MILITARY STANDARD

AERONAUTICAL EQUIPMENT SERVICE RECORD

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BY THIS DOCUMENT

76GP

Department of Defense
Washington, D.C. 20360

Aeronautical Equipment Service Record

MIL-STD-2172

1. This military standard is approved for use by the Naval Air Systems Command, Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense.

2. Beneficial comments (recommendations, additions or deletions) and any pertinent data which may be of use in improving this document should be addressed to:
Commanding Officer
Naval Air Engineering Center
Engineering Specifications and Standards Department (ESSD) Code 93
Lakehurst, NJ 08733, by using either the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document, or by letter.

FOREWORD

1. The purpose of this standard is to establish uniform procedures for the initiation or maintenance of Aeronautical Equipment Service Records and associated forms and records.

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1. SCOPE

1.1 General. This standard establishes the uniform procedures for the initiation or maintenance of Aeronautical Equipment Service Record (AESR) and associated forms and records. AESRs are an essential element of aeronautical technical discipline. They provide a history of maintenance, operation, and configuration control of selected aeronautical equipment.

1.2 Application. The requirement for an AESR for a specific type of airborne equipment will be promulgated by an official bulletin. The bulletin will include a listing of the appropriate separators and forms to be used in the subject AESR. The following is a list of the currently required applications of the AESR to specific equipment:

a. Aircraft Power Plant
b. Airborne Gun Pod, e.g., GPU-2/A, MK-4, ADEN.
c. Low-level Escape System
d. Propeller assembly
e. In-flight refueling store/package
f. Auxiliary Power Unit (APU)
g. AN/ALQ-99 Pod
h. Retrieve Engine (M-21 arresting gear)
i. Gas Turbine Power Plant (7LM 1500 PB-104)
j. Engine Test Cell/Stand
k. MK-105 Magnetic Mine Sweeping Gear
l. Support Equipment Gas Turbine Engines (SEGTEs) listed in NAVAIRNOTE 4700

2. REFERENCED DOCUMENTS

2.1 Issues of Documents. The following documents of the issue in effect on date of invitation for bids or request for proposal, form a part of this standard to the extent specified herein.

STANDARDS

MILITARY

MIL-STD-962 - Outline of forms and Instructions for the preparation of Military Standards and Military Handbooks.

PUBLICATIONS

INSTRUCTIONS

SECNAVINST 5212.5 Disposal of Navy and Marine Corps Records
OPNAVINST 4790.2 Naval Aviation Maintenance Program
NAVAIRINST 4790.3 Scheduled Removal Component (SRC)/Equipment History Record (EHR) Program
NAVAIRINST 13050.3 Procedures for Implementing and Maintaining the Technical Directive Status Accounting (TDSA) System

(Copies of specifications, standards, drawings, and publications required by contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer).

3. DEFINITIONS

3.1 Definitions of Acronyms used in this Standard. The following acronyms used in this MIL-STD are defined as follows:

AEPS	Aircrew Escape Propulsion System
AESR	Aeronautical Equipment Service Record
AM	Amendment
ASR	Assembly Service Record
BUNO	Bureau Number
C	Cancelled
CFA	Cognizant Field Activity
DOD	Department of Defense
DODIC	Department of Defense Identification Code
DTG	Date Time Group
ECP	Engineering Change Proposal
EHR	Equipment History Record
ELCF	Equivalent Low Cycle Fatigue
EOT	Engine Operating Time
FREDS	Flight Readiness Evaluation Data System
FSCM	Federal Supply Code for Manufacturers
IMA	Intermediate Maintenance Activity
INC	Incorporated
INT	Interim
JCN	Job Control Number
LCF	Low Cycle Fatigue
MECFA	Maintenance Engineering Cognizant Field Activity
MER	Multiple Ejection Rack
MRC	Maintenance Requirements Card
MSR	Module Service Record
NA	Not Applicable
NAVAIR	Naval Air Systems Command
NAVAIREWORKFAC	Naval Air Rework Facility
NAVAVNLOGCEN	Naval Aviation Logistics Center
NDI	Non-Destructive Inspection
NIS	Not Issued
OPNAV	Office of the Chief of Naval Operations
PMRM	Periodic Maintenance Requirements Manual
PRI	Priority
PT	Part
REV	Revision
RFI	Ready for Issue
SDLM	Standard Depot Level Maintenance
SECNAV	Secretary of the Navy
SEGTE	Support Equipment Gas Turbine Engine

Definitions (Continued)

SERNO	Serial Number
SRC	Scheduled Removal Component
TBO	Time Between Overhaul
TD	Technical Directive
TER	Triple Ejection Rack
TSN	Time Since New
TSO	Time Since Overhaul
TSR	Time Since Rework
UNK	Unknown
VIDS/MAF	Visual Information Display System/Maintenance Action Form
WUC	Work Unit Code

4. GENERAL REQUIREMENTS

4.1 Purpose of AESRs. The AESR is a loose leaf record punched for insertion in the aircraft (or designated) logbook ring binder. Special care shall be exercised to ensure that the separate forms are not lost when the record is removed from the aircraft logbook. A suitable fastener shall be used to bind the record together when it is transferred or shipped as a separate item. DO NOT USE STAPLES.

4.2 Origin. The AESR shall be initiated by the activity originally accepting the equipment for the Navy. This record shall be maintained by the activity having reporting or physical custody of the equipment.

4.3 Contents. In the AESR there shall be entered a record of rework, major repairs, operating, and monitoring system data. Also included in the AESR in the appropriate sections, is a record of maintenance directives affecting the equipment, its components, and assemblies. The AESR shall be kept neat and clean. All necessary entries shall be made under the supervision of the supervisor responsible for logbook custody for the activity having physical or reporting custody of the equipment. Entries shall be printed in black ink or typewritten (except where penciled entries are authorized). No entries shall be made with felt-tipped pen. The repair/rework activity, upon induction of the equipment, shall screen the entire AESR for information that may be pertinent to repair/rework. Upon completion, the repair/rework activity shall ensure that all required entries have been completed. The record shall accompany the aeronautical equipment at all times. When equipment is installed as a part of the aircraft, the AESR shall be maintained concurrently with, and becomes part of, the aircraft logbook.

NOTE

Since it is in looseleaf form, the full identification data and serial number are inserted on each page in the spaces provided to ensure ready identification when pages are removed for entries or for other reasons.

4.4 Forms. Currently approved and active forms shall be provided to contractors by the Cognizant DOD Contract Administration Office. Forms are available by requisition from the forms and publications segment of the Navy Supply System in accordance with NAVSUP Publication 2002.

4.5 Engines. When the AESR is used with engines and power plants, a locally produced Replacement Interval/Due sticker shall be affixed over the Authorized Operating Interval Block on the OPNAV Form 4790/29. The data required for the Replacement Interval Block shall be obtained by review of the Replacement Interval Block of each Assembly Service Record. The lowest time recorded shall be initially recorded in the Replacement Interval Block on the AESR. The Replacement Due Block will be computed by adding the interval time to the engine time. Entries shall be made in pencil to allow for component changes at repair/rework activities. (Figure 1.)

4.6 Field teams. When an equipment is repaired, modified, reconditioned, or has TDs incorporated by NAVAIREWORKFAC or contractor field teams at other than the NAVAIREWORKFAC or contractor's facility, the reporting custodian shall make all required entries on the appropriate AESR pages. The required information and the work

order authorizing the work shall be provided by the NAVAIREWORKFAC or contractor team supervisor/designee. The authenticating signature and stamp for completed work on all AESR entries shall be that of the NAVAIREWORKFAC or contractor team supervisor/designee. The reporting custodian shall ensure the Repair/Rework Record (OPNAV 4790/23A), is completed and signed, even though no other additional AESR entries are required.

4.7 Signatures. The signature required in the AESR and on associated forms and records is the personal signature of the Commanding Officer or persons designated in writing by the Commanding Officer. All signatures shall be written in black ink; rubber stamp signatures are not authorized. Signatures shall not be transcribed when new AESRs are initiated or when old AESRs are consolidated. When this procedure is elected, the same date shall be used for all entries in the Inspection and Technical Directives sections and in the Date Completed column of the Repair/Rework Record (OPNAV Form 4790/23A). The signature appearing on the Repair/Rework Record shall be that of the person designated for this purpose, handwritten, and accepted as a certification that the entries in the Inspection and Technical Directive sections are complete and correct as of that date. Any subsequent record changes shall be treated as separate line items and signed accordingly.

4.8 Additional data. Pages or forms other than those described herein (unless specifically directed by OPNAV) shall not be inserted, stapled, or otherwise attached to the AESR. Superseded forms will be closed out with the following statement, "No further entries this page," and a new form initiated. The superseded form shall remain in the logbook as specified herein.

4.9 Disposition. Records for aeronautical equipment deleted from the Navy inventories are disposed of in accordance with the following procedures:

a. Destroyed equipment. The records shall be disposed of locally after any necessary investigation and preparation of required reports.

b. Sale or transfer. When equipment is sold or transferred to other than Navy custody, the AESR accompanies the equipment unless otherwise directed by proper authority. Any classified information shall be removed or cleared for release through appropriate channels prior to transfer or sale.

c. Special categories. The following AESRs are forwarded to the Director, Washington National Records Center, General Services Adminstration, Washington, D.C. 20409, utilizing Standard Forms 135 citing SECNAVINST 5212.5 as authorization for disposal:

(1) Records for experimental equipment.
(2) Records considered to be of historical value.
(3) Records of equipment lost in combat or involved in mishaps resulting in death, missing in action or injury to any person, or substantial damage to other than Government property, are retained by the operating activity for a period of 1 year (for litigation action), and then forwarded to the Director, Washington National Records Center.

5. DETAILED REQUIREMENTS

5.1 Forms. The following OPNAV separators and forms shall make up the AESR:

OPNAV 4790/29 - Aeronautical Equipment Service Record (AESR)
OPNAV 4790/31 - Equipment Operating Record - Separator
OPNAV 4790/31A - Equipment Operating Record
OPNAV 4790/22 - Inspection Record - Separator
OPNAV 4790/22A - Inspection Record
OPNAV 4790/23 - Repair/Rework Record - Separator
OPNAV 4790/23A - Repair/Rework Record
OPNAV 4790/24 - Technical Directives - Separator
OPNAV 4790/24A - Technical Directives
OPNAV 4790/25 - Miscellaneous/History - Separator
OPNAV 4790/25A - Miscellaneous/History
OPNAV 4790/26 - Installed Explosive Safety Devices - Separator
OPNAV 4790/26A - Installed Explosive Safety Devices
OPNAV 4790/27 - Inventory Record- Separator
OPNAV 4790/27A - Inventory Record
OPNAV 4790/28A - Scheduled Removal Component Card
OPNAV 4790/106A - Assembly Service Record
OPNAV 4790/113 - Equipment History Record
OPNAV 4790/136 - Preservation/Depreservation - Separator
OPNAV 4790/136A - Preservation/Depreservation
OPNAV 4790/135 - Module Service Record
OPNAV 4790/134 - Supplemental Records - Separator

5.2 Equipment Operating Record (OPNAV 4790/31A)

5.2.1 Data. This form shall be used with all aeronautical equipment requiring the monthly compilation of significant operating data. Reporting and physical custodians will ensure that operating/monitoring system data are entered on this form monthly and upon transfer of the equipment. If no operating/monitoring system data has accumulated for uninstalled equipment since last entry, monthly entries are not required.

5.2.2 Columns. This form as illustrated in Figure 2., provides columns for logging operating hours/monitoring system data as applicable. Uncaptioned columns are provided for monitoring system data and are to be labeled as required, e.g., starts, rounds fired, LCF, METER. If equipment is monitored by Time Since New (TSN) and Time Since Rework (TSR), label the first column under Monitoring System Data as TSR. The accumulative column under operating hours will then display the TSN hours. A remarks column has been provided for logging special information as appropriate. Operating hours are obtained from Part C of the Naval Aircraft Flight Record (OPNAV 3760/2). For USMC activities using the Flight Readiness Evaluation Data System (FREDS), operating hours are obtained from the maintenance data section of NAVMC Form 10958.

