



Dryden Flight Research Center
Edwards, California 93523

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Dryden Organizational Procedure

Code O

DFRC Space Shuttle Support Equipment (SE) Problem Reporting & Corrective Action (PRACA) System and Test & Inspection Record (TAIR)

Electronically approved by
Director, Flight Operations Directorate

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1.0 PURPOSE OF DOCUMENT

This document defines the processes for Government oversight and contractor maintenance and problem reporting requirements for Shuttle Support Equipment (SE) for which DFRC is assigned operational and maintenance responsibility by the Space Shuttle Program (SSP). It defines the required Problem Reporting and Corrective Action (PRACA) system requirements that ensure the appropriate SSP personnel receive timely and complete equipment status during critical space flight operations. This document also defines the SE Test and Inspection Record (TAIR) which provides the DFRC Shuttle and Flight Operations Support Office with an accurate historical record of all maintenance, discrepancy reports, and corrective actions performed on all SE. The TAIR system also supports problem trend analysis.

2.0 PROCEDURE SCOPE & APPLICABILITY

Scope: This procedure applies to DFRC requirements for SE maintenance and reporting including minimum maintenance requirements, the PRACA system, the TAIR system, and Government/Contractor reporting and review requirements.

Applicability: This procedure applies to all DFRC Shuttle and Flight Operations Support Office government and contractor employees tasked to provide oversight and/or operation and maintenance of government owned SE located at DFRC and/or within the EAFB complex.

3.0 PROCEDURE OBJECTIVES, METRICS, & TREND ANALYSIS

Objective: Identify Space Shuttle SE TAIR requirements

Metric: NASA DFRC Space Shuttle Manager identification of all applicable SE to be covered under the TAIR

Objective: Establish Operations and Maintenance (O&M) matrix tables, TAIR books, and Technical Directive (TD) preventative maintenance (PM) procedures.

Metric: All contractors have developed O&M matrix tables, TAIR books, and Quality Management Systems that define all PM procedures for SE.

Objective: All problems and discrepancies are reported to the DFRC Shuttle and Flight Operations Support Office for Government review/action.

Metric: All SE problems and discrepancies are reported to the DFRC Shuttle and Flight Operations Support Office immediately during critical space flight operations or within one day of discovery during non-critical space flight operations.

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Objective: All SE problems, discrepancies, and corrective actions are properly documented and closed out.

Metric: There are no errors in DR/PRs for all SE discrepancies and correction actions.

Objective: Ensure KSC NCC and sustaining engineering are immediately informed and aware of SE status during critical space flight operations

Metric: Without exception KSC NCC and appropriate sustaining engineering are immediately informed and aware of SE status during critical space flight operations.

Trend analysis: Metrics will be analyzed to determine whether procedural objectives have been met.

4.0 WAIVER AUTHORITY

The NASA DFRC Space Shuttle Manager is delegated the authority to waive the use of, or alter, this procedure. Waivers to requirements defined in this DOP will be documented, approved by the DFRC Space Shuttle Manager, and submitted to the Contracting Officer for inclusion in the Contract file.

5.0 ROLES & RESPONSIBILITIES

5.1 NASA DFRC Shuttle and Flight Operations Support Office

- A. Identify SE that is to be tracked under the TAIR system.
- B. Identify minimum maintenance requirements of the Space Shuttle SE
- C. Ensure timely/accurate discrepancy/problem reporting to appropriate KSC management.
- D. Participate in PRACA process audits.
- E. Perform surveillance on selected PRACA reportable problems and/or processes to assure compliance of the requirements within this document.
- F. Provide a NASA DFRC Flow Engineer.

