

**AIRCRAFT  
CONDITION INSPECTION  
REQUIREMENTS**

**U.S. NAVY  
T-39G/N SABRELINER  
AIRCRAFT**



**LIST OF EFFECTIVE PAGES**

This document was prepared under the technical cognizance of Program Manager Air (PMA) 273, Naval Air Systems Command, Patuxent River, MD. Comments and recommendations pertaining to this document shall be submitted IAW the terms of the applicable contract.

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**T-39G/N**  
**AIRCRAFT CONDITION INSPECTION SPECIFICATION**  
**CHANGE REQUEST/DISCREPANCY NOTIFICATION FORM**

1. SUBMITTED BY:	2. ORGANIZATION/COMPANY
3. ACI SPECIFICATION BASIC DATE	4. ACI SPECIFICATION CHANGE NO. & DATE
5. DESCRIPTION OF CHANGE REQUEST OR DISCREPANCY	
6. SIGNATURE	7. DATE
FORWARD TO: PROGRAM MANAGER AIR 273 T-39G/N INTEGRATED PRODUCT TEAM 22581 SAUFLEY ROAD BLDG 3258 PATUXENT RIVER MD 20670	

This form may be used for this and any future revisions.

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## SECTION 1 GENERAL INSTRUCTIONS

### 1.1 SCOPE

- a. This specification establishes the Aircraft Condition Inspection (ACI) requirements for the U.S. Navy T-39G/N Sabreliner aircraft.

#### 1.1.1 GENERAL

- a. For the purpose of this specification, logistics management and in-service engineering functions are located within Program Manager Air (PMA) 273 at Patuxent River, Maryland. The ACI requirements defined herein provide for airframe inspection, defect correction, and preventive maintenance. The ACI requirements for aircraft subject to this process are the minimum requirements, formulated and established to the depth required to ensure reliability and operational availability of the aircraft for the duration of the established service phase and provide intermediate support of total service life, commensurate with safety requirements and reasonable economic considerations. The requirements include, but are not limited to:

- (1) A thorough and comprehensive inspection of selected aircraft structure, flight essential systems, and flight critical components by appropriate inspection methods with repair as required to ensure serviceability until the next ACI induction. This includes all 48 and 60 month requirements of NA-62-1224 Chapter 5.
- (2) Replacement of time change items in accordance with (IAW) designated operational limitations for items assigned to the ACI.
- (3) Adjustments, checks, tests, repairs, inspections, component rework, preventive maintenance, and the rework procedures coincidental thereto IAW applicable directives and publications.

#### 1.1.2 CONTENTS

- a. Section 1 of this specification provides general requirements relative to the purpose and scope of ACI, specification revision information, ACI intervals,

definitions of the terminology of ACI, and a listing of the maintenance publications, documents, and directives required to perform ACI of the T-39G/N aircraft.

b. Section 2 of this specification contains general and specific rework requirements, standards, guidelines, instructions, inspections, tests, and rework to be complied with as an item of scheduled maintenance at the specified rework interval or time limitation. At completion of all such repair and rework, the aircraft and its accessories/components shall be functionally flight checked IAW Section 3.

(1) The scheduled maintenance requirements prescribed in this specification comprise the minimum requirements necessary to ensure the timely discovery and correction of actual and/or anticipated defects based on the aircraft class and intended use. Compliance with these requirements is mandatory.

(2) Unscheduled maintenance requirements are those requirements which cannot be directly related to any scheduled requirements. These are only discovered as an incidental result of the following functions which are accomplished as a part of and during the scheduled inspection:

- (a) review of aircraft logbooks and records
- (b) the operational/functional testing of systems
- (c) inspection of the aircraft and its components during ACI.

c. Section 3 of this specification provides the actions to be performed at the completion of ACI relative to:

(1) final processing which includes weight and balance, Logs and Records, and completing equipment inventory.

(2) performance of Functional Check Flight.

(3) Government acceptance processing.

d. Section 4 of this specification describes the engineering reports which shall be submitted no later than thirty (30) days subsequent to Government

acceptance of each aircraft completing ACI. These include:

- (1) Noted But Not Corrected (NBNC) Report.
- (2) Non-Destructive Inspection (NDI) Reports.
- (3) Aircraft Maintenance/History Summary (MHS) Report.
- (4) Maintenance Requirements Review Report (MRRR).

### **1.1.3 REVISION INFORMATION**

- a. Recommendations for additions, deletions or changes to the requirements of this specification are invited and should be submitted to PMA 273 via the Cognizant Government Representative (if applicable) and/or IAW the terms of the applicable contract.
- b. All revisions and changes to this document shall be prepared and approved by PMA 273 prior to promulgation.