5.2.3 Retention. This record remains a permanent part of the AESR.

5.3 Inspection Record (OPNAV 4790/22A)

5.3.1 AESR requirements. This form provides a record of all inspections performed on equipment for which an AESR is required.(Figure 3.) Accurate inspection records prevent instances of wasted effort due to the failure of logbook custodians to make proper entries indicating compliance with NAVAIR or major command inspection directives. Questionable or incomplete inspection records leave receiving activities no alternative but to assume previous noncompliance, to require reinspection in accordance with existing directives, or to refuse acceptance of the equipment until corrective action has been taken.

5.3.2 Type inspections. This form reflects all inspections performed on the equipment, including those in the aircraft phased maintenance requirement cards, except routine servicing, preflight/post flight, turnaround, daily, preoperational, or oil sampling which are not logged.

5.3.3 Engines. All engine major inspections i.e., phase/calendar/periodic/conditional, except fluid sampling or servicing require AESR Logbook entries by the activity performing the inspection.

5.3.4 Special inspection. All other equipment having an AESR shall have the inspection logged on an inspection record form titled "Special" only if the inspection requires Non-Destructive Inspection (NDI) or disassembly/reassembly.

5.3.5 Inspection identification. Phase, calendar, periodic, special, and conditional inspection records are maintained as separate pages within this section of the AESR. The record provides space for identifying the type of inspection performed. The left column of the record is titled "Type or Description of Inspection" to facilitate proper descriptive entries for individual inspections.

5.3.6 Directives. An entry will be made in the REFERENCE column for each inspection that indicates the NAVAIR or major command directive that directs the applicable inspection.

5.3.7 Conditional inspection. These inspections are unscheduled events required as a result of a specific overlimit condition, which are required by NAVAIR or major commands and may or may not be recurring in nature. They are logged to preclude the necessity for reinspection by a new custodian on receipt of the equipment. Conditional requirements which specify servicing or fluid sampling need not be logged. Acceptance and transfer inspections on uninstalled equipment are not required.

5.3.8 TD inspections. In certain instances, TDs may contain instructions to inspect the assembly every so many hours until incorporation of the change. When this occurs, an initial inspection shall be performed and logged in this section and the inspection requirement is added to existing Maintenance Requirements Cards(MRCs).

5.3.9 Repair/rework. During repair/rework, the Naval, interservice, or commercial contractor industrial establishment screens this form for items of historical or maintenance value and transcribes them to a new form. A minimum of two years data will be maintained at all times.

5.4 Repair/Rework Record (OPNAV 4790/23A)

5.4.1 Maintenance history. This form contains a complete record of all overhaul, rework, repair, reconditioning, conversion, modification, or modernization performed on the equipment by any Intermediate Maintenance Activity (IMA) or Naval, interservice, or commercial contractor industrial establishment. (Figure 4.)

5.4.2 Reference column entry. An entry shall be made in the Reference column indicating the NAVAIR or Major Command directive that directs the applicable work.

5.4.3 Repair. When Propulsion Systems/SEGTEs are repaired, an entry shall be made indicating the degree of maintenance performed.

5.4.4 Permanent record. This record is permanently retained in the AESR.

5.5 Technical Directives (OPNAV 4790/24A)

5.5.1 TD recording. The recording of TDs in the AESR utilizes the same record for recording TD compliance as used in the aircraft logbook. Separate pages are used for each type of TD and all TDs affecting the equipment and its integral parts are recorded. (Figure 5.) Changes and Bulletins concerning equipment, other than engines, present no special problems in recording in that the numerical quantity of these TDs is relatively small. Power plant changes and bulletins however, are issued in greater numbers and therefore require careful screening to ensure that the AESR reflects the actual configuration of the equipment. Definite rules and procedures are required to ensure that the AESR contains a record of the applicable TDs and, at the same time, elliminates the recording of superfluous material.

5.5.2 Preparation. To provide for uniformity throughout the system for all equipment, all changes and bulletins, including revisions, are recorded in this section of the AESR. Numerical sequence shall be used when possible, particularly with power plant TDs. Applicable Technical Directive Identification, Status Codes, and Title/Remarks are used. TDs that affect a component which has an SRC/EHR/ASR/MSR card are also recorded in the Technical Directive part of that card. In this instance, the Technical Directive Identification is entered and a notation to see the applicable SRC/EHR/ASR/MSR card is entered in the Title/Remarks column.

5.5.3 Technical directive requirements lists. This paragraph applies when lists No. 2 and 4 are received for a specific equipment. List No. 2, Directives Applicable to a Specific Serial Number (but not incorporated), and list No. 4, Directives Applicable to a Specific Serial Number (and reported as incorporated), are prepared by the Naval Aviation Logistics Center (NAVAVNLOGCEN).

5.5.3.1 Initial lists. When initial lists No. 2 and 4 are received, remove the Technical Directives form (OPNAV 4790/24A) from the AESR and after verification against the new lists No. 2 and 4, retain or destroy at the discretion of the reporting custodian.

5.5.3.2 Location. Insert lists 2 and 4 in the TD section of the AESR. List 2 precedes list 4.

5.5.3.3 New TD. When a new TD is received, add it to list No.2. As TDs are complied with, annotate the list No.2, and add the information to the list No. 4. This will provide a complete, up-to-date configuration listing of the equipment at any given time.

5.5.4 Interim Type TDs. Interim Type TDs. Interim TDs are recorded on the same sheet as formal TDs and identified by an I in the interim column. When cancellation instructions in an interim TD indicate that it will be superceded by a regular TD, enter in pencil the regular TD number on the line following with a temporary status code NINC (Not Incorporated).

5.5.5 Inspections. For TDs requiring one-time or continuing inspections, the initial, or one-time inspection, shall be logged in the TD section of the AESR. Subsequent or continuing inspection requirements are added to the MRCs as required in the basic TD. When this action has been completed, no further AESR entry is required for that TD.

5.5.6 Sequence. All TDs are logged in numerical sequence except on pages titled REVISIONS. These are logged in the order they are received.

5.5.7 Initiation and maintenance. The Technical Directives form shall be initiated and maintained in accordance with the following:

5.5.7.1 Basic information. Enter the Type Directive, Equipment Name, Model/Type, and SERNO on each page.

5.5.7.2 Technical directive identification. Enter the TD Identification data. All TDs, except revisions, are accounted for in numerical sequence. This includes numbered spaces for TDs not received.

a. Code - Enter TDC code.
b. Basic - Enter TD number.
c. INT - If an Interim TD enter I.
d. REV - Enter revision letter.
e. AM - Enter numerical amendment number.
f. PT - Enter numerical TD Part (e.g., Part-01, Part-02).
g. Kit - Enter kit number, enter 00 if no kit is required.

5.5.7.2.1 Priority. Enter I for immediate, U for urgent, R for routine, or K for previously incorporated (record purpose), as applicable.

NOTE

Priority K shall be used when a modification has been completely incorporated in all accepted equipment prior to issuance of the TD, and when retrofit of repairables in the Navy's possession is not required.

5.5.7.3 Status. Enter the appropriate Status Code: INC, NINC, NA, NIS, or C.

5.5.7.4 Title/remarks. Enter the title of the TD. (This need not be the complete subject of the TD.

5.5.7.5 Compliance.

a. By (activity) - Enter the name of the activity complying with the TD.
b. Date - Enter the date the TD was completed.

5.5.7.6 Signature. A person having aircraft/AESR logbook signature authority will sign this block.

NOTE

A special procedure for indicating revisions to TDs contained within block entries is included in the discussion concerning blocking of entries by original accepting activities, IMAs and Rework activities (refer to paragraph 5.5.7.8).

5.5.7.7 Status codes. No status codes other than those prescribed herein shall appear in the AESR nor is any code used to indicate other than its intended meaning. Meanings of the codes and instructions for their use are as follows:

a. INC (Incorporated) - Indicates that the specified change or bulletin has been completely incorporated.

b. NINC (Not Incorporated). - A temporary entry made in pencil. This code is used to indicate TDs that have been issued but not incorporated, including changes or bulletins that are only partially incorporated. It is not necessary to assign codes to denote reasons for nonincorporation. Activities should screen AESRs at frequent intervals to determine the interim status of nonincorporated TDs.

c. NA (Not Applicable). - TDs that do not apply to the particular equipment, model or serial number.

d. NIS (Not Issued). - TDs that have not been issued, will not be issued, or have not been received. This entry is made in pencil unless it is determined that the TD will not be issued, in which case a permanent entry is made.

e. C (Cancelled). - TDs that have been cancelled. When a TD has been incorporated and is subsquently cancelled, the status code remains INC.

5.5.7.8 Separate entry procedures. Data recorded by operating activities will be as follows:

a. INC - A complete entry is required.

b. NINC - Enter TD Identification, Status Code (in pencil), and Title.

c. NA - Enter TD Identification, Status Code, Activity, and Signature. A brief notation is made in the Title/Remarks column to indicate nonapplicability, e.g., previous models only or not this serial number. No Title of the TD is required.

d. NIS - Enter TD Identification and Status Code in pencil. No other information or signature is required.

e. C - Enter TD Identification, Status Code, Activity, and Signature. The cancelling reference is noted in the Title/Remarks column. No Title of the TD is required.

5.5.7.9 Block entry procedures. Block entries are authorized for use only by the original accepting activity, IMAs, and Rework Activities. The use of this type of entry provides for a consolidated accounting of TDs when the equipment is new and upon completion of repair/rework/overhaul. Block entries may be used only for a series of consecutively numbered TDs having the same status code. This procedure is necessary so that subsequent custodians may be able to determine the configuration of the equipment without being required to screen the entire file of TDs for applicability. Original accepting activities ensure that each entry in this section is valid and is supported by an offical TD.

a. INC - Use block entries when possible. All information except Priority and Title shall be entered. The date is considered to be the date of acceptance or date of repair/rework/overhaul.

(1) When a change is incorporated during production and a TD is to be issued, the assigned TD number shall be entered as INC and the notation PRODUCTION EQUIVALENTS, is entered for a block of incorporated changes in the Title/Remarks column and lists the applicable TD numbers of such changes; for example, an entry may be 120-155 INC. If production equivalent changes are included within this block, the Title/Remarks column might contain the notation 129, 139, 152, PRODUCTION EQUIVALENTS. These changes often differ physically from the changes as they are issued at field and operating activities and therefore require this notation to avoid confusion. All incorporated Engineering Change Proposals (ECPs) shall be entered numerically, using the block entry procedure, and remain as a permanent logbook entry.

(2) When a series of incorporated TDs are entered in block form, the next line shall be used for listing subsequently issued, not-incorporated revisions to TDs included within the entry. The notation REVISIONS TO ABOVE BLOCK ENTRIES appears on this line, and the listing of revisions shall follow. Operating activities also use this line for listing revisions that are subsequently issued to TDs within the block entry. The actual records of status and compliance are entered on the page(s) designated REVISIONS.

b. NINC - Separate entries are required. Enter the TD Identification, Status Code (in pencil), Priority, and Title/Remarks.

c. NA. Use block entries when possible. Only the TD Identification, Activity, and Signature are required. When a new version (dash number) of the same equipment is produced, it shall be the responsiblity of the original accepting activity to account for changes to the original model by making a AESR entry, such as 1-105 are NA, and the notation PREVIOUS MODELS ONLY inserted in the Title/Remarks column. This entry ensures that all TDs in the model series are accounted for and cites, by number, those TDs that do not apply to the new version and for which no action is required by Navy activities. The entry is not to be construed as indicating that the

modifications prescribed by the TDs contained within the block entry may not have been included in the production models of the new version.

d. NIS - Separate entries are required. Enter the TD Identification and Status Code only.

e. C - Use block entries when possible. Only Activity and Signature are required.