5.2 NASA DFRC Flow Engineer

- A. Inform the NCC of any problems or discrepancies from T-14 through end of mission
- B. Provide oversight of the DFRC Space Shuttle operations and maintenance contractors during Critical Space Flight and Turnaround Operations
- C. Screen all Problem Reports (PR), Discrepancy Reports (DR), non-conformances and anomalies for accuracy and applicability
- D. Report all Nav-aids PR/DR actions to NASA KSC Nav-aids Engineering
- E. Report all convoy/heavy equipment PR/DR actions as appropriate.
- F. Administer reporting requirements as described in Section 9.0

5.3 Contractor Supervisor Responsibility

- A. Manage the control, issuance and numbering sequence of contractor issued PRs / DRs
- B. Schedule maintenance technicians to perform corrective action
- C. Assure notification of the NASA DFRC Shuttle and Flight Operations Support Office verbally of any discrepancy / issue immediately.
- D. Assure delivery of an initial copy of the PR / DR describing the problem to the NASA DFRC Shuttle and Flight Operations Support Office within 24 hours and/or as described in Section 9.0.
- E. Review / concur with corrective actions

5.4 Contractor Maintenance Technician Responsibility

- A. Notify Supervisor / QA when a discrepancy has been discovered
- B. Obtain PR / DR number; make appropriate entry in the TAIR book index
- C. Document problem description on PR / DR before start of repairs
- D. Perform corrective actions as required
- E. Enter corrective action taken on PR / DR, initial the tech block, and ensure QA final inspection completed
- F. Close out TAIR index after final inspection

5.5 Contractor Quality Assurance (QA) Responsibility

- A. Assure technicians have notified supervision of the discrepancy

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- B. Assure the technician has obtained a PR / DR number and have completed the problem description portion of the PR / DR form, prior to troubleshooting
- C. Concur with corrective action, inspect and “buyoff” technicians work in process and / or at closeout of the PR / DR, as required
- D. Assure PR / DR is accurate and completed
- E. Review DRs for possible upgrading to a PR
- F. Verify TAIR book entries are accurate and complete
- G. Ensure notification of the NASA DFRC Shuttle and Flight Operations Support Office upon completion of corrective action
- H. Ensure delivery of a copy of the completed PR / DR to NASA DFRC Flow Engineer for review
- I. Make distribution of the PR / DR to KSC as applicable

Quality Assurance personnel may assist in the preparation of any or all of the above requirements.

6.0 TEST AND INSPECTION RECORD (TAIR)

This section defines required utilization and control of Test and Inspection Record (TAIR) books. TAIR books are developed and maintained by NASA DFRC contractors, for the SE for which they have operations and maintenance responsibility. TAIR books contain both the active and completed maintenance history of the SE, as well as an accumulation of active documentation that define work tasks and control of the book.

A TAIR book is a binder or folder that provides for the accumulation, display, and status of specific SE work control system documentation.

- A. TAIR books will contain a cover page and divided sections for the following work control documentation:
 - TAIR Cover
 - TAIR Index
 - Document Charge-Out Record
 - Operations & Maintenance Instructions
 - Work Order, T.O., and Engineering Instruction Log
 - Problem Reports
 - Discrepancy Reports
 - Part Removal and Installation Record

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- Equipment Status Log

- B. SE TAIR books will be developed and maintained by the contractor for each major equipment end item. The TAIR books will identify the SE model number, dash number, and serial number as applicable.

A single TAIR book may be developed that contains "like items," i.e., Xenon lights, ball-bars, etc. Each end item will be placed in the appropriate section of the TAIR, as identified in paragraph A, above.

The Area A operational intercom / communications systems will be contained in a single TAIR Book. Due to the number of systems involved, the required operations and maintenance instructions will be listed in index form to comply with paragraph A above. Separate supplemental books will contain those maintenance instructions defined in the TAIR Book O&M index and be located in the same area as the TAIR book.