### **1.2 ACI INTERVALS/STRUCTURAL SERVICE LIFE LIMITS**

- a. The interval between ACIs for the T-39G/N aircraft is 48 operational service months, however, the U.S. Navy has authority to direct earlier, or to delay, inspection performance.
- b. Service intervals, life limits, and time-interval removal/rework requirements of aircraft system and airframe components shall be IAW Federal Aviation Administration (FAA) and/or Original Equipment Manufacturer (OEM) direction and guidance for private/commercial North American Aviation 265-40 (T-39N equivalent) and 265-60 (T-39G equivalent) aircraft unless the U.S. Navy has directed otherwise.
- c. In the event of any conflict between FAA and OEM requirements, the FAA requirements shall take precedence. In the event of any conflict between U.S. Navy and OEM requirements, or between U.S. Navy and FAA requirements, the U.S. Navy requirements shall take precedence.

## 1.3 DEFINITIONS/ACRONYMS

- a. The purpose of this paragraph is to establish a mutual basis of communication to avoid misinterpretation and distortion of the terminology, and therefore, the intent of the requirements contained in this document.
- b. This terminology is defined in view of the maintenance and rework requirements of this document.
- c. Terminology not defined in this paragraph and used in this document shall be defined IAW COMNAVAIRFORINST 4790.2 series and interpreted in the context of the requirements of this document.
- d. Generally accepted interpretations or colloquial usage of terminology shall be unacceptable rationale for any deviation from the definitions of this document.

### 1.3.1 DEFINITIONS

**Abrasion:** The wearing away of material by rubbing or scraping. Synonymous with *chafing*.

**Accessible:** Areas exposed by the removal of non-permanent fasteners, access doors, panels, fairings, etc., or other disassembly required by a maintenance requirement which does not involve destructive disassembly unless otherwise specified.

**Aircraft Condition Inspection (ACI):** Depot level aircraft inspection and maintenance accomplished at the specified ACI interval.

**Airframe:** The structural components, including the framework and skin, of such parts as the fuselage, empennage, wings, control surfaces, landing gear (minus wheels and tires) and engine mounts.

**Airframe Accessories:** The items of equipment that are required for operation of the aircraft and that cannot be considered an integral part of the airframe or engine, such as wheels, brakes, hydraulic equipment, fuel system, de-icing equipment, anti-icing equipment, and other items not an integral part of the airframe, regardless of whether attached to the engine or airframe.

**Assembly:** Any combination or number of parts or subassemblies joined together to perform a specific function.

**Attachment:** A part, subassembly, or assembly designed for use in conjunction with another assembly, unit, or set that contributes to the effectiveness thereof by extending or varying the basic function of the assembly or set.

**Calibrate:** To determine and make required corrections in calibration standards or Precision Measuring Equipment (PME) used in precise measurement or to repair, adjust, and align equipment so that it functions with assigned tolerances; may consist of the comparison of two instruments, one of which is certified calibration standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the other instrument being compared with the certified calibration standard.

**Chafing:** The wearing away of material by rubbing or scraping. Synonymous with *abrasion*.

**Check:** To compare the characteristics of an item with established standards.

**Check Flight, Functional:** Airborne operational test performed to determine whether the airframe, power plant, accessories, and other items of equipment are functioning IAW predetermined standards when subjected to the intended operating environment.

**Checkouts:** A sequence of functional, operational, and calibration tests to determine the condition and status of a system or element thereof.

**Cleanliness:** The state of being free from impurities, impediments, and foreign matter not specified to be applied to the surface in question.

**Component:** A part or any combination or number of parts or subassemblies joined together to perform a specific function.

**Composite Material:** A material composed of two or more different constituents, the combination of which results in a product superior in some mechanical properties to any of its constituent parts.

**Concurrent Component Rework:** The removal of a defective component from an aircraft, repair of that item concurrent with ACI processing of the aircraft, and reinstallation of that item on the same aircraft.

**Condition:** To inspect for (condition) as used herein implies a visual examination to determine the existence of external damage and defects that could render the article unacceptable for continued use.

**Configuration Identification:** The current approved or conditionally approved technical document for a configuration item as set forth in specifications, drawings, and associated lists and documents referenced therein.

**Corrosion:** An action or process, which destroys metal by chemical or electrochemical action and converts it into an oxide, hydroxide, or sulfate compound.

**Crack:** A break, fracture, crevice, or separation in the structure of a part.

**Crazing:** Fine cracks, which may extend in a network, in plastic material (i.e., windshields, canopy glass, windows, etc.).