5.5.7.10 Multiple part technical directives. Some TDs consist of several parts. Accounting of this type directive presents special problems when the separate parts are assigned different categories and are to be accomplished at different times. To provide a standard recording procedure for this type of TD, AESR entries are made in accordance with the following:

a. If all parts of the TD are to be accomplished by the same activity and at the same time, a regular single line entry for each part shall be used. The Priority appearing in the AESR entry shall be the overall Priority assigned to the TD.

b. When a TD is composed of several parts to be accomplished at different times, separate consecutive entries are made for each part, indicating the Priority and Status of each. A multiple part TD shall not be included in a block entry unless all parts have been incorporated.

c. In instances where a single line has been left for a TD not received (NIS status) and a multiple part TD is subsequently received, Part One shall be entered and accounted for on the applicable TD page. This entry also will reference the remaining parts, which are to be recorded on the applicable TD REVISIONS page.

5.6 Miscellaneous/History (OPNAV Form 4790/25A)

5.6.1 Required information. The Miscellaneous/History form shall be used to record pertinent information for which no other place has been provided, i.e., special test data, abnormal characteristics of equipments, significant damage and repair, Naval Oil Analysis Program (NOAP) entries, and authorization for extension of operating intervals. When equipment is exposed to large quantities of salt water, fire extinquishing agents, or other corrosive media, an entry shall be made on this form, to include a description of the decontamination and approximate time between exposure and completion of decontamination. (Figure 6.)

5.6.2 Screening. During repair/rework,the IMA/Industrial Rework Activity screens this section for items of historical or maintenance value and transcribes them to a new form. A minimum of two years data shall be maintained at all times.

5.6.3 Equipment transfer. Activities transferring equipment will annotate the form with the date, reason for transfer, activity transferred to, JCN, shipping document number, and if applicable Star/Status Code.

5.6.4 Inspection interval. A change in the authorized inspection interval requires that the following entry be made: "Effective (date), was placed on (specified interval) in accordance with (authority), next inspection due (date or hours)."

5.6.5 Inspection induction date. A change in the inspection induction date or hourly sequence requires that the following entry be made: "Effective (date) inspection induction date or hours was rescheduled from (old date or hours) to (new date or hours) as authorized by (reference).

5.6.6 Authorized signature. All entries on this form will require an authorized signature and the name of the activity.

5.7 Preservation/Depreservation Record (OPNAV 4790/136A)

5.7.1 Actions performed. This form in the AESR contains a record of preservation, represervation, and depreservation that has been performed. (Figure 7.)

5.7.2 Maintenance of form. The form shall be maintained as follows:

a. Preservation

(1) Date - Date preservation is accomplished.
(2) By - Name of activity accomplishing preservation.
(3) Type Preservation - Type of preservation accomplished.
(4) Reference - Identify the NAVAIR or Major Command document directing the preservation.

b. Represervation

NOTE
Represervation requires entry in preservation section of this record.

(1) Date Due - Date represervation is due.

c. Depreservation

(1) Date - Date depreservation is accomplished.
(2) By - Name of activity accomplishing depreservation.

5.8 Installed Explosive Safety Devices Form (OPNAV Form 4790/26A)

5.8.1 Installed devices. This form in the AESR contains a record of all explosive safety devices installed. (Figure 8.)

5.8.2 Periodic screening. The possibility of transferring certain equipments from one aircraft to another during SDLM and replacement during periods of scheduled maintenance, emphasizes the necessity for careful and periodic checking of this record regarding the status of the explosive devices currently installed.

5.8.3 Maintenance Criteria. The form shall be maintained as follows:

5.8.3.1 Line entries. A single line entry shall be made for each installed Explosive Safety Device.

5.8.3.2 Column completion. All columns shall be complete. For devices not serialized and for Aircrew Escape Propulsion System (AEPS) devices when the container open date is not required, NA (not applicable) shall be entered in the appropriate data column.

5.8.3.3 Service computation. Installed service life expiration dates for explosive devices are computed from the date of manufacture, the date the hermetically sealed container is or was opened, and the date the device is installed. The method used in computing the expiration date of explosive devices, and the number of months/years a specific device may remain in service is contained in the following technical manuals; NA11-85-1, Description, Preparation for Use and Handling Instructions, Aircrew Escape Propulsion System (AEPS) Devices, NA11-100-1.1 General Use Cartridges and Cartridge Actuated Devices for Aircraft and Associated Equipment, NA11-100-1.2 Cartridges and Cartridge Actuated Devices for Unique Aircraft Systems.

NOTE

The Department of Defense Identification Codes (DODICs) are listed in NA11-1-116A, and NA11-1-116B, Navy Ammunition Logistic Codes. DODICs are also specified in the three technical manuals mentioned above.

5.8.3.4 Extensions. When Installed Explosive Safety Devices have extensions granted, the expiration date will be updated by drawing a line through it and placing the new expiration date above it. The authority granting subject extension, e.g., message Date Time Group (DTG) and originator, and IRAC number and manual affected, will be logged in the Remarks column.

5.8.4 Expendable ammunition and stores. Cartridges and devices used to effect stores seperation are not intended for inclusion in this record unless specifically directed for a particular application.

5.8.5 Custody of equipment. This record is maintained in a current status by all activities having custody of or performing rework on the equipment in which explosive safety devices are installed.

5.8.6 Rework. At the time of rework, the rework activity shall transcribe all current information to a new form and discard the old form.

5.9 Inventory Record (OPNAV 4790/27A)

5.9.1 Equipment inventory. This form shall be used to maintain a current inventory of all equipment/components/assemblies/modules requiring SRC, EHR, ASR, and MSR records. Mission configuration items are not required to be maintained on this record e.g., MER, TER. (Figure 9.)

5.9.2 Equipment requirement. It is impracticable to include a standard list of such components since requirements vary according to the equipment; however, all equipment/components requiring an SRC, EHR, ASR, or MSR card shall be recorded in this section of the AESR. When SRC, EHR, or ASR items are part of a module, they shall be recorded in section II of the MSR.

5.9.3 Maintenance practices. Sound maintenance practices and flight safety considerations will dictate those items, other than mandatory, that should be recorded in this section. It is emphasized that components/assemblies/modules properly associated with equipment that require an AESR shall be recorded in this section and not with airframe components in the aircraft logbook.

5.9.4 New forms. At time of repair/rework, the IMA/Industrial Rework Activity shall remove all old Inventory Record forms and insert new forms. All pertinent data for those items that have been installed by the equipment custodian during the previous service period and that are not scheduled for removal during repair/rework shall be transcribed to the new form(s) to maintain proper maintenance continuity. SRCs/EHRs/ASRs/MSRs installed during repair/rework shall also be listed on this new form.

5.10 Scheduled Removal Components (SRC) Card (OPNAV 4790/28A)

5.10.1 SRC card program. SRC cards provide for the recording of maintenance history, installation and usage data on scheduled removal components, and are maintained as part of the aircraft logbook or AESR as long as the component is installed. When the component is removed from the aircraft or equipment, the SRC card accompanies the component. Continuity of this maintenance history is paramount. NAVAIRINST 4790.3 establishes policy and assigns responsibilities for the planned removal/replacement of selected aeronautical components designated as Scheduled Removal Components. (Figure 10.)

5.10.2 SRC description. The SRC is BUFF in color and divided into five sections: (1) Identification Data, (2) Installation Data, (3) Removal Data, (4) Technical Directives, and (5) Repair/Rework/Overhaul. The maintenance of the SRC card is of the utmost importance and it is imperative that all required data be entered.

5.10.3 SRC loss. Loss of an SRC card can cause the loss of the item to the supply system; therefore, it is extremely important to be able to reconstruct the items' history in order to determine the necessary course of action when the card is not available. The SRC card Central Repository at the NAVAVNLOGCEN has the responsibility to determine the required course of action under these circumstances. To enable the Central Repository to accomplish this function it must receive cancelled cards and copies of all updated cards after Standard Depot Level Maintenance (SDLM) or rework, and copies of all new cards generated for new SRC items. The Central Repository will respond to all requests for information regarding lost/misplaced SRC cards, the request for this data may be made by telephone (Autovon 356-4587), message, or letter consistent with the priority of the requirement for the information. Policy and responsibilities concerning the NAVAVNLOGCEN SRC Central Repository are contained in NAVAIRINST 4790.3.

5.10.4 Administrative procedures. The administrative procedures for initial generation, in-service utilization and management actions are as follows:

a. SRC card initiation for components installed on or delivered with major aeronautical equipment (e.g., aircraft, engines) as part of a DOD contract, shall be the responsibility of the activity accepting such major equipment for the Navy. When these components are delivered to the Navy at the contractor's plant, the cognizant Navy

Representative is considered to be the original accepting activity. The accepting activity shall forward a copy of the SRC card to the Central Repository.

b. When SRC card requirements are not included in the Navy contract, SRC card initiation for new components drawn from the Navy Supply System shall be the responsibility of the requisitioning activity. The requisitioning activity shall initiate the required SRC card and forward a copy of the card to the Central Repository.

c. Upon completion of rework, the SRC card reflecting the current status of the component shall be copied and the copy forwarded to the Central Repository. This procedure applies to components reworked as supply spares or installed components reworked concurrently as part of an aircraft rework process. The original SRC card shall be securely attached to the component being returned to the supply system or inserted in the aircraft logbook/AESR as appropriate.

d. When notified that SRC cards are no longer required via the NAVAIR notice/changes to the applicable Periodic Maintenance Requirements Manual (PMRM)/SDLM specifications, custodians shall remove and forward the affected cards to the Central Repository for purging of the Master File. The deletion authorization must be annotated on the card.

e. When an SRC card becomes damaged or mutilated, the activity having current custody shall initiate a new card, and all information shall be transcribed to the new card. When a card contains no space for additional entries, a new card shall be prepared and both cards accompany the component until the cards are consolidated at rework. When a new card is prepared, the last line entry of the Installation block of the old card must be transcribed to the new card. Entries will be typed or plainly printed in black ink except as indicated. No entries shall be made with felt-tipped pen.

5.10.4.1 Detailed instructions. A detailed description and instructions for each section of the SRC card are as follows:

5.10.4.1.1 Section I - Identification Data.

a. Nomenclature - Noun name of the item.

b. WUC - Work Unit Code of the item.

c. FSCM - The five-digit manufacturer's code.

d. Replacement Interval - Enter the hours, days, counts, etc. after which the component must be removed and replaced.

e. Replacement Due - This entry is computed when the item is installed and reflects the total count (e.g., hours, starts, landings, EMS counts) on the aircraft or equipment, or the date when it must be replaced. Replacement Due equals Total Aircraft/Equipment hours or counts plus Replacement Interval, minus hours or counts on the item at installation. For example, a 500 hour component (Replacement Interval) installed on an aircraft with 795 hours (Total Aircraft/Equipment hours or counts) with 200 hours since overhaul will have an entry of 1095 hours in the Replacement Due block. These entries are made in pencil.

f. Part Number - Part Number of the item.

g. Serial Number - Serial Number of the item.

h. CFA - Cognizant Field Activity responsible for the SRC item.

5.10.4.1.2 Section II - Installation Data.

a. Date - Enter the date the item is installed on an aircraft or equipment.

b. BUNO/SERNO Installed On - Enter BUNO or SERNO of the aircraft or equipment on which the item is being installed.

c. Total Aircraft/Equipment Hours or Counts - Enter the hours/counts (whole numbers only) of the aircraft/equipment on which the item is being installed (Time since new). Uncaptioned columns are provided for aircraft/equipment that have Monitoring Systems installed and may be labeled as required, e.g., LCF, ELCF, EOT. Aircraft/equipment without Monitoring Systems will utilize the first column only.

d. Total Hours or Counts on Item - Enter the hours/counts (whole numbers only) since new and overhauled/reworked. Uncaptioned columns have been provided and will be labeled with the appropriate information required, e.g., TSN, TSO, TSR, LCF, EOT. When entering data for new material, the entry in the TSO/TSR column will be NEW. When the total hours or counts since new is not known, the entry in the TSN column will be UNK (Unknown).

5.10.4.1.3 Section III - Removal Data.

a. Date - Enter the date the item is removed.

b. Total Aircraft/Equipment Hours or Counts - Enter the hours/counts (whole numbers only) of the aircraft/equipment on which the item is being removed (Time since new). Uncaptioned columns are provided for aircraft/equipment that have Monitoring Systems installed and may be labeled as required, e.g., LCF, ELCF, EOT. Aircraft/equipment without Monitoring Systems will utilize the first column only.

c. Total Hours or Counts on Item - Subtract total aircraft/equipment hours or counts at installation from total aircraft/equipment hours or counts at removal. Add to total hours or counts on item at installation and enter in the appropriate columns. Label columns as required.

d. Reason for Removal and Job Control Number - Enter the reason for removal and JCN that removed the item from the aircraft or equipment.