- C. A master record of all TAIR books issued and the assigned location for the book will be maintained by the Contractor Quality Assurance.
- D. TAIR books will be transferred with equipment being permanently relocated. SE information contained in a shared book, as defined above, will be removed from the book, inspection sealed, and transferred with the specific item / equipment. SE information will be reviewed for completeness prior to such transfer and will be placed in an inspection-sealed plastic envelope. The envelope will be physically attached to the equipment, if practicable.
- E. TAIR books for SE on loan or being repaired off site will be retained by the contractor with O&M responsibility. Contractors borrowing SE will be responsible for notifying the contractor holding the TAIR book of any non-conformances, calibration expirations, or other problems affecting an item on loan to obtain concurrence or remedial action.
- F. When a TAIR book is lost, a letter from the head of the contractor's QA function is required to authorize its replacement.

6.1 Documentation Records Maintenance

- 1) A TAIR book cover will be completed for each SE end item.
- 2) The TAIR index form will be utilized to record the entry and closure of the following work control documents:
 - a. Operations and Maintenance Instruction
 - b. Work Order, T.O., and Engineering Instructions
 - c. Problem reports
 - d. Discrepancy reports
- 3) A Document Charge-Out Record entry will be made at any time a document is removed from a TAIR book.

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- 4) Approved Operations & Maintenance Instructions will be utilized when accomplishing all scheduled maintenance. An entry will be made in the TAIR Index for each operation.
- 5) All Work Order, Technical Orders, and Engineering Instructions will be recorded in the TAIR index. A permanent file of all work-authorizing documents will be maintained in this section.
- 6) Problem / Discrepancy reports will be initiated on [DFRC 9-7d](#).
- 7) Temporary and / or permanently removed parts from SE end items will be recorded on a Parts Removal & Installation Record.
- 8) A status record section will be utilized to record documentation of a miscellaneous nature.

6.2 Responsibilities and Handling

- A. Contractor QA will
 - 1) Issue and control TAIR books, including documentation and document removal
 - 2) Establish and maintain record file
 - 3) Monitor work control documentation to assure it reflects hardware status
 - 4) Process TAIR books and documentation for items being relocated
- B. Contractor operations will routinely maintain work control documentation to reflect tasks accomplished.

7.0 MINIMUM CONTRACTOR REQUIREMENTS

This section establishes the minimum requirements to be implemented by contractors tasked to maintain shuttle support equipment for which DFRC has operation and maintenance responsibilities. The intent of this section is to define preventive maintenance requirements and the methods by which these requirements are to be implemented by the contractor to minimize equipment down time.

Preventive maintenance includes the following activities:

- A. Proof load testing
- B. Pressure testing of hoses / vessels
- C. Calibration
- D. Component time / cycle replacement
- E. Corrosion control

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- F. Cleaning / decontamination
- G. Periodic maintenance
- H. Filter maintenance
- I. Periodic inspection

7.1 Criteria

Preventive / periodic maintenance of SE will be lapsed-time oriented. Specific requirements for performance of preventive maintenance will be contained in applicable maintenance procedures for the specific SE. The Contractors Quality Management System will contain and define all periodic maintenance for all SE.

7.2 Work Authorizing Documents

Applicable operations and maintenance instructions will be prepared, implemented, and maintained by the contractor tasked to operate and maintain the SE.

All work performed on specified shuttle equipment will be documented in the SE TAIR BOOK as described in Section 8.0. The contractor will submit a matrix listing of all SE maintained to the DFRC Shuttle Support Manager, who will identify and approve SE that requires a TAIR book. (See paragraph 9.2.1R.) SE not requiring a TAIR book will be documented and adhere to the contractor's quality system.

Discrepant hardware removal, repair, replacement, revalidation, and / or unscheduled SE maintenance or operational deficiencies will be documented by utilization of a Problem and / or Discrepancy Report form as described in this document.

7.2.1 Work requirements / implementation processes / systems.

A. Scheduling

The SE contractor will establish, schedule, and maintain records of SE periodic maintenance cycles. Impending periodic maintenance requirements should allow some extension flexibility (+/- 30 days) to allow use of equipment and not impact critical shuttle operations.