**Damage:** Impairment of an aircraft/item/part by a physical force.

**Defect:** Any non-conformance of a unit or part with specified requirements. Synonymous with *discrepancy*.

**Defect, Critical:** A defect that constitutes a direct hazardous or unsafe condition or as determined by experience and judgment could conceivably become so, relative to its deleterious effect on the prime intended functions, safety of flight, or mission capability of the aircraft or its operating personnel. The word "direct" means that the defect must cause the failure, by itself, and not in combination with other defects. In other words, the defect must independently be able to create the adverse effect on operating safety. Additionally, in order for a defect to be "direct" the resulting failure must occur immediately upon demand for the item's function. The phrase "adverse effect" is meant to imply that the direct consequences of the defect are extremely serious or possibly catastrophic and most probably will cause the loss of an aircraft or death or major

injury to personnel. The phrase "operating safety" is meant to encompass the flight regime, which is defined IAW OPNAVINST 3750.6.

**Defect, Major:** A defect, other than critical, that could result in failure or materially reduce the usability of the unit or part for its intended purpose.

**Defect, Minor:** Any nonconformance of a unit or part with specified requirements that does not impact the prime intended function, safety or flight, or mission capability of the aircraft or its operating personnel.

**Defective:** The state of possessing a deviation from specified requirements.

**Deformation:** Any disfiguration or change in form or shape from the intended design configuration.

**Delaminating:** A physical break of the bond between the binder material and any two or more plies of laminated panels fabricated of plastic, metal, composite material, or other material.

**Deterioration:** The breakup, eating away, or decomposition of a substance by the action of weather, corrosion, or other environmental conditions.

**Discrepancy:** Any non-conformance of a unit or part with specified requirements. Synonymous with *defect*.

**Distortion:** Any disagreement or change in form or shape from the intended design configuration resulting from a twisting or torsional action.

**Disturbed System:** A system whose installed integrity has been interrupted, broken, or interfered with to the extent that system installation and operation cannot be assured without verification by a functional or operational check or test.

**Economical Repair:** Repair that can be accomplished using the economical repair criteria of NAVSUP 4400.14 or significantly equivalent commercial guidance.

**Erosion:** The set of wearing away by corrosion, friction, scraping or rubbing.

**Evidence:** Factual data which establishes the possibility of an existing or impending unsatisfactory condition.

**Equipment:** A collection of items consisting of parts, subassemblies, components, assemblies, units, groups, sets, subsystems and systems,

**Examination:** An element of inspection consisting of investigation, without the use of special laboratory appliances or procedures, supplies and services to determine conformance to those specified requirements that can be determined by such investigations. Examination is generally non-destructive.

**Exterior Surface:** That part of the airframe exposed to the elements when in a "clean" flight configuration, including wing and stabilizer control surface wells (aileron, flap, rudder, and elevator). Does not include landing gear structure, wheel wells, or areas exposed by deflection of slats, vanes, speed brakes, wing folds, etc., or extension of landing gear.

**Failure:** The inability of an item to perform within previously specified limits.

**Fraying:** The wearing away by rubbing, usually of woven, braided, or stranded material, which results in a worn or ragged appearance.

**General Electrical/Electronic/Wiring Circuitry Verification:** A test of system wiring and wiring components to verify ability of aircraft wiring to perform its intended function when mated to a set of operational black boxes. This may be accomplished by either of the following procedures: functional or operational test of the system using existing aircraft black boxes, if operable; or slave units, if available. Test shall be limited to the depth required to demonstrate adequacy of system wiring continuity and insulation resistance test to ensure adequacy of wiring to perform its intended circuitry function.

**Government Acceptance:** For the purposes of processing and delivering reports required as part of aircraft ACI, Government Acceptance shall be noted as the point of completion of a successful functional check flight.

**Groove:** Any narrow furrow, depression, or slit on the surface of a part.

**Group:** A collection of units, assemblies, or subassemblies that is a subdivision of a set or system but is not capable of performing a complete operational function (see *system*).

**Inclusion:** A void or discontinuity in the molecular structure of metal.

**Inspect:** The critical examination of an item for existing or impending functional failure(s) or defect(s).

**Inspection:** To compare the characteristics of an item with established standards. Inspection includes, but is not limited to, sight, hearing, smell, touch, taste, and other investigations simple physical manipulation, gauging, and measurement. The process may require partial disassembly of the item.

**Inspection, Conditional:** An unscheduled inspection required as a result of an over limit situation.

**Inspection, Special:** A scheduled inspection with a standard interval other than daily, calendar/phased, turnaround or ACI.