5.10.4.1.4 Section IV - Technical Directives.

a. Technical Directive Identification.

(1) Code - Enter TDC code.
(2) Basic - Enter TD number.
(3) INT - If an Interim TD enter I.

(4) REV - Enter revision letter.
(5) AM - Enter numerical amendment number.
(6) PT - Enter numerical TD Part (e.g., Part-01, Part-02).
(7) Kit - Enter kit number, enter 00 if no kit is required.
(8) PRI - Enter I for immediate, U for urgent, R for routine, or K for previously incorporated (record purpose), as applicable.

b. Status - Enter the code indicating the status of the directive. No status codes other than those prescribed will appear on SRC cards nor is any code used to indicate other than its intended meaning. Meanings of the codes and instructions for their use are listed below:

(1) INC (Incorporated) - Indicates that the specified change or modification has been completely incorporated.

(2) NINC (Not Incorporated) - A temporary entry made in pencil. This code shall be used to indicate directives that have been issued but not incorporated and changes or modifications that are only partially incorporated.

(3) NA (Not Applicable) - Directives that do not apply to the particular aircraft/equipment.

c. Title/Remarks - Brief description of the TD.

d. Compliance.

(1) By (activity) - Enter the name of the activity completing the TD compliance.

(2) Date - Enter the date the TD was completed.

e. Signature - A person having aircraft logbook/AESR signature authority shall sign this block.

5.10.4.1.5 Section V - Repair/Rework/Overhaul.

a. Date - Enter date Repair/Rework/Overhaul was accomplished.

b. Activity - Enter name of activity accomplishing Repair/Rework/Overhaul.

c. Description - Indicate whether the item has been Repaired/Reworked/Overhauled and a concise narrative of the maintenance performed.

d. Signature - A person having aircraft logbook/AESR signature authority shall sign this block.

5.10.4.2 Shipping procedures. When components are shipped between activities, the following procedures shall be followed to reduce the possibility of loss or damage to SRC cards:

a. The SRC card shall be inserted and sealed in a plastic return material document envelope and should not be removed by anyone except the user/recipient. Shipping documents shall not be placed in the same envelope with the SRC card.

b. When the component is placed in a box or container for shipment, the SRC card, in the envelope, shall be placed inside and attached to the component.

c. When components are shipped in open-type crates or without a container, special attention shall be given to attaching the envelope containing the SRC card to the component in a manner which will prevent the card from becoming lost or destroyed.

5.10.4.3 SRC reconstruction. Lost, misplaced or destroyed SRC cards have a definite impact upon logistic assets available to the using activities, rework line scheduling, and will result in a loss of usable operating time on components. To enhance the ability to reconstruct SRC cards, the following procedures shall be followed to support the Central Repository:

a. If it can be determined that the component is in fact new, or newly reworked, an SRC card shall be initiated by the requisitioning activity prior to installation.

b. If the above determination cannot be made, the Central Repository should be contacted and requested to provide historical data.

c. Caution must be exercised concerning components having an established finite life (e.g., helicopter rotor blades). Since failure of a finite life item may have catastrophic consequences, it is mandatory that documented proof of its remaining service life be determined prior to installation. On components where an overspeed/overstress occurrence is a mandatory reportable factor, this information must also be determined and documented. Visual appearance or apparent satisfactory operation of an item are not considered sufficient evidence of remaining serviceability. If the Central Repository does not have the historical data to complete a new SRC card, the NAVAIREWORKFAC having MECFA responsibility will be contacted for disposition of the component and final determination as to its serviceability.

5.10.4.4 Condemned components. For components that are condemned, the SRC card shall be annotated "condemned" in the Reason for Removal column and the SRC card forwarded to the Central Repository. This will serve to purge the Repository of records for the component.

5.10.4.5 Repair of components without SRC cards. For items that are received for rework without SRC cards, the repair point shall obtain the history of the item from the Central Repository. If no data is available at the Central Repository, the following shall apply to items with Time Between Overhaul (TBO).

a. Induct the TBO component received without an SRC card. Prepare a new SRC card using information obtained from the data plate installed on the component. If total time since last overhaul is not on the data plate, add one TBO interval to the time entered in the "total count at last overhaul" block. If no data plate

is installed, replace all finite life subcomponents and rework the balance of the subcomponents in accordance with existing procedures.

b. Restore the component to a ready-for-issue (RFI) condition in accordance with existing procedures and indicate time since new "unknown" and time since last overhaul "0.0" on the new SRC card.

5.10.4.6 SRC card special instructions. SRC cards for components on stricken aircraft are disposed of in accordance with the following procedures:

a. Aircraft/Equipment Destroyed. A copy of all SRC cards shall be forwarded to the Central Repository after necessary investigation and preparation of required reports.

b. Sale or Transferred. When an aircraft/equipment is sold or transferred to other than Navy custody, the SRC cards shall accompany the aircraft/equipment unless otherwise directed by proper authority.

c. Special Categories. The SRC cards for the following shall be forwarded with the aircraft logbook/AESR to the Director, Washington National Records Center, GSA, Washington, D.C. 20409, utilizing Standard Form 135 citing SECNAVINST 5212.5 as authorization for disposal:

(1) For experimental aircraft/equipment.
(2) For aircraft/equipment considered to be of historical value.
(3) For aircraft/equipment lost in combat or involved in mishaps resulting in death, missing in action or injury to any person, and/or substantial damage to other than government property. The SRC cards shall be retained by the reporting custodian for a period of one year (for use in litigation action) and then forwarded to the Director, Washington National Records Center.

d. SRC Card Disposition. Prior to disposition of SRC cards as noted in 5.10.4.6 b. and c. above, a copy of all pertinent SRC cards shall be forwarded to the Central Repository.

5.11 Equipment History Record (EHR) Card (OPNAV 4790/113)

5.11.1 EHR card program. The EHR Program was established to provide for a method of monitoring specific maintenance data on designated aeronautical components and equipment that do not qualify as Scheduled Removal Components. EHR designated items are Quick Engine Change Kits (QECKs), armament equipment (e.g., MERs, TERs) and Maintenance Engineering Cognizant Field Activity (MECFA) selected on-condition items that require special emphasis in the monitoring and trending of failure data. NAVAIRINST 4790.3 establishes policy and assigns responsibilities for the selection of items designated to utilize the EHR card. (Figure 11.)

5.11.2 EHR card description. The EHR card is GREEN in color and divided into six sections: (1) Identification Data, (2) Installation Data, (3) Removal Data, (4) Maintenance Record, (5) Inspection Record, and (6) Technical Directives. Maintenance of the EHR card is essential and it is imperative that all required data be entered. Entries shall be typed or printed in black ink except as indicated. No entries shall be

made with felt-tipped pen. The EHR card provides for the recording of maintenance history on EHR designated items. An individual card for each EHR serialized item is maintained as part of the aircraft logbook or Aeronautical Equipment Service Record (AESR) while the component is installed. When the component is removed from the aircraft or equipment, the EHR card shall be attached to and accompany the component to its final disposition.

NOTE

EHR cards that pertain to those items that are constantly being removed/installed for the purpose of aircraft mission configuration (e.g., MERs, TERs) may be maintained within the respective division having custody of the mission configuration items. Aircraft logbook/AESR Inventory Record (OPNAV 4790/27A) entries are not required.

5.11.3 EHR card loss. Loss of an EHR card does not render the item unusable. However, it is important for the MECFAs to be able to monitor the history of EHR designated items. To accomplish this an EHR repository has been established at the respective MECFA sites. Cancelled cards, copies of updated cards and copies of all newly generated cards shall be forwarded to the appropriate MECFA for the equipment/component. The appropriate MECFA Repository shall respond to all requests for information regarding a particular EHR item. The request for this data may be made by telephone, meassage or letter consistent with the priority of the requirement for the information.

NOTE

The EHR repositories at the respective MECFA sites do not replace the SRC Central Repository located at the NAVAVNLOGCEN.

5.11.4 Administrative procedures. The administrative procedures for the initial generation, in-service utilization, and management actions are as follows:

a. EHR card initiation for components installed on or delivered with major aeronautical equipments (e.g., aircraft, engines) as part of a DOD contract, shall be the responsibility of the activity accepting such major equipment for the Navy. When these components are delivered to the Navy at the contractor's plant, the cognizant Navy representative is considered to be the original accepting activity. The delivery point shall forward a copy of the EHR card to the appropriate MECFA Repository.

b. When EHR card requirements are not included in the Navy contract, EHR card initiation for new components drawn from the Navy Supply System shall be the responsibility of the requisitioning activity. The requisitioning activity shall initiate the required EHR card and forward a copy of the card to the MECFA Repository.

c. When the MECFA has determined that an on-condition item is to be monitored, they will notify NAVAIR. NAVAIR will revise the NAVAIR Notice and distribute this information to the end user. The user will then initiate an EHR card and forward a copy of the card to the appropriate MECFA Repository.

d. Upon completion of any maintenance performed on removed designated EHR components at the depot level, the EHR card reflecting the current status of the component shall be copied and the copy forwarded to the MECFA Repository. The original EHR card shall be securely attached to the component if that component is returned to the supply system or inserted in the respective logbook/AESR whichever is appropriate.

e. When notified that EHR cards are no longer required via the NAVAIR Notice, custodians shall remove and forward the affected cards to the MECFA Repository for purging of the Master File. The deletion authorization shall be annotated on the card.

d. When an EHR card becomes damaged or mutilated, the activity having current custody shall initiate a new card, and all information shall be transcribed to the new card. When a card contains no space for additional entries, a new card is prepared and both cards accompany the component until the cards are consolidated at the depot level. When a new card is prepared, the last line entry of the Installation block of the old card shall be transcribed to the new card. Entries will be typed or printed in black ink except as indicated.

5.11.4.1 Detailed instructions. A detailed description and instructions for each section of the EHR card are as follows:

5.11.4.1.1 Section I - Identification Data.

a. Nomenclature - Noun name of the item

b. WUC - Work Unit Code of the item

c. FSCM - The five digit manufacturer's code

d. Replacement Interval - Enter the hours, day's, counts, etc. after which the component must be removed and replaced if applicable, otherwise enter on-condition.

e. Maintenance Due - This block shall be used to remind the custodian when the installed component is due in accordance with its time cycle requirement. The entry is computed when the component is installed and indicates the total count (e.g., hours starts, rounds, days) that will be against the end item when the installed component reaches its interval requirements. For example, a component with a 200 flight hour inspection interval installed on an aircraft with 1287 flight hours will have a 1487 flight-hour entry in the block. Entries in this block will be made in pencil.

f. Part Number - Part Number of the item.

g. Serial Number - Serial number of the item.

h. CFA - Cognizant Field Activity responsible for the EHR item.

i. Reference - Enter the reference that authorizes the addition or deletion of an item to the EHR Program.

5.11.4.1.2 Section II - Installation Data.

a. Date - Enter the date the item is installed on an aircraft or equipment.

b. BUNO/SERNO Installed On - Enter BUNO or SERNO of the aircraft or equipment on which the item is being installed.

c. Total Aircraft/Equipment Hours or Counts - Enter the hours/counts (whole numbers only) of the aircraft/equipment on which the item is being installed. (Time since new.) Uncaptioned columns are provided for aircraft/equipment that have Monitoring Systems installed and shall be labeled as required, e.g., LCF, ELCF, EOT. Aircraft/equipment without Monitoring Systems will utilize the first column only.

d. Total Hours or Counts on Item - Enter the hours/counts (whole numbers only) since new and repaired/reworked. Uncaptioned columns have been provided and shall be labeled with the appropriate information required, e.g., TSN, TSR, LCF, EOT. When entering data for new material, the entry in the TSO/TSR column will be NEW. When the total hours or counts since new is not known, the entry in the TSN column will be UNK (Unknown).