B. Accomplishment

Preventive maintenance will be accomplished by contractor-developed processes and procedures. The Shuttle Area Manager and / or EASC will be made aware of, and approve, in writing, all extensions beyond those identified above.

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C. Proof Load Testing

Proof load testing provides periodic retesting of handling devices to assure the safety and reliability required for handling shuttle hardware and equipment. Proof load test procedures will be derived from specification and drawing requirements and be included in periodic maintenance instructions, as required.

D. Proof Pressure Testing of Hoses / Vessels

Proof pressure testing of flex hoses and pressure vessels is designed to provide maximum equipment operational safety and reliability.

Proof pressure test requirements will be derived from specification and drawing requirements and be included in periodic maintenance instructions, as required.

E. Calibration

Calibration involves the periodic comparison of quantitative measuring devices contained within SE end items against controlled standards to ensure obtaining required accuracy.

Calibration requirements will be derived from specification and drawing requirements and included in periodic maintenance instructions, as required.

Equipment requiring calibration will be calibrated per [DCP-O-007](#), Metrology System and be included in the automatic calibration recall system.

F. Component Time / Cycle Replacement

The component time / cycle replacement program provides for periodic replacement of SE components as a function of their design, intended use material limits, and measured reliability.

Time cycle component replacement will be derived from specification and drawing requirements and included in periodic maintenance instructions, as required.

G. Corrosion Control

Corrosion control consists of the detection, assessment, documentation, and treatment of corrosion. The scope of treatment is that which can be economically justified relative to maintaining the SE operational during the course of the program.

Corrosion treatment may be deferred where structural or functional integrity is not affected and such action is deemed advisable for economic or schedule reasons.

Corrosion control inspection should be included in periodic maintenance instructions, as required.

H. Cleaning / Decontamination

Cleaning / Decontamination consists of the inspection, assessment, and documentation of components and systems to determine if they are cleaned to the required system levels and are compatible with the particular commodities utilized in the system.

Cleaning / Decontamination requirements will be ensured through normal surveillance during system initial assembly and during change-out of components during scheduled maintenance.

I. Periodic Maintenance

Periodic Maintenance is the maintenance performed periodically to minimize deterioration and identify discrepancies requiring correction. Periodic maintenance is performed in accordance with procedures developed and / or controlled within the contractor's quality management system. A periodic maintenance plan will be written for each SE end item.

Preventive / periodic maintenance instructions of SE will be lapsed-time oriented and should be derived from the SE manufacturer maintenance manuals, technical orders, and / or drawing requirements. Specific preventive maintenance requirements will be contained in applicable maintenance procedures for the specific SE.

J. General Criteria for PM / Operational Instructions

When establishing the periodic interval of periodic maintenance / operational instructions, the SE environment and the extent of utilization will be taken into consideration. Weekly, monthly, quarterly, semiannual, and annual requirements should be considered and implemented when practicable.

The periodic maintenance / operational instruction will provide complete instruction necessary to accomplish the task. When sources such as drawings, manufacturer manuals, or T.O.s, etc. are referenced as having to be complied with, the source document, section, and page will be clearly identified in the instructions. When a task involves a process such as general cleaning, corrosion treatment, or maintenance of cleanliness levels, the applicable specification will be referenced.

When materials such as grease, oil, solvents, fluids etc., are required to accomplish a task, note the specific type indicated by part number or specification.

K. Filter Maintenance

Filter Maintenance consists of periodic replacement and / or cleaning of filter elements to provide maximum operational

reliability of SE. Clearly define periodic replacement and / or cleaning of filters in the maintenance instruction.

L. Fluids, Oil, Lubricant Replacement

Clearly define periodic replacement, cleaning, and / or sampling of oils and lubricants to provide maximum operational reliability of SE in the maintenance instruction.

M. Periodic Inspections

Compliance with the preventive maintenance plan will be ensured through normal quality surveillance and periodic inspections during the period between scheduled periodic maintenance.