**Major Structural Damage:** Damage which requires removal and repair or replacement of airframe structural members.

**Manual Change Release (MCR):** U.S. Navy issued change notice, usually minor in nature, to a Navy technical manual, or adding Navy-unique requirements into an OEM manual.

**Modify:** To alter in appearance, performance, function, position, or effect.

**Nick:** Any notch, slit, cut, or chip on the surface of a part.

**Overhaul, Component:** Rework performed on a component which includes disassembly sufficient to inspect all constituent parts, followed by cleaning, repair, replacement of consumable and defective parts as required, servicing, reassembly and checks/tests IAW applicable overhaul specifications, instructions and procedures.

**Part:** One piece, or two or more pieces joined together, not normally subject to disassembly without destruction of designed use.

**Pitting:** Any small, approximately circular indentation, depression, hollow, or scar in the surface of a part; generally the result of corrosion or erosive action.

**Quality Assurance:** A planned program of actions necessary to provide confidence that processing conforms to established standards.

**Ready For Issue (RFI):** The condition of an item in which all requirements of repair, check/test, rework or modification, as applicable, have been accomplished, making it capable of performing the function or requirements for which originally designed or later modified as directed by approved technical directives. Synonymous with *Serviceable*.

**Refinish:** To restore an existing surface finish without removal of all the existing finishes. The process of refinishing includes cleaning the affected area to remove all loose and scaling paint or other finishing material, soil, and contaminants; feather-edging the remaining original finish to a smooth surface; and applying new finish coatings (including chemical conversion coatings).

**Refurbish:** To repair and renovate aircraft interior furnishings to acceptable standards of appearance and comfort consistent with the assigned mission of the aircraft. Includes replacement of deteriorated, worn, or damaged furnishings.

**Reinstall:** The reinstallation of an originally removed part or component in its former position to accomplish its former function.

**Reliability:** The probability the material will perform its intended function for a specified period under stated conditions.

**Remove:** The physical separation of an item from its designed position. Removal is normally required to facilitate a maintenance action on the item or on the area of items exposed by the removal. Implicit in the requirement for removal is the requirement for reinstallation.

**Repair:** Whatever is required to restore an item to serviceable status, including preparation, disassembly, inspection, fault correction, and replacement of parts, adjustment, reassembly, calibration, and tests.

**Repair as Required:** The unscheduled repair of discrepant items when the repair is technically feasible or economically justified and is based on inspections and tests or authorized directives.

**Rework Activity:** The industrial establishment, either government or commercial, designated by the Naval Air Systems Command or Department of Defense as having depot maintenance and responsibility for rework of a particular model aircraft or aircraft components.

**Scheduled Removal Component (SRC):** Components whose overhaul or replacement schedule is established as a function of service use (flight hours, unit operating time or calendar time, cycles, events or OSP intervals), and formalized IAW the requirements of CNAFINST 4790.2 series and NAVAIRINST 4790.3. See also *Time Compliance Scheduled Component*.

**Scuff/Sand/Over Paint:** The complete removal of all paint oxide from the exterior paint system by scuff sanding, necessary treatment, primer and replication of the paint top coat.

**Security Inspection:** An inspection to verify that an item is positively and safely attached and secured in the approved manner specified by applicable drawings and specifications.

**Selective Strip and Paint:** The removal of the paint system from a specified area of the exterior of the aircraft, necessary treatment, primer and replication of the specified paint system.

**Service:** The performance of any act (other than corrective maintenance) required to maintain an item of equipment in operating condition, such as lubrication, fueling, oiling, cleaning, etc., but does not include periodic replacement of parts or any corrective maintenance task.

**Serviceable:** The condition of an item in which all requirements of repair, check/test, rework or modification, as applicable, have been accomplished, making it capable of performing the function or requirements for which originally

designed or later modified as directed by approved technical directives. Synonymous with *Ready For Issue (RFI)*.

**Service Life Expectancy:** The projected operational usefulness of an aircraft component in terms of operating time, cycles, or calendar age as determined through engineering estimates or actual operational experience. The time or age figure (i.e., 1000 hours, 36 months, etc.) used in relation to service life expectancy represents the point at which continued use of the component would create a high probability of failure within a short period of time.

**Set:** A unit or units and necessary assemblies, subassemblies, and parts connected or associated together to perform an operation function.

**Specified:** Used to define a definite amount, operation, or limitation, which has been established and is contained in applicable directives.

**Structure:** Structural members are those primary and secondary pieces of semi-monocoque construction, spars, longerons, beams, transverse ribs, stringers, intercostals, frames, skins, chem-milled aluminum alloy stressed skins, and honeycomb sandwich panels that form the integral parts of the structural groups. The major structural groups of the aircraft are the doors, fuselage, nacelles/pylons, stabilizers, windows, and wings. Included in the structural groups are flaps, ailerons, slats, elevators, and rudder. Structure does not include landing gear and radomes.