5.11.4.1.3 Section III - Removal Data.

a. Date - Enter the date the item is removed.

b. Total Aircraft/Equipment Hours or Counts - Enter the hours/counts (whole numbers only) of the aircraft/equipment on which the item is being removed. (Time since new.) Uncaptioned columns are provided for aircraft/equipment that have Monitoring Systems installed and shall be labeled as required, e.g., LCF, ELCF, EOT. Aircraft/equipment without Monitoring Systems shall utilize the first column only.

c. Total Hours or Counts on Item - Subtract total aircraft/equipment hours or counts at installation from total aircraft/equipment hours or counts at removal. Add total count on item at installation and enter in the appropriate columns. Label columns as required.

d. Reason for Removal and Job Control Number - Enter the reason for removal and JCN from the VIDS/MAF that removed the item from the aircraft or equipment.

5.11.4.1.4 Section IV - Maintenance Record.

a. Date - Enter date maintenance is performed.

b. Activity - Enter name of activity performing maintenance.

c. Remarks and Major parts Replaced - Identify the maintenance that was performed and any major parts replaced on the item and their reason for removal.

d. Signature - A person having aircraft logbook/AESR signature authority shall sign this block.

5.11.4.1.5 Section V - Inspection Record.

a. Type and Description of Inspection - Type and description of the inspection that affects the equipment/component.

b. Reference - Identify the document directing the inspection e.g., Message Originator and Date Time Group, letter originator and serial number.

c. Date Commenced - Date inspection began.

d. Date Completed - Date inspection was completed.

e. Activity - Activity performing the inspection.

f. Signature - A person having aircraft logbook/AESR signature authority shall sign this block.

5.11.4.1.6 Section VI - Technical Directives.

a. Technical Directive Identification.

(1) Code - Enter TDC Code.
(2) Basic - Enter TD Number.
(3) INT - If an Interim TD enter I.
(4) REV - Enter revision letter.
(5) AM - Enter numerical amendment number.
(6) PT - Enter numerical TD Part (e.g., Part-01, Part-02).
(7) KIT - Enter Kit Number, enter 00 of no kit is required.
(8) PRI - Enter I for Immediate, U for Urgent, R for Routine, or K for previously incorporated(record purpose), as applicable.

b. Status - Enter the code indicating the status of the directive. No status codes other than those prescribed shall appear on EHR cards nor is any code used to indicate other than its intended meaning. Meanings of the code and instructions for their use are listed below.

(1) INC (Incorporated) - Indicates that the specified change or modification has been completely incorporated.

(2) NINC (Not Incorporated) - A temporary entry made in pencil. This code is used to indicate directives that have been issued but not incorporated and changes or modifications that are only partially incorporated.

(3) NA (Not Applicable) - Directives that do not apply to the particular aircraft/equipment.

c. Title/Remarks - Brief description of the TD.

d. Compliance.

(1) By(activity) - Enter the name of the activity completing the TD compliance.

(2) Date - Enter the date the TD was completed.

e. Signature - A person having aircraft logbook/AESR signature authority shall sign this block.

5.11.4.2 Shipping procedures. When components are shipped between activities, the following procedures shall be followed to reduce the possibility of loss or damage to EHR cards:

a. The EHR card shall be inserted and sealed in a plastic return material documents envelope. Shipping documents shall not be placed in the same envelope with the EHR card.

b. When the component is placed in a box or container for shipment, the EHR card, in the envelope, shall be placed inside and attached to the component.

c. When components are shipped in open-type crates or without a container, special attention shall be given to attaching the envelope containing the EHR card to the component. The EHR card shall be sealed in an envelope by itself and shall not be removed by anyone except the user/recipient. Shipping documents shall not be placed in the same envelope with the EHR card.

5.11.4.3 Lost, misplaced, or destroyed cards. Lost, misplaced, or destroyed EHR cards have a definite impact upon logistic assets available to the using activities, and overhaul/rework line scheduling, plus loss of usable operating time on components. To enhance the ability to reconstruct EHR cards, the following procedures shall be followed to support the MECFA Repository:

a. If it can be determined that the component is in fact new, or newly repaired/reworked, an EHR card shall be initiated upon receipt by the requisitioning activity prior to installation.

b. If the above determination cannot be made, the appropriate MECFA Repository shall be contacted and requested to provide historical data or guidance.

c. Once the card is reconstructed and if the maintenance history was derived from other than a MECFA, a copy shall be forwarded to the appropriate MECFA Repository to insure continuity of the component's maintenance history.

5.11.4.4 EHR card special instructions. EHR cards for components on stricken aeronautical equipment are disposed of in accordance with the following procedures:

a. Aircraft/Equipment Destroyed. For unsalvageable components, a copy of the EHR card shall be forwarded to the MECFA Repository after necessary investigation and preparation of required reports.

b. Sale or Transfer. Where an aircraft/equipment is sold or transferred to other than Navy custody, The EHR cards shall accompany the aircraft/equipment unless otherwise directed by proper authority.

c. Special Categories. The EHR cards for the following shall be forwarded with the aircraft logbook/AESR to the Director, Washington National Records Center, GSA, Washington, D.C. 20409, utilizing Standard Form 135 citing SECNAVINST 5212.5 as authorization for disposal:

(1) For experimental aircraft/equipment.
(2) For aircraft/equipment considered to be of historical value.
(3) For aircraft/equipment lost in combat or involved in mishaps resulting in death, missing in action, or injury to any person, and/or substantial damage to other than government property, the EHR cards shall be retained by the reporting custodian for a period of one year (for use in litigation action) and then forwarded to the Director, Washington National Records Center.

d. Prior to disposition of EHR cards as noted in 5.11.4.4 b. and c. above, a copy of all pertinent EHR cards shall be forwarded to the respective MECFA Repository for file purging.

5.12 Assembly Service Record (ASR) (OPNAV 4790/106A)

5.12.1 ASR program. The ASR shall be used to provide data tracking on assemblies if the assembly has a rework/overhaul life limit and its subassemblies are either depot removal only or if removed by O- and I-levels and are discarded. NAVAIRINST 4790.3 establishes policy and responsibilities for the planned removal/replacement of selected assemblies designated to utilize the ASR. (Figure 12.)

5.12.2 ASR card description. The ASR is BUFF in color and divided into six sections; (1) Identification Data, (2) Components, (3) Installation Data, (4) Removal Data, (5) Technical Directives, and (6) Repair/Rework/Overhaul/Exceedance. Maintenance of the ASR is essential and it is imperative that all required data be entered. Entries shall be typed or printed in black ink except as indicated. No entries shall be made with felt-tipped pen. An individual card for each ASR serialized assembly shall be maintained as part of the aircraft logbook/AESR while the assembly is installed. When the assembly is removed from the aircraft or equipment, the ASR shall be attached to and accompany the assembly to its final disposition.

5.12.3 ASR card loss. Loss of an ASR card can cause the loss of the assembly to the supply system; therefore, it is extremely important to be able to reconstruct the assemblys' history in order to determine the necessary course of action when the card is not available. The Central Repository at the NAVAVNLOGCEN has the responsibility to determine the required course of action under these circumstances. In order to enable the Central Repository to accomplish this responsibility, it must receive misplaced and cancelled cards, copies of all updated cards after SDLM or Rework, and copies of all new cards generated for new ASR items. The Central Repository shall respond to all requests for information regarding ASR cards. The request for this data may be made by telephone (Autovon 356-4587), message, or letter, consistent with the priority of the requirement for the information. Policy and responsibilities concerning the NAVAVNLOGCEN Central Repository are contained in NAVAIRINST 4790.3.

5.12.4 Administrative procedures. The administrative procedures for the initial generation, in-service utilization, and management actions are as follows:

a. ASR Card initiation for assemblies installed on or delivered with major aeronautical equipments, e.g., aircraft, engines, as part of a DOD contract shall be the responsibility of the activity accepting such major equipment for the Navy. When these assemblies are delivered to the Navy at the contractor's plant, the cognizant Navy representative shall be considered to be the original accepting activity. The accepting activity shall forward a copy of the ASR card to the Central Repository.

b. When ASR card requirements are not included in the Navy contract, ASR card initiation for new assemblies drawn from the Navy Supply System shall be the responsibility of the requisitioning activity. The requisitioning activity shall initiate the required ASR card and forward a copy of the card to the Central Repository.

c. Upon completion of rework, the ASR card reflecting the current status of the assembly shall be copied and the copy forwarded to the Central Repository. This procedure applies to assemblies reworked individually and concurrently as part of an aircraft rework process. The original ASR card shall be securely attached to the assembly being returned to the supply system or inserted in the aircraft logbook/AESR as appropriate.

d. When notified that ASR cards are no longer required via the NAVAIR Notice/changes to the applicable Periodic Maintenance Requirements Manual (PMRM)/SDLM specifications, custodians shall remove and forward the affected cards to the Central Repository for purging of the Master File. The deletion authorization shall be annotated on the card.

e. When an ASR card becomes damaged or mutilated, the activity having current custody shall initiate a new card, and all information shall be transcribed to the new card. When a card contains no space for additional entries, a new card shall be prepared and both cards accompany the assembly until the cards are consolidated at rework.

f. The ASR has a Replacement Block at the top right side of each card. This block shall be read as Replacement Interval (time remaining on the complete assembly) and Replacement Due (equipment hours/counts at which the assembly must be removed from service for maintenance). This information is to assist maintenance and records personnel by providing a ready reference for determining hard time maintenance requirements. Review the individual subassemblies and assembly hard time requirements. Subtract the time consumed on each subassembly from the established hard time. The lowest remaining difference shall be recorded in the Interval Block. The Due Block shall be computed by adding the interval time to the equipment hours/counts on which the assembly is installed.

5.12.4.1 Detailed instruction. A detailed description and instructions for each section of the ASR card are as follows:

5.12.4.1.1 Section I - Identification Data.

a. Part Number - Part number of the assembly.

b. Serial Number - Serial number of the assembly.

c. Work Unit Code - Work Unit Code of the assembly.

d. CFA - Cognizant Field Activity responsible for the assembly.

5.12.4.1.2 Section II - Components.

a. This section contains a listing of all life limited subassemblies. Maximum hours/counts expended on any subassembly shall be the controlling factor for removing that particular assembly. Hours for disc or blades which have not been replaced since new or during the current rework shall be determined by total accumulated engine time in Section IV. Hours for discs or blades which have been replaced during a rework shall be determined by computing actual operating hours expended since last replacement.

(1) Nomenclature - Noun name of the component that is a subassembly of the assembly.
(2) P/N - Part number of the item.
(3) S/N - Serial number of the item.
(4) Component Time or Counts - Enter the hours/counts on the component at installation in the assembly
(5) Miscellaneous Data - This section shall be used to record pertinent information for which no other space has been provided.

5.12.4.1.3 Section III - Installation Data.

a. Date - Enter the date the assembly is installed on an aircraft or equipment.

b. BUNO/SERNO Installed On - Enter BUNO or SERNO of the aircraft or equipment on which the assembly is being installed.

c. Total Aircraft/Equipment Hours or Counts - Enter the hours/counts (whole numbers only) of the aircraft/equipment on which the assembly is being installed. (Time since new.) Uncaptioned columns are provided for aircraft/equipment that have Monitoring Systems installed and shall be labeled as required, e.g., LCF, ELCF, EOT. Aircraft/equipment without Monitoring Systems shall utilize the first column only.

d. Assembly Hour or Counts - Enter the hours/counts (whole numbers only) since new and reworked/overhauled. Uncaptioned columns have been provided and shall be labeled with the appropriate information required, e.g., TSN, TSO, TSR, LCF, EOT. When entering data for new material, the entry in the TSO/TSR column will be NEW. When total hours or counts since new is not known, the entry in the TSN column shall be UNK (Unknown).