N. Operational Readiness Requirements

All contractors responsible for operation and / or maintenance of shuttle support equipment will report the operational status of the SE to the DFRC Flow Engineer, Shuttle Area Manager, and EASC 24 hours prior to each shuttle launch. The contractor will supply written verification that all SE under their control is operational and ready to support or define any discrepancies / limitations associated with the SE. The plan defines the minimum maintenance requirements for each SE end item. Validation will include leak check, functional test, shuttle SE-Facility interface compatibility, and system verification. Units will be in current calibration when validated.

O. Validation / Certification

Validate all SE utilized to support shuttle operations. Validation consists of the verification of satisfactory operation, as well as the culmination and completion of the contractor's on-going periodic maintenance requirements.

If an end item or system validation period has expired, the applicable operational checks and periodic maintenance must be performed prior to shuttle support.

Once validated, the validation for an end item or system will continue to remain in effect for a fixed period of time, normally not to exceed one year. Unscheduled maintenance does not necessitate revalidation, as performance of applicable troubleshooting techniques and proper functional / operational checks of the SE are required to be performed to re-verify and certify proper system operation of the SE.

Satisfactory performance and completion of all operational and periodic maintenance requirements of the SE during the validation time period will constitute a revalidation and a new validation cycle will be commenced

P. Validated GSE Identification

A certificate of validation or metal tag of validation will be attached to each SE end item. The certificate or tag will clearly state the part number and serial number of the SE, if applicable, as well as the validation date and / or validation expiration date. Where this is not practical, the validation certificate will be displayed inside the front cover of the TAIR book. This certificate assures equipment readiness to support shuttle operations. The lack of a valid certificate of validation will be justification to withhold use of the equipment.

The Validation Certificate or Tag will indicate

- 1) SE model number
- 2) SE serial number
- 3) Validation / revalidation document number
- 4) Date of validation and / or revalidation
- 5) Q / A inspectors stamp

Q. Periodic Maintenance Records

Periodic maintenance records will be preformed, verified, closed, and retained, along with all deviations by the contractor for the life of the contract, at which time they will become the property of the government. Permanent deviations to instructions, required during performance, will be processed for update of the instruction being performed.

R. Maintenance Requirements Table

Each DFRC contractor responsible for operation and maintenance of shuttle support equipment will develop a matrix table that lists each end item for which they have operational and / or maintenance responsibility. Submit this table to the Shuttle Support Manager who will identify and approve the specific SE that requires a TAIR book. The contractor will incorporate this matrix table in their quality manual.

The Maintenance Requirements Table contains

- 1) The nomenclature of the SE, quantity on site, and TAIR book applicability
- 2) The part number / model number
- 3) All maintenance instructions utilized to validate the SE
- 4) The frequency the maintenance instruction is performed:
 - a) D / Daily
 - b) W / Weekly

- c) M / Monthly
 - d) BI / Bi-Monthly
 - e) Q / Quarterly
 - f) SA / Semi-Annually
 - g) A / Annually
 - h) PL / Pre-Launch
 - i) L / Pre-Landing
- 5) A remarks column for any necessary supplemental information

8.0 PROBLEM AND DISCREPANCY REPORTING

This section provides instruction on the use of the PRACA system.

8.1 Problem Report (PR)

A Problem Report is utilized and will be initiated by supervisors, maintenance technicians, and / or quality assurance personnel to document the following:

- A. Problems requiring sustaining engineering analysis and / or direction
- B. Problems that may be systemic in nature and could affect similar shuttle support equipment
- C. Failures or discrepancies that places the equipment out of service for an extended period of time
- D. Test problems
- E. All other discrepancies beyond DR limitations

8.2 Discrepancy Report (DR)

A Discrepancy Report is utilized and will be initiated by the supervisor, maintenance technicians, and / or quality assurance personnel to report the following:

- A. Discrepancies and / or operational failures that can be corrected utilizing previously approved methods, instructions, and practices. Included are operational anomalies and discrepancies due to wearout, mishandling, or damage in transit.
- B. Minor discrepancies that do not affect form, fit, or function
- C. Failures noted during preventative maintenance inspections

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- D. Procedure deficiencies or noncompliance
- E. Unsatisfactory workmanship

A Discrepancy Report may be upgraded to a Problem Report if circumstances warrant.