**Subassembly:** Two or more parts, which form a portion of an assembly or a unit, replaceable as a whole, but having a part or parts, which are individually replaceable.

**Substitute Items:** Two or more items possessing such functional and physical characteristics as to be capable of interchangeability for particular applications without alteration of the items themselves.

**System (Electrical-Electronics):** A combination of two or more parts, assemblies, or sets generally physically separated when in operation, and such other assemblies, subassemblies, and parts interconnected as necessary to perform an operational function or functions.

**System (General):** A combination of parts, assemblies, and sets joined together to perform a specific operational function or functions.

**Test:** Evaluation of aircraft items (e.g., airframe, power plant, accessories, equipment, equipage, etc.) under specified conditions to verify functional conformance to predetermined requirements IAW applicable directives.

**Test Bench:** Shop equipment used to conduct functional tests or checks.

**Test, Functional:** The quantitative evaluation of a system or component to assure its ability to perform over the full operating range as designed and within specified limits. Test equipment is normally used to provide precise inputs and to make measurements.

**Test, Operational:** The exercise of a system or component, within its operating modes, to assure operation without interference and in proper direction and sequence of intended performance. Normal operation is verified through observation of overall performance without resort to measurement.

**Time Compliance Scheduled Component:** Components whose overhaul or replacement schedule is established, usually by the OEM or FAA, as a function of service use (flight hours, unit operating time or calendar time, cycles, events or OSP intervals). See also *Scheduled Removal Component*.

**Touch Up:** The action for a localized area of the aircraft exterior, which involves "feathering" of the adjacent paint, surface treatment, primer and application of a topcoat.

**Unauthorized Installations:** Any modification or addition of material or components to an aircraft not authorized by configuration publications, FAA Supplemental Type Certificate, or by a formal NAVAIR Technical Directive (TD).

**Unit:** An assembly or any combination of parts, subassemblies, and assemblies mounted together normally capable of independent operation in a variety of situations.

## 1.3.2 ACRONYMS

**ACC** (Aircraft Controlling Custodian)

**ACI** (Aircraft Condition Inspection)

**DER** (Designated Engineering Representative)  
**FAA** (Federal Aviation Administration)  
**F.S.** (Fuselage Station)  
**IAW** (In Accordance With)  
**IFR** (Instrument Flight Rules)  
**LH** (Left Hand)  
**MCR** (Manual Change Release)  
**MED** (Maintenance Engineering Directive)  
**MRRR** (Maintenance Requirements Review Report)  
**NA** (North American - used in reference to commercial Sabreliner manuals)  
**NATOPS** (Naval Air Training and Operations Procedures Standardization Program)  
**NAVAIR** (Naval Air Systems Command)  
**NAVSAFECEN** (Naval Safety Center)  
**NBNC** (Noted But Not Corrected)  
**NDI** (Non-Destructive Inspection)  
**NFPA** (National Fire Protection Association)  
**PMA** (Program Manager Air)  
**PME** (Precision Measuring Equipment)  
**RFI** (Ready For Issue)  
**RH** (Right Hand)  
**SRC** (Scheduled Removal Component)  
**SRM** (Structural Repair Manual)  
**SSB** (Sabreliner Service Bulletin)  
**TD** (Technical Directive)  
**TDSA** (Technical Directive Status Accounting)  
**T/M/S** (Type/Model/Series)  
**TYCOM** (Type Commander)  
**W.S.** (Wing Station)

## 1.4 MAINTENANCE REFERENCES

The following documents of the issue in effect as of the issue date of this specification form a basic part of this specification.

### 1.4.1 STANDARDS

#### 1.4.1.1 MILITARY STANDARDS

##### REFERENCE LISTING

##### TITLE

MIL-PRF-23377	Primer Coatings, Epoxy, High Solids
MIL-PRF-83282	Hydraulic Fluid, Petroleum Base;

## Aircraft, Missile, and Ordnance

MIL-STD-2161	Paint Schemes and Exterior Markings for U.S. Navy and Marine Corps Aircraft
MIL-STD-765	Compass Swinging, Aircraft, General Requirements for

### 1.4.1.2 OTHER STANDARDS

#### REFERENCE LISTING

#### TITLE

NFPA 55	Standard for the Storage, Use, and Handling of Compressed Gases and Cryogenic Fluids in Portable and Stationary Containers, Cylinders, and Tanks
NFPA 407	Standard for Aircraft Fuel Servicing