5.12.4.1.4 Section IV - Removal Data.

a. Date - Enter the date the assembly is removed.

b. Total Aircraft/Equipment Hours or Counts - Enter the hours/counts (whole numbers only) of the aircraft/equipment on which the assembly is being removed. (Time since new.) Uncaptioned columns are provided for aircraft/equipment that have Monitoring Systems installed and shall be labeled as required, e.g., LCF, ELCF, EOT. Aircraft/equipment without Monitoring Systems will utilize the first column only.

c. Assembly Hours or Counts - Subtract total aircraft/equipment hours or counts at installation from total aircraft/equipment hours or counts at removal. Add to total hours or counts on assembly at installation and enter in the appropriate columns. Label columns as required.

d. Reason for Removal and Job Control Number - Enter the reason for removal and JCN from the VIDS/MAF that removed the assembly from the aircraft/equipment.

5.12.4.1.5 Section V - Technical Directives.

a. Technical Directive Identification.
(1) Code - Enter TDC Code.
(2) Basic - Enter TD number.
(3) INT - If an Interim TD enter I.
(4) REV - Enter revision letter.
(5) AM - Enter numerical amendment number.
(6) PT - Enter numerical TD Part (e.g., Part-01, Part-02).
(7) KIT - Enter kit number, enter 00 if no kit is required.
(8) PRI - Enter I for Immediate, U for Urgent, R for routine, or K for previously incorporated (record purpose), as applicable.

b. Status - Enter the code indicating the status of the directive. No status codes other than those prescribed shall appear on the ASR nor is any code used to indicate other than its intended meaning. Meanings of the codes and instructions for their use are listed below:

(1) INC (Incorporated) - Indicates that the specified change or modification has been completely incorporated.

(2) NINC (Not Incorporated) - A temporary entry made in pencil. This code is used to indicate directives that have been issued but not incorporated and changes or modifications that are only partially incorporated.

(3) NA (Not Applicable) - Directives that do not apply to the particular aircraft/equipment.

c. Title/Remarks - Brief description of the TD.

d. Compliance.

(1) By (activity) - Enter the name of the activity completing the TD compliance.

(2) Date - Enter the date the TD was completed.

e. Signature - A person having aircraft logbook/AESR signature authority shall sign this block.

5.12.4.1.6 Section VI - Repair/Rework/Overhaul/Exceedance.

a. Date - Enter date Repair/Rework/Overhaul was accomplished, or exceedance occurred.

b. Activity - Enter name of activity accomplishing Repair/Rework/Overhaul, or Exceedance.

c. Description - Indicate whether the item has been Repaired/Reworked/Overhauled and a concise narrative of the maintenance performed. Exceedances encountered during operation of the assembly shall be logged ensuring the level of the exceedance is noted.

d. Signature - A person having aircraft logbook/AESR signature authority shall sign this block.

5.12.4.2 Shipping procedures. When assemblies are shipped between activities, the following procedures shall be followed to reduce the possibility of loss or damage to ASR cards:

a. The ASR card shall be inserted and sealed in a plastic return material documents envelope. Shipping documents shall not be placed in the same envelope with the ASR card.

b. When the assembly is placed in a box or container for shipment, the ASR card, in the envelope, shall be placed inside and attached to the assembly.

c. When assemblies are shipped in open-type crates or without a container, special attention shall be given to attaching the envelope containing the ASR card to the assembly. The ASR card shall be sealed in an envelope by itself and shall not to be removed by anyone except the user/recipient. Shipping documents shall not be placed in the same envelope with the ASR card.

5.12.4.3 Lost ASR cards. Lost, misplaced, or destroyed ASR cards have a difinite impact upon logistic assets available to the using activities, and rework/overhaul line scheduling, plus loss of usable operating time on assemblies. To enhance the ability to reconstruct ASR cards, the following procedures shall be followed to support the Central Repository:

a. If it can be determined that the assembly is in fact new, or newly reworked/overhauled, an ASR card shall be initiated upon receipt by the requisitioning activity prior to installation.

b. If the above determination cannot be made, the Central Repository shall be contacted and requested to provide historical data/technical guidance.

c. Caution must be stressed concerning assemblies having an established finite life. Since failure of a finite life item may have catastrophic consequences, it is

mandatory that documented proof of its remaining service life be determined prior to installation. On components where and overspeed/overstress occurrence is a mandatory reportable factor, this information must also be determined and documented. Visual appearance or apparent satisfactory operation of an item are not considered sufficient evidences of remaining serviceability. If the Central Repository does not have the historical data to complete a new ASR card, the NAVAIREWORKFAC having MECFA responsibility shall be contacted for disposition of the assembly and final determination as to its serviceablility.

5.12.4.4 Condemned assemblies. For assemblies that are condemned, the ASR card shall be annotated "condemned" in the Reason for Removal column and the ASR card forwarded to the Central Repository. This will serve to purge the Central Repository of records for the assembly.

5.12.4.5 Repair of assemblies without ASR cards. For assemblies that are received for rework without ASR cards, the rework activity shall obtain the history of the item from the Central Repository. If data is not available at the Central Repository, the following shall apply to item with Time Between Overhaul (TBO):

a. Induct TBO assembly received without ASR card. Prepare new ASR card using information obtained from the data plate installed on the assembly. If total time since last overhaul is not on the data plate, add one TBO interval to time entered in the total time at last overhaul block. If no data plate is installed, replace all finite life subcomponents and rework the balance of the subcomponents in accordance with existing procedures.

b. Restore the assembly to an RFI condition in accordance with existing procedures and indicate time since new, UNK, and time since last overhaul as Zero in Section II of the new ASR card.

5.12.4.6 ASR card special instructions. ASRs for assemblies on stricken aeronautical equipment are disposed of in accordance with the following procedures:

a. Aircraft/Equipment Destroyed. A copy of all ASR cards shall be forwarded to the Central Repository after necessary investigation and preparation of required reports.

b. Sale or Transfer. Where an aircraft/equipment is sold or transferred to other than Navy custody, the ASR cards shall accompany the aircraft/equipment unless otherwise directed by proper authority.

c. Special Categories. The ASR cards for the following shall be forwarded to the Director, Washington National Records Center, GSA, Washington, D.C. 20409, utilizing Standard Form 135 citing SECNAVINST 5212.5 as authorization for disposal:

(1) For experimental aircraft/equipment.
(2) For aircraft/equipment considered to be of historical value.
(3) For aircraft/equipment lost in combat or involved in mishaps resulting in death, missing in action or injury to any person, and/or substantial damage to other than government property, the ASR cards shall be retained by the reporting

custodian for a period of one year (for use in litigation action) and then forwarded to the Director, Washington National Records Center.

d. Prior to disposition of ASR cards as noted in 5.12.4.6 b. and c. above, a copy of all pertinent ASR cards shall be forwarded to the Central Repository for file purging.

5.13 Module Service Records (MSR) (OPNAV 4790/135)

5.13.1 MSR program. Modular engine design allows I-level maintenance activities to readily remove and replace interchangeable modules with RFI spares. The removed modules are then either repaired at an IMA or retrograded to Depot. This capability requires a system by which these modules, the life cycle limits of the assemblies and components within them and other maintenance data may be recorded and maintained. The Module Service Record provides this capability and shall be used for all modular engines (e.g., T56, T76, T400, T700, and F404). The MSR accompanies the module at all times. When the module is installed as a part of a propulsion system, this record shall be maintained concurrently with, and becomes a part of, the propulsion system AESR. When the module is uninstalled, a suitable fastener shall be used to bind the record together when it is transferred or shipped as a separate item. DO NOT STAPLE.

5.13.2 MSR description. The MSR is a four page fold-out record that is ORANGE in color and divided into nine sections: (1) Identification Data, (2) Module Composition, (3) Installation Data, (4) Removal Data, (5) Technical Directives, (6) Repair/Rework, (7) Inspection Record, (8) Miscellaneous/History, and (9) Exceedance. The maintenance of the MSR is of utmost importance and it is imperative that all required data be entered. (Figure 13.)

5.13.3 Administrative procedures. The administrative procedures for the initial generation, in-service utilization, and management actions are as follows:

a. MSR initiation for modules installed on aeronautical engines as part of a DOD contract, shall be the responsibility of the activity accepting the engines for the Navy. When these modules are delivered to the Navy at the contractor's plant, the cognizant Navy representative shall be considered to be the original accepting activity. The accepting activity shall forward a copy of the MSR to the NAVAVNLOGCEN Central Repository.

b. When an MSR becomes damaged or mutilated, the activity having current custody shall initiate a new record, and all information shall be transcribed to the new record. When a record contains no space for additional entries, a new record is prepared and both records accompany the module until the records are consolidated at repair/rework. Entries shall be typed or printed in black ink except as indicated. No entries shall be made with felt-tipped pen.

5.13.3.1 Detailed instructions. A detailed description and instructions for each section of the MSR are as follows:

a. Indicate what type of MSR it is, e.g., FAN, TURBINE, AFTERBURNER.

b. Replacement Block.

(1) Component/Assembly - The noun name of the component/assembly that will require the module to be removed from the propulsion system because of its life cycle limit.

(2) Due - Add the component/assembly interval time to the module time minus any hours or counts on the component/assembly at installation. These entries are made in pencil.

5.13.3.1.1 Section I - Identification Data.

a. Part Number - Part number of the module.

b. Serial Number - Serial number of the module.

c. Type/Model/Series - T/M/S of the module.

d. WUC - Work Unit Code of the module.

e. CFA - Cognizant Field Activity responsible for the module.

5.13.3.1.2 Section II - Module Composition.

a. Nomenclature - Noun name of the component/assembly that is a subassembly of the module. Only subassemblies that require data tracking (SRC, EHR, or ASR) shall be listed.

b. P/N - Part number of the item.

c. S/N - Serial number of the item.

d. Date - Date the item was installed or removed from the module as appropriate.

5.13.3.1.3 Section III - Installation Data.

a. Date - Enter the date the module is installed in a propulsion system.

b. PSSN Installed On - Enter the Propulsion System Serial Number (PSSN) of the propulsion system on which the module is being installed.

c. By (activity) - Enter the name of activity installing the modules.

d. Total Propulsion System Hours or Counts - Enter the hours/counts (whole numbers only) of the propulsion system on which the module is being installed. Uncaptioned columns are provided for propulsion systems that have Monitoring Systems installed and shall be labeled as required, e.g., LCF, ELCF, EOT. Propulsion systems without Monitoring Systems shall utilize the first column only, and shall enter the time since new.

e. Total Module Hours or Counts - Enter the hours/counts (whole numbers only) as appropriate. Uncaptioned columns have been provided and shall be labeled with the appropriate information required, e.g., TSN LCF EOT.

5.13.3.1.4 Section IV - Removal Data.

a. Date - Enter the date the module is removed.

b. Total Propulsion System Hours or Counts - Enter the hours/counts (whole numbers only) of the propulsion system on which the module is being removed. Uncaptioned columns are provided for propulsion system that have Monitoring Systems installed and shall be labeled as required, e.g., LCF, ELCF, EOT. Propulsion systems without Monitoring Systems shall utilize the first column only and shall enter the time since new.

c. Total Module Hours or Counts - Subtract total propulsion system hours or counts at installation from total propulsion system hours or counts at removal. Add to total hours/counts on module at installation and enter in the appropriate columns. Label columns as required.

d. Reason for Removal and Job Control Number - Enter the reason for removal and JCN from the VIDS/MAF that removed the module from the propulsion system.

5.13.3.1.5 Section V - Technical Directives.

a. Technical Directives Identification.

(1) Code - Enter TDC Code.
(2) Basic - Enter TD Number.
(3) INT - If an Interim TD, enter I.
(4) REV - Enter revision letter.
(5) AM - Enter numerical amendment number.
(6) PT - Enter numerical TD Part (e.g., Part-01, Part-02).
(7) KIT - Enter kit number, enter 00 if no kit is required.
(8) PRI - Enter I for Immediate, U for Urgent, R for Routine, or K for previously incorporated (record purpose), as applicable.

b. Status - Enter the code indicating the status of the directive. No status codes other than those prescribed shall appear on MSRs nor is any code used to indicate other than its intended meaning. Meanings of the codes and instructions for their use are listed below:

(1) INC (Incorporated) - Indicates that the specified change or modification has been completely incorporated.

(2) NINC (Not Incorporated) - A temporary entry made in pencil. This code shall be used to indicate directives that have been issued but not incorporated and changes or modifications that are only partially incorporated.

