requirements of this procedure

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from receipt and during all stages of production, delivery, and installation.

3. PROCEDURE

<u>Actionee</u>	<u>Action</u>
Project Manager, Design Organizations	3.1 Design will recommend traceability levels, but final determination will be with the program/project manager (except for fracture-critical parts). See MPG 8060.1.
All	3.2 The requester, either for in-house or for procurements, will obtain serial numbers for traceability from the Configuration Management Release Desk and include them in the design definition documentation. See MSFC-STD-555.
Hardware Handling Directorates	3.3 Manufacturing organizations or designated representative will implement traceability requirements during fabrication operations. See MPG 1280.2.
Hardware Handling Directorates	3.4 Maintain product identification/reidentification, as necessary, for the configuration of as-built, assembled, or tested hardware to include Engineering Orders (EO's), Discrepancy Reports (DR's), waivers, and deviations initiated during fabrication, assembly, and test operations. See MPG 1280.2 and MPG 6410.1.
S&MA	3.5 Quality Assurance will maintain product inspection documentation (including traceability) in accordance with MPG 8730.1.

Traceability, when required, shall be maintained in conjunction with MPG 8040.2, "Product Identification."

Application guidance and levels of traceability can be found in MWI 8040.4, "Application Guidance for Traceability."

The developing software organization will establish and control traceability requirements for software end items.

4. RECORDS

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Product traceability is documented as required by the records generated in MPG 8060.1, MPG 8730.1, MPG 6410.1, and MPG 1280.2.

5. FLOW DIAGRAM