### 1.4.2 CNO INSTRUCTIONS

#### REFERENCE LISTING

#### TITLE

OPNAVINST 3710.7	General Flight and Operating Instructions.
OPNAVINST 3750.6	Naval Aviation Safety Program
OPNAVINST 5442.4	Aircraft Material Condition Definitions, Mission-Essential Subsystems Matrices (MESMS), and Mission Descriptions

### 1.4.3 CNAF INSTRUCTIONS

#### REFERENCE LISTING

#### TITLE

COMNAVAIRFORINST 4790.2	The Naval Aviation Maintenance Program (NAMP)
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**1.4.4 NAVSUP INSTRUCTIONS****REFERENCE LISTING****TITLE**

NAVSUP 4400.14 Navy Repairables Management Manual

**1.4.5 NAVAIR INSTRUCTIONS****REFERENCE LISTING****TITLE**

NAVAIRINST 3710.1 Contractor's Flight and Ground Operations

NAVAIRINST 4790.3 Aeronautical Time Cycle Management Program

NAVAIRINST 10340.3 Maintaining Quality and Eliminating Contamination of Aircraft Fuels

**1.4.6 NAVY PUBLICATIONS****REFERENCE LISTING****TITLE**

NAVAIR 01-1A-1 General Manual for Structural Repair

NAVAIR 01-1A-8 Structural Hardware

NAVAIR 01-1A-16 Nondestructive Inspection Methods, Basic Theory

NAVAIR 01-1A-17 Aviation Hydraulic Manual

NAVAIR 01-1A-20 Aviation Hose and Tube Manual

NAVAIR 01-1A-35 Inspection and Repair of Aircraft Integral Tanks and Fuel Cells

NAVAIR 01-1A-503 Maintenance of Aeronautical Anti-Friction Bearings

NAVAIR 01-1A-505 (series) Installation and Repair Practices, Aircraft Electric and Electronic Wiring

NAVAIR 01-1A-509 Aircraft Weapons Systems Cleaning and Corrosion Control

NAVAIR 01-1B-40	Weight and Balance Data Handbook
NAVAIR 01-1B-50	U.S. Navy Weight and Balance Control
NAVAIR 01-60GBE-1	NATOPS Flight Manual, Navy Model T-39G/N Aircraft
NAVAIR 01-60GBE-1F	NATOPS Functional Check Flight Checklist, Navy Model T-39G/N Aircraft
NAVAIR 05-15-17	Flux Gate Compass System, Gyro Stabilized, Depot Level Maintenance Overhaul Instructions Technical Manual
NAVAIR 17-15BAD-1	Navy Aircraft Storage Batteries; Service and Maintenance Instructions

## 1.4.7 PMA 273 DOCUMENTS

### 1.4.7.1 MAINTENANCE ENGINEERING DIRECTIVES

#### REFERENCE LISTING

#### TITLE

MED T39-05-04	T-39G (Post AFC 638) Nose Wheel Steering System Feedback Potentiometer Monitor Switch Adjustment
MED T39-07-08	T-39N Aircraft Aileron Control Cable Rigging and Tensioning
MED T39-07-13	T-39 Aircraft Pitot-Static System Inspection and Leak Check
MED T39-07-19	T-39 Landing Gear Position Indicating and Warning Systems Operational Check Procedure
T-39 MED 15	Navy Unique Periodic Inspection Requirements

### 1.4.7.2 MANUAL CHANGE RELEASES

#### REFERENCE LISTING

#### AFFECTIVITY

PRT39-08-0001	NA-62-1224
PRT39-08-0002	NA-62-1224
PRT39-10-0001	NA-62-1208
PRT39-10-0002	NA-62-1224

**1.4.8 COMMERCIAL MANUALS****REFERENCE LISTING****TITLE**

NA-62-1208	Sabreliner Illustrated Parts Catalog
NA-62-1224	Sabreliner Maintenance Manual
NA-66-1032	Sabreliner Structural Repair Manual
NA-67-103	Sabreliner Wiring Diagram Manual
NA-72-184	Sabreliner Wiring Diagram Manual
SR-76-023	Sabreliner Corrosion Control Manual
SR-84-002	Sabreliner Wire List Manual
SRM-102	Saint Gobain Performance Plastics
-	Micro Circuit Co. Application of Anti-Static Paint (with RSE-1RA-2 additive)
24-34-00	MarathonNorco Aerospace Operating and Maintenance Manual for Nickel-Cadmium Aircraft Batteries
43510	Pratt & Whitney JT-12A Maintenance Manual