(3) NA (Not Applicable) - Directives that do not apply to the particular module.

c. Title/Remarks - Brief description of the TD.

d. Compliance.

(1) By(activity) - Enter the name of the activity completing the TD compliance.

(2) Date - Enter the date the TD was completed.

e. Signature - A person having aircraft logbook/AESR signature authority shall sign this block.

5.13.3.1.6 Section VI - Repair/Rework.

a. Date - Enter date Repair/Rework was accomplished.

b. Activity - Enter name of activity accomplishing Repair/Rework.

c. Description - Indicate whether the module has been Repaired/Reworked and a concise narrative of the maintenance performed.

d. Signature - A person having aircraft logbook/AESR signature authority shall sign this block.

5.13.3.1.7 Section VII - Inspection Record.

a. Type and Description of Inspection - Type and description of the inspection that affects the module.

b. Reference - Identify the document directing the inspection e.g., Message originator and Date Time Group, letter originator and serial number.

c. Date Completed - Date inspection was completed.

d. Activity - Activity performing the inspection.

e. Signature - A person having aircraft logbook/AESR signature authority shall sign this block.

5.13.3.1.8 Section VIII - Miscellaneous/History.

a. The Miscellaneous/History section is used to record pertinent information for which no other place has been provided. When equipment is exposed to large quantitites of salt water, fire extinguishing agents, or other corrosive media, an entry shall be made on this form, to include a description of the decontamination and approximate time between exposure and completion of decontamination.

b. To aid in determining repair/rework requirements of modules following rejection, it is imperative that activities rejecting modules separate from a propulsion

system document completely the reasons for and nature of the rejection. For example, a simple entry such as "overtemp" is not sufficient. Include information as to the degree of overtemp, length of overtemp, the circumstances under which it occurred (start, shutdown, ground runup, etc.), and whatever corrective measures were taken.

c. Module Transfer. Activities transferring modules that are not a part of a propulsion system shall annotate this section with the date, reason for transfer, activity transferred to, JCN, Star/Status Code, and if applicable shipping document number.

d. If MSR consolidation is required, the IMA/Depot shall screen this section for items of historical or maintenance value and transcribe them to a new form. A minimum of two years data shall be maintained at all times.

e. All entries shall require an authorized signature and the name of the activity.

5.13.3.1.9 Section IX - Exceedance.

a. Exceedance - Type of exceedance.

b. Level - The level of the exceedance if applicable.

c. Remarks - As appropriate.

d. Signature - A person having aircraft logbook/AESR signature authority shall sign this block.

5.13.3.2 Shipping procedures. When modules are shipped between activities, the following procedures shall be followed to reduce the possibility of loss or damage to MSRs:

a. The MSR shall be inserted and sealed in a plastic envelope. Shipping documents shall not be placed in the same envelope with the MSR.

b. When the module is place in a box or container for shipment, the MSR in the envelope, shall be placed inside and attached to the module.

c. When modules are shipped in open-type crates or without a container, special attention shall be given to attaching the envelope containing the MSR to the module. The MSR shall be sealed in an envelope by itself and shall not to be removed by anyone except the user/recipient. Shipping documents shall not be placed in the same envelope with the MSR.

5.13.3.3 Lost MSRs. Lost, misplaced, or destroyed MSRs have a definite impact upon logistics assets available to the using activities, and repair/rework line scheduling, plus loss of usable operating time on modules. To enhance the ability to reconstruct MSRs, the following procedures shall be followed to support the Central Repository:

a. If it can be determined that the module is in fact new, or newly reworked, an MSR shall be initiated upon receipt by the requisitioning activity prior to installation.

b. If the above determination cannot be made, the Central Repository shall be contacted and requested to provide historical data/technical guidance.

c. Caution must be stressed concerning modules or subassemblies having an established finite life. Since failure of a finite life item may have catastrophic consequences, it is mandatory that documented proof of its remaining service life be determined prior to installation. On modules where an overspeed/overstress occurrence is a mandatory reportable factor, this information must also be determined and documented. Visual appearance or apparent satisfactory operation of an item are not considered sufficient evidence of remaining serviceability. If the Central Repository does not have the historical data to complete a new MSR, the NAVAIREWORKFAC having MECFA responsibility shall be contacted for disposition of the module and final determination as to it serviceability.

5.13.3.4 Repair/rework of modules without MSRs. For modules that are received for repair/rework without MSRs, the repair/rework activity shall obtain the history of the module from the Central Repository. If data is not available at the Central Repository, restore the module to an RFI condition in accordance with existing procedures and initiate a new MSR.

5.13.3.5 MSR special instructions. MSRs for modules on stricken propulsion systems are disposed of in accordance with the following procedures:

a. Propulsion System Destroyed. A copy of MSRs shall be forwarded to the Central Repository after necessary investigation and preparation of required reports.

b. Sale or Transfer. When a propulsion system is sold or transferred to other than Navy custody, the MSR shall accompany the propulsion system unless otherwise directed by proper authority.

c. Special Cagegories. The MSR for the following shall be forwarded to the Director, Washington National Records Center, GSA, Washington, D.C. 20409, utilizing Standard Form 135 citing SECNAVINST 5212.5 as authorization for disposal:

(1) For experimental propulsion systems.
(2) For propulsion systems considered to be of historical value.
(3) For propulsion systems lost in combat or that have been involved in mishaps resulting in death, missing in action or injury to any person, or substantial damage to other than government property, the MSR will be retained by the reporting custodian for a period of one year(for use in litigation action) and then forwarded to the Director, Washingtion National Records Center.

d. Prior to disposition of MSRs as noted in 5.13.3.5 b. and c. above, a copy of all pertinent MSRs shall be forwarded to the Central Repository for file purging.

Preparing activity
Navy-AS
(Project 7FGP-NOO1)

AERONAUTICAL EQUIPMENT SERVICE RECORD

NOMENCLATURE OF EQUIPMENT		REPLACEMENT INTERVAL	REPLACEMENT DUE
TYPE	MODEL	SER. NO. (Nav if prop.)	
INSTALLED ON–			
MODEL	BUNO/SERIAL NO.	DATE	BY (Activity)
CURRENT ENGINE OR PROPELLER POSITION NO.			

SAMPLE

DEPARTMENT OF THE NAVY, CHIEF OF NAVAL OPERATIONS
OPNAV FORM 4790/29

Figure 1. Example of Aeronautical Equipment Service Record (OPNAV 4790/29).

OPNAVINST 4790.2C

EQUIPMENT OPERATING RECORD

Entry required at end of month and upon transfer

1. EQUIPMENT											2. T/M/S	3. SERIAL NUMBER
4. MONTH AND YEAR	5. OPERATING HRS		6. MONITORING SYSTEM DATA (e.g. TSR, STARTS, COUNTS, ROUNDS)								7. ACTIVITY	8. REMARKS
	a. THIS MONTH	b. ACCUM	a.		b.		c.		d.			
			(1) THIS MONTH	(2) ACCUM	(1) THIS MONTH	(2) ACCUM	(1) THIS MONTH	(2) ACCUM	(1) THIS MONTH	(2) ACCUM		

OPNAV 4790/31A (Rev. 1-84)

PERMANENT RECORD

Figure 2. Example of Equipment Operating Record (OPNAV 4790/31A).

OPNAVINST 4790.2C

INSPECTION RECORD

(Periodical) or Conditional)

1. AIRCRAFT MODEL OR EQUIPMENT NAME	2. TYPE/MODEL/SERIES	3. BUNO OR SERIAL NUMBER

4. TYPE OR DESCRIPTION OF INSPECTION	5. REFERENCE	6. DATE COMMENCED	7. DATE COMPLETED	8. ACTIVITY	9. SIGNATURE

OPNAV 4790/22A (Rev 1-84)

Figure 3. Example of Inspection Record (OPNAV 4790/22A).

OPNAVINST 4790.2C

REPAIR / REWORK RECORD

1. AIRCRAFT MODEL / EQUIPMENT NAME	2. TYPE / MODEL / SERIES	3. BUNO OR SERIAL NUMBER

4. DATE INDUCTED	5. DATE COMPLETED	6. DESCRIPTION OF WORK	7. REFERENCE	8. ACTIVITY	9. SIGNATURE

OPNAV 4790 / 23A (Rev. 1-84) S / N 0107 - LF - 047 - 9118

PERMANENT RECORD

Figure 4. Example of Repair/Rework Record (OPNAV 4790/23A).

OPNAVINST 4790.2C

TECHNICAL DIRECTIVES											1. TYPE DIRECTIVE		
2. AIRCRAFT MODEL/EQUIPMENT NAME								3. TYPE/MODEL/SERIES			4. BUNO OR SERIAL NUMBER		
5. TECHNICAL DIRECTIVE IDENTIFICATION							6. STATUS	7. TITLE/REMARKS	8. COMPLIANCE		9. SIGNATURE
a. BASIC	b. INT	c. REV	d. AM	e. PT	f. KIT	g. PRI			a. BY (Activity)	b. DATE	

OPNAV 4790/24A (Rev. 1-84)

Figure 5. Example of Technical Directives (OPNAV 4790/24A).

MISCELLANEOUS/HISTORY

CRAFT MODEL OR EQUIPMENT NAME	EQUIPMENT MODEL/TYPE	BUNO OR SERIAL NO.

DATE	REMARKS

NAVAIR FORM 4790/25A (8-88) S/N 0107-770-3505

Figure 6. Example of Miscellaneous/History (OPNAV Form 4790/25A).

OPNAVINST 4790.2C

PRESERVATION / DEPRESERVATION RECORD

1. AIRCRAFT MODEL OR EQUIPMENT NAME			2. TYPE / MODEL / SERIES		3. BUNO OR SERIAL NUMBER	
4. PRESERVATION				5. REPRESERVE	6. DEPRESERVATION	
a. DATE	b. BY (Activity)	c. TYPE PRESERVATION	d. REFERENCE	a. DATE DUE	a. DATE	b. BY (Activity)

OPNAV 4790-136A (1-84)

Figure 7. Example of Preservation/Depreservation Record (OPNAV 4790/136A).