8.3 Problem Report (PR) and Discrepancy Report (DR) Numbering
 PRs / DRs will be numbered as follows:

XX	X	XXXXXX
Identifies the form and DFRC	Identifies the initiating contractor or NASA	A numeric designation TBD by the contractor

- A. The first letter will be “P” for Problem Report and “D” for Discrepancy Report.
- B. The second letter “E” signifies DFRC as the maintainer of the end item.
- C. The third digit is a numeric designation assigned to NASA or the appropriate support contractor as follows:

NASA	1
Space Shuttle Landing and Research Aircraft Support Services Contract	2
Facilities Support Services Contract	3
Aircraft Ground Equipment and Transportation Support Contract	4

- D. The last six digits are assigned to the PR / DR by the contractor to track the report.

8.4 Documentation Requirements

- A. The following blocks on DFRC 9-7d should be completed, as applicable: 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, and 19. If PR / DR Continuation Sheet, (page 2 of form DFRC 9-7d) is used, the following blocks should be completed if applicable: 1, 14, 15, 16, 18, and 19.
- B. The problem description section (block13) should contain a precise description of the problem. Follow-on information should be added as appropriate when troubleshooting uncovers pertinent information relating to the discrepancy.
- C. The disposition section (block 15) should contain a precise, sequential description of the corrective action taken to correct the problem and

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include relevant processes / procedures utilized to certify the system has been restored to its fully operational condition.

9.0 REPORTING REQUIREMENTS

9.1 Reporting During Non-critical Space Flight and Turnaround Operations

All SE contractors will ensure that the DFRC Flow Engineer is aware of all open problems and discrepancies affecting the equipment they are tasked to maintain. Contractors will inform and deliver an initial DR/PR, to the

Flow Engineer, within 24 hours of discovery for review and inclusion into the NASA DFRC PR/DR tracking database. Upon completion, all DR/PR's will be delivered to the Flow Engineer for final review and close out of the NASA DFRC tracking database. In addition, all closed out Nav-aids related DRs/PRs will be sent/faxed to appropriate KSC sustaining engineering for review/tracking within the KSC PRACA system.

The DFRC Flow Engineer is to be immediately informed of all discrepancies requiring NASA KSC sustaining engineering interface/resolution.

9.2 Reporting During Critical Space Flight and Turnaround Operations

Critical Space Flight Operations is defined as that time commencing 14 days prior to an orbiter launch through all on orbit mission support times and concluding with the orbiter landing.

Critical Space Flight Turnaround Operations is defined as that time commencing from the time the orbiter lands at EAFB, continuing 24 hours a day through all orbiter processing support periods and concluding with the departure of the orbiter from EAFB.

During Critical Space Flight and Turnaround Operations, all SE contractors will ensure that the DFRC Flow Engineer is immediately aware of and continuously updated on all open discrepancies affecting equipment they are tasked to maintain. In addition and at the direction of the Flow Engineer, SE contractors are tasked to ensure an initial, as well as the completed copy of all PRs / DRs are forwarded to the appropriate KSC sustaining engineer for potential entry into and/or close out of the KSC PRACA tracking system

Contractors will immediately inform the DFRC Flow Engineer of any shuttle support equipment discrepancies / failures starting 14 days prior to

each scheduled launch and continuing through critical space flight and turnaround operations for review and inclusion in the DFRC and/or KSC DR/PR tracking databases.