**1.4.9 DRAWINGS**

NAVAIR Drawing No. (30003) 4011AS100  
Sabreliner Drawing No. SKE02080

**1.4.10 FORMS****REFERENCE LISTING****TITLE**

DD Form 250	Material Inspection and Receiving Report
DD Form 365-1	Chart A - Basic Weight Checklist Record
DD Form 365-2	Form B - Aircraft Weighing Record

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DD Form 365-3	Chart C - Basic Weight and Balance Record
DD Form 365-4	Weight and Balance Clearance Form F - Transport
OPNAV Form 4790/112	Aircraft Inventory Record Shortages
OPNAV Form 4790/28A	Scheduled Removal Component Card
OPNAV Form 4790/60	VIDS/MAF
OPNAV Form 4790/65	Standard Depot Level Maintenance Special Work Request

## 1.5 AIRCRAFT IDENTIFICATION CROSS REFERENCE

<b>Aircraft Identification Cross Reference</b>		
<u>SQUADRON NOSE NO./</u> <u>A/C NO.</u>	<u>USN SERIAL NO.</u>	<u>SABRELINER SERIAL NO.</u>
<b>T-39G</b>		
318/18	160053	306-104
319/19	158844	306-055
320/20	159365	306-070
322/22	160054	306-105
324/24	160055	306-106
325/25	159364	306-069
<b>T-39N</b>		
301/01	165509	282-009
302/02	165510	282-081
303/03	165511	282-029
304/04	165512	282-002
305/05	165513	282-066
306/06	165514	282-030
307/07	165515	282-072
308/08	165516	282-090
309/09	165517	282-061
310/10	165518	282-077
311/11	165519	282-019
312/12	165520	282-032
313/13	165521	282-094
315/15	165523	282-020

## SECTION 2 ACI REQUIREMENTS

**2.1 GENERAL.** This section contains general and specific preparation, inspection, rework, and test requirements to be accomplished by the reporting custodian and the depot level rework activity responsible for the ACI of the T-39G/N aircraft. Each requirement shall be complied with as an item of scheduled maintenance at each ACI unless otherwise specified. Component nomenclature used in this specification is in general agreement with that used in the aircraft technical manuals. Inspection requirements for items identified by nomenclature are applicable to the entire class of part numbers for that item unless explicitly specified otherwise. Part numbers listed in this section are for identifying the item for which a specific inspection exists. Inspection and examination when used in requirements are not intended to indicate the classification of personnel assigned to the task. The inspection, replacement or other maintenance actions required by this specification on specific equipment not installed on a particular T-39G/N aircraft shall be disregarded.

**2.2 GENERAL MAINTENANCE STANDARDS.** This paragraph contains maintenance requirements and related instructions applicable to the rework of the aircraft weapons system. These standards do not establish inspection requirements. The information in this paragraph is necessary knowledge prior to the actual induction of the aircraft into ACI.

**2.2.1 REWORK PROCEDURES.** ACI procedures shall comply with the latest revision of the specifications, publications, bulletins, instructions, FAA regulations, advisory circulars, and other applicable Government directives, drawings, publications, etc., as required.

**2.2.2 APPLICABLE DOCUMENTS.** Documents for particular equipment shall be determined by referring to the preceding Maintenance References paragraph and applying the specific serial/model number to the Sabreliner Maintenance Manual, Illustrated Parts Catalog, Structural Repair Manual, Corrosion Control Manual, Wiring Diagram Manual, and others. Particular attention shall be given to the unique requirements found in PMA 273 documents.

**2.2.3 REWORK PROCEDURES APPROVAL.** Rework procedures for the accomplishment of rework requirements shall be subject to inspection by the Cognizant Government Representative and/or the PMA.

**2.2.4 LOGBOOK ENTRIES AND INSERTIONS.** Other logbook entries or page insertions shall be recorded in the aircraft logbook as specified by the requirements of this specification and as specifically directed by the Cognizant Government Representative and/or the PMA.

**2.2.5 ORGANIZATIONAL LEVEL TIME COMPLIANCE SCHEDULED COMPONENT INSPECTION/REMOVAL/REPLACEMENT CRITERIA.** Components having scheduled inspection/removal/replacement intervals which shall exceed the specified scheduling time allowance prior to return of the aircraft to the reporting custodian shall have the appropriate action performed in conjunction with the ACI effort. However, it is the responsibility of the reporting custodian to take such actions prior to delivering the aircraft to the depot for ACI as necessary to preclude or reduce such occurrences. See paragraph 2.3.1. Explosive devices used in safety and survival systems or equipment shall be removed and replaced IAW time limits specified in OEM/FAA/NTSB direction.