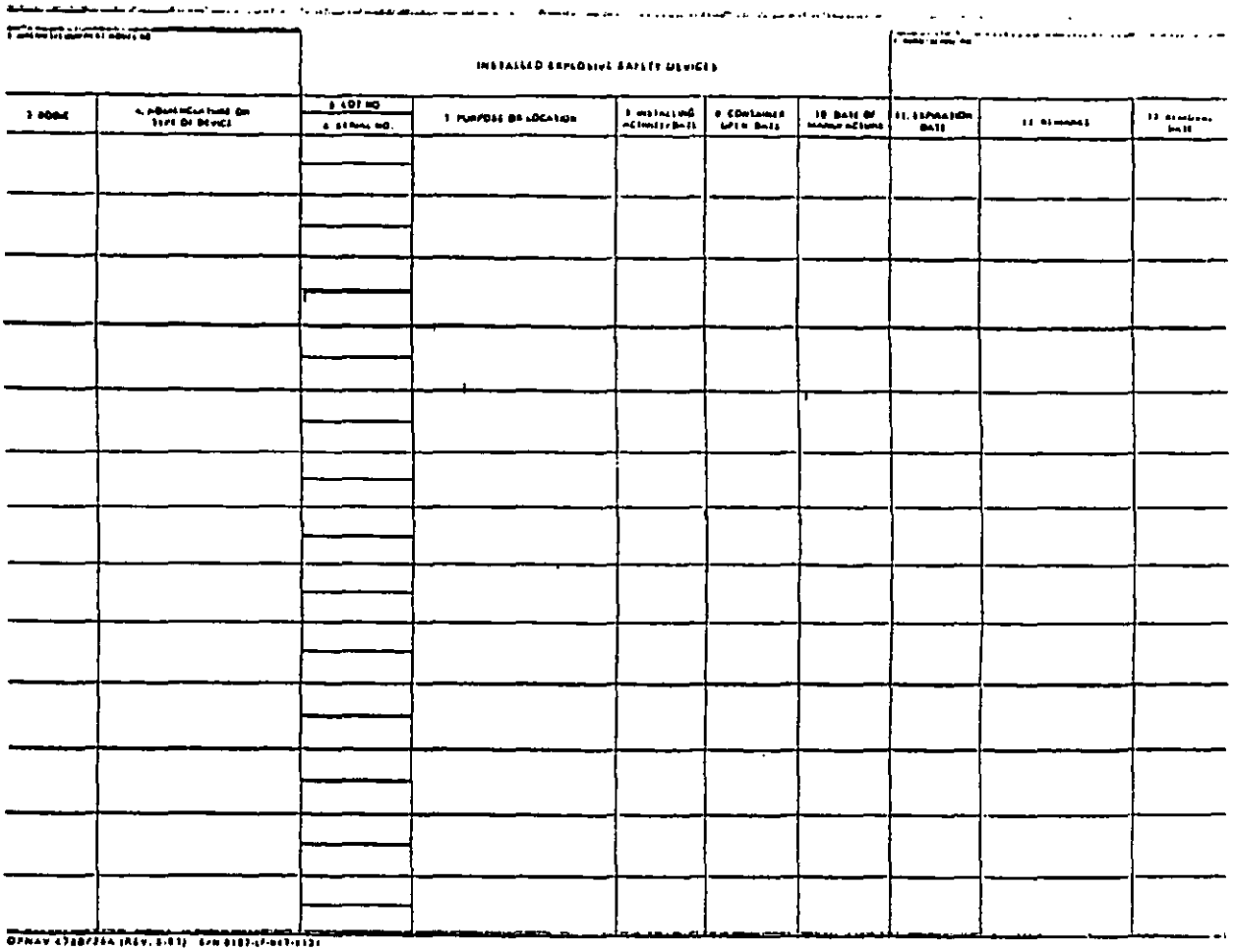

Figure 8. Example of Installed Explosive Safety Devices (OPNAV 4790/26A).

OPNAVINST 4790.2C

INVENTORY RECORD

1. AIRCRAFT MODEL/EQUIPMENT NAME			2. TYPE/MODEL/SERIES				3. BUNO OR SERIAL NUMBER		
4. NOMENCLATURE	5. PART NO.	6. SERIAL NO.	7. DATE		8. NOMENCLATURE	9. PART NO.	10. SERIAL NO.	11. DATE	
			a. INSTALL	b. REMOVE				a. INSTALL	b. REMOVE

OPNAV 4790/27A (Rev. 1-84)

Figure 9. Example of Inventory Record (OPNAV 4790/27A).

OPNAVINST 4790.2C

SCHEDULED REMOVAL COMPONENT CARD

SECTION I - IDENTIFICATION DATA

A. NOMENCLATURE	B. WORK UNIT CODE	C. FSCM	D. REPLACEMENT INTERVAL	E. REPLACEMENT DUE
F. PART NUMBER	G. SERIAL NUMBER	H. CFA		

SECTION II - INSTALLATION DATA

A. DATE	B. BUNO/SERNO INSTALLED ON	C. TOTAL AIRCRAFT/EQUIPMENT HOURS OR COUNTS				D. TOTAL HOURS OR COUNTS ON ITEM			

SECTION III - REMOVAL DATA

A. DATE	B. TOTAL AIRCRAFT/EQUIPMENT HOURS OR COUNTS				C. TOTAL HOURS OR COUNTS ON ITEM				D. REASON FOR REMOVAL AND JOB CONTROL NUMBER

OPNAV 4790/28A (Rev. 1-84) S/N 0107-LF-047-9142

PERMANENT RECORD

Figure 10. Example of Scheduled Removal Component Card (OPNAV 4790/28A) (Front).

SECTION IV - TECHNICAL DIRECTIVES

A. TECHNICAL DIRECTIVE IDENTIFICATION								B. STATUS	C. TITLE / REMARKS	D. COMPLIANCE		E. SIGNATURE
(1) CODE	(2) BASIC	(3) INT	(4) REV	(5) AM	(6) PT	(7) KIT	(8) PRI			(1) BY (Activity)	(2) DATE	

SECTION V - REPAIR / REWORK / OVERHAUL

A. DATE	B. ACTIVITY	C. DESCRIPTION	D. SIGNATURE

OPNAV 4790/28A (Rev. 1-84) REVERSE

Figure 10. Example of Scheduled Removal Component Card (OPNAV 4790/28A) (Back). - Continued

OPNAVINST 4790.2C

EQUIPMENT HISTORY RECORD (EHR) CARD

SECTION I - IDENTIFICATION DATA

A. NOMENCLATURE	B. WORK UNIT CODE	C. FSCM	D. REPLACEMENT INTERVAL	E. MAINTENANCE DUE

F. PART NUMBER	G. SERIAL NUMBER	H. CFA	I. REFERENCE

SECTION II - INSTALLATION DATA

A. DATE	B. BUNO/SERNO INSTALLED ON	C. TOTAL AIRCRAFT/EQUIPMENT HOURS OR COUNTS	D. TOTAL HOURS OR COUNTS ON ITEM

SECTION III - REMOVAL DATA

A. DATE	B. TOTAL AIRCRAFT/EQUIPMENT HOURS OR COUNTS	C. TOTAL HOURS OR COUNTS ON ITEM	D. REASON FOR REMOVAL AND JOB CONTROL NUMBER

SECTION IV - MAINTENANCE RECORD

A. DATE	B. ACTIVITY	C. REMARKS AND MAJOR PARTS REPLACED	D. SIGNATURE

OPNAV 4790/113 (Rev. 1-84) PERMANENT RECORD

Figure 11. Example of Equipment History Record Card (OPNAV 4790/113) (Front).

SECTION V - INSPECTION RECORD

A. TYPE AND DESCRIPTION OF INSPECTION	B. REFERENCE	C. DATE COMMENCED	D. DATE COMPLETED	E. ACTIVITY	F. SIGNATURE

SECTION VI - TECHNICAL DIRECTIVES

A. TECHNICAL DIRECTIVE IDENTIFICATION								B. STATUS	C. TITLE/REMARKS	D. COMPLIANCE		E. SIGNATURE
(1) CODE	(2) BASIC	(3) INT	(4) REV	(5) AM	(6) PT	(7) KIT	(8) PRI			(1) BY (Activity)	(2) DATE	

OPNAV 4790/113 (Rev. 1-84) REVERSE

Figure 11. Example of Equipment History Record Card (OPNAV 4790/113) (Back). - Continued

OPNAVINST 4790.2C

_____ ASSEMBLY SERVICE RECORD	REPLACEMENT DUE	REPLACEMENT INTERVAL

SECTION I - IDENTIFICATION DATA

A. PART NUMBER	B. SERIAL NUMBER	C. WORK UNIT CODE	D. CFA	E. FSCM

SECTION II - COMPONENTS

A. NOMENCLATURE	B. P/N	C. S/N	D. COMPONENT TIME OR COUNTS (TSN, TSR, METER, LCF)						E. MISCELLANEOUS DATA

SECTION III - INSTALLATION DATA

A. DATE	B. BUNO/SERNO INSTALLED ON	C. BY (Activity)	D. TOTAL AIRCRAFT / EQUIPMENT HOURS OR COUNTS				E. ASSEMBLY HOURS OR COUNTS			

OPNAV 4790/106A (Rev. 1-84) S/N 0107-LF-047-9521 PERMANENT RECORD

Figure 12. Example of Assembly Service Record (OPNAV 4790/106A) (Front).

SECTION IV - REMOVAL DATA

A. DATE	B. TOTAL AIRCRAFT / EQUIPMENT HOURS OR COUNTS				C. ASSEMBLY HOURS OR COUNTS				D. REASON FOR REMOVAL AND JOB CONTROL NUMBER

SECTION V - TECHNICAL DIRECTIVES

A. TECHNICAL DIRECTIVE IDENTIFICATION								B. STATUS	C. TITLE / REMARKS	D. COMPLIANCE		E. SIGNATURE
(1) CODE	(2) BASIC	(3) INT	(4) REV	(5) AM	(6) PT	(7) KIT	(8) PRI			(1) BY (Activity)	(2) DATE	

SECTION VI - REPAIR / REWORK / OVERHAUL / EXCEEDANCES

A. DATE	B. ACTIVITY	C. DESCRIPTION	D. SIGNATURE

OPNAV 4790 / 106A (1-84) REVERSE

Figure 12. Example of Assembly Service Record (OPNAV 4790/106A) (Back). - Continued

OPNAVINST 4790.2C

_____MODULE SERVICE RECORD

REPLACEMENT	
COMPONENT / ASSEMBLY	DUE

SECTION I - IDENTIFICATION DATA

A. PART NUMBER	B. SERIAL NUMBER	C. TYPE / MODEL / SERIES	D. WORK UNIT CODE	E. CFA

SECTION II - MODULE COMPOSITION

A. NOMENCLATURE	B. P/N	C. S/N	D. DATE		E. NOMENCLATURE	F. P/N	G. S/N	H. DATE	
			INSTALL	REMOVE				INSTALL	REMOVE

SECTION III - INSTALLATION DATA

A. DATE	B. SERIAL NO. INSTALLED ON	C. BY (Activity)	D. TOTAL PROPULSION SYSTEM HOURS OR COUNTS					E. TOTAL MODULE HOURS OR COUNTS				

OPNAV 4790/135 (Rev. 1-84) Page 1 of 4 Pages S/N 0107-LF-047-9675

PERMANENT RECORD

Figure 13. Example of Module Service Record (OPNAV 4790/135) (Page 1).

SECTION IV - REMOVAL DATA

A. DATE	B. TOTAL PROPULSION SYSTEM HOURS OR COUNTS					C. TOTAL MODULE HOURS OR COUNTS					D. REASON FOR REMOVAL & JOB CONTROL NUMBER

SECTION V - TECHNICAL DIRECTIVES

A. TECHNICAL DIRECTIVE IDENTIFICATION								B. STATUS	C. TITLE / REMARKS	D. COMPLIANCE		E. SIGNATURE
(1) CODE	(2) BASIC	(3) INT	(4) REV	(5) AM	(6) PT	(7) KIT	(8) PRI			(1) BY (Activity)	(2) DATE	

OPNAV 4790 / 135 (1-84) Page 2 of 4 Pages

Figure 13. Example of Module Service Record (OPNAV 4790/135) (Page 2). - Continued

SECTION VI - REPAIR / REWORK			
A. DATE	B. ACTIVITY	C. DESCRIPTION	D. SIGNATURE

SECTION VII - INSPECTION RECORD				
A. TYPE AND DESCRIPTION OF INSPECTION	B. REFERENCE	C. DATE COMPLETED	D. ACTIVITY	E. SIGNATURE

OPNAV 4790/135 (1-84) Page 3 of 4 Pages

Figure 13. Example of Module Service Record (OPNAV 4790/135) (Page 3). - Continued

SECTION VIII - MISCELLANEOUS / HISTORY	
A. DATE	B. REMARKS

SECTION IX - EXCEEDANCE			
A. EXCEEDANCE	B. LEVEL	C. REMARKS	D. SIGNATURE

OPNAV 4790/135 (1-84) Page 4 of 4 Pages

Figure 13. Example of Module Service Record (OPNAV 4790/135) (Page 4). - Continued

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(See Instructions - Reverse Side)

1. DOCUMENT NUMBER	2. DOCUMENT TITLE
MIL-STD 2172(AS)	Aeronatuical Equipment Service Record

3a. NAME OF SUBMITTING ORGANIZATION	4. TYPE OF ORGANIZATION *(Mark one)*
	☐ VENDOR
b. ADDRESS *(Street, City, State, ZIP Code)*	☐ USER
	☐ MANUFACTURER
	☐ OTHER *(Specify)* _____

5 PROBLEM AREAS

a. Paragraph Number and Wording

b. Recommended Wording

c. Reason/Rationale for Recommendation

6 REMARKS

7a. NAME OF SUBMITTER *(Last, First, MI)* – Optional	b. WORK TELEPHONE NUMBER *(Include Area Code)* – Optional
c. MAILING ADDRESS *(Street, City, State, ZIP Code)* – Optional	8. DATE OF SUBMISSION *(YYMMDD)*

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