The DFRC Flow Engineer is responsible for initial verbal discrepancy reporting to on-site KSC NCC and sustaining engineering during this time frame. In the event that the DFRC Flow Engineer is not available, the contractor will immediately inform the Shuttle Area Manager and / or EASC, who will then notify the on-site KSC NCC.

The contractor will

- A. Upon discovery of a problem or discrepancy, immediately inform the DFRC Flow Engineer and initiate a preliminary PR / DR detailing the nature of the problem and the applicable steps being taken to resolve the problem.
- B. Immediately inform the DFRC Flow Engineer of all problems, discrepancies, and / or modifications to equipment requiring KSC engineering interface.
- C. Within 4 hours of discovery of a problem or discrepancy, provide the DFRC Flow Engineer with a copy of all PRs / DRs initiated.
- D. After the review of, and at the direction of, the DFRC Flow Engineer provide KSC Nav-aids sustaining engineering a copy of all PRs / DRs upon initiation/completion.
- E. Provide the DFRC Flow Engineer with a copy of all PRs / DRs upon completion.
- F. After the review of, and at the direction of, the DFRC Flow Engineer provide appropriate KSC GSE sustaining engineering a copy of all PRs /DRs.

10.0 MANAGEMENT RECORDS & RECORDS RETENTION

Contractor performance evaluations are recorded in the Contracting Officers applicable contract file, which is retained for the life of the contract. Records are preserved, maintained, and disposed of in accordance with NPR 1441.1, NASA Records Retention Schedules, and [DCP-F-603](#), Records Management.

- OMRSD and OMI Preventative Maintenance verifications are digitally sent to KSC and stored in the contractor quality department
- Preventative Maintenance utilizing local Technical Directives are stored with the equipment Test and Inspection Record (TAIR) for minimum period of 5 years beyond the life of the program per NPR 1441.1

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- Problem Reports (PR) are entered into DFRC 9-7d and stored in the TAIR for minimum period of 5 years beyond the life of the program per NPR 1441.1
- Discrepancy Reports (DR) are entered into DFRC 9-7d and stored in the TAIR for minimum period of 5 years beyond the life of the program per NPR 1441.1

11.0 RELEVANT DOCUMENTS

11.1 Authority Documents

NSTS 07700 National Space Transportation System

11.2 Reference Documents

NSTS 08126, rev. H, Problem Reporting and Corrective Action System Requirements

[DCP-O-007](#) Metrology System

11.3 Forms

[DFRC 9-7d](#) Problem Reporting and Corrective Action

12.0 ACRONYMS

DR	Discrepancy Report
EASC	Edwards Airfield Support Coordinator
MD	Maintenance Directive
NCC	NASA Convoy Commander
NSTS	National Space Transportation System
O&M	Operation and Maintenance
OMI	Operation and Maintenance Instruction
PR	Problem Report
PRACA	Problem Reporting and Corrective Action
QA	Quality Assurance
QCD	Quality Control Directive
SE	Shuttle Support Equipment
SOP	Standard Operating Procedure
SSP	Space Shuttle Program

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TAIR	Test and Inspection Record
TD	Technical Directive
TO	Technical Order

Document History Log

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Status Change	Document Revision	Effective Date	Page	Description of Change
Baseline		06-15-04		Consolidation of DFRC Process Instructions PI-02-A, PI-02-B, PI-02C, and PI-02D.
Admin Change	Baseline-1	03-10-08	All	<ul style="list-style-type: none"> • Added expiration date to header • Updated reference: DCP-O-007 became DCP-S-055 • Formatting changes, including <ul style="list-style-type: none"> ○ Moved Section 14.0, Metrics & Trend Analysis to Section 3.0, Procedure Objectives, Metrics, & Trend Analysis
Revision	A	02-25-09	All	<ul style="list-style-type: none"> • Updated reference to change of form from KSC Form 2-151 to new form DFRC 9-7d • Updated instructions referencing use of new form DFRC 9-7d • Updated contractor listing • Updated formatting to current template

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