**2.2.6 REPLACEMENT OF TIME COMPLIANCE SCHEDULED COMPONENTS.** Scheduled time change components that are removed, either prematurely prior to expiration of the specified replacement interval for repair, authorized modification, or compliance with FAA, OEM, or USN technical directive, or which are removed in compliance with paragraph 2.2.5 above, shall be replaced with FAA certified serviceable or, in the case of Navy-unique items, government certified serviceable components.

**2.2.7 AIRCRAFT SPECIAL INSPECTION.** Applicable requirements (Daily, Servicing, 14 Day, and 210 Day) of T-39 MED 15 shall be accomplished during ACI just prior to the Functional Check Flight and the return ferry flight.

**2.2.8 UNSCHEDULED ACCESSORY AND COMPONENT REWORK CRITERIA.** Repairable accessories and components not otherwise scheduled for removal/replacement shall be subject to rework/replacement only on a discrepancy basis, (i.e., determined defective by in-place operational checks/tests and inspection). Items removed on a discrepancy basis shall receive repair IAW applicable FAA regulations, Sabreliner Maintenance Manual NA-62-1224, and other applicable OEM drawings and specifications as required.

**2.2.9 ECONOMICAL REPAIR DETERMINATIONS.** Items determined to be non-repairable, or with a repair cost estimated to exceed 80 percent of the new procurement price of the item from the OEM or other FAA certified vendors, should be replaced with an authorized serviceable item. Other factors such as availability

and lead time shall be considered, and program office concurrence shall be obtained.

## **2.2.10 GROUND HANDLING OPERATIONS AND SAFETY PRECAUTIONS.**

Personnel involved in the ground handling and operation of an aircraft shall be thoroughly familiar with the emergency procedures of the following referenced documents:

**2.2.10.1 AIRCRAFT FUEL OPERATIONS.** The instructions, procedures, and precautions of aircraft fueling operations shall be as specified in NA-62-1224, NFPA 407, and/or other FAA guidance.

**2.2.10.2 AIRCRAFT SERVICING.** Aircraft servicing, taxiing, towing, parking, jacking, moving, and hoisting shall be IAW NA-62-1224, OPNAVINST 3710.7, and any Navy-unique direction.

**2.2.10.3 GROUND OPERATION OF ENGINES.** Ground operation of engines shall be IAW OPNAVINST 3710.7 and NA-62-1224.

**2.2.11 STRUCTURAL REPAIRS.** All structural repairs shall be accomplished IAW NA-66-1032, NAVAIR 01-1A-1, applicable OEM approved drawings, FAA structural DER-approved special technical data, or Navy-unique direction.

**2.2.12 EXTENT OF CORROSION.** When corrosion is detected by an inspection requirement and the extent cannot be determined, the adjacent structure shall be disassembled (i.e., the skin shall be peeled back, fittings or other structural members removed to determine the extent of corrosion).

**2.2.13 PREVIOUS REPAIRS.** All previous repairs that are not authorized by, or do not meet the standards of quality, security, or strength of the applicable maintenance references, or which are not documented as Government- or DER-authorized, shall be brought to the attention of the PMA or the Cognizant Government Representative for disposition.

**2.2.14 MAJOR STRUCTURAL REPAIRS.** For repairs of a major nature exceeding the depth and intent of coverage of the applicable maintenance references, rework activities shall submit a detailed description of damage, method and details of recommended repair procedures, stress analyses, drawings and specifications to the PMA or the Cognizant Government Representative for review and approval. For repairs exceeding the depth and intent of coverage of applicable maintenance references, approval of repair method by a FAA DER (Structural)

or the aircraft OEM is a requirement. The OEM or DER shall ensure that the repair meets the minimum applicable FAA airworthiness requirements.

**2.2.15 INVALIDATED NDI REQUIREMENTS.** An NDI requirement of an area may be invalidated by a previous structural repair contained within that area. When a requirement or any portion cannot be accomplished due to a previous repair, the rework activity shall contact the PMA or the Cognizant Government Representative for disposition. Resulting changes to requirements shall be documented in the Maintenance History/Summary report.

**2.2.16 REPLACEMENT PARTS AND SUBSTITUTIONS.** Replacement parts and material substitutions shall be IAW applicable documents or directives. Replacement parts and substitute materials shall meet the minimum applicable FAA requirements for the particular installations. The rework activity shall notify the PMA prior to rework of the area in question. The rework activity shall demonstrate to the Cognizant Government Representative and/or the PMA the basic minimum replacement requirements are met.

**2.2.17 UNAUTHORIZED INSTALLATIONS.** All unauthorized installations or configurations shall be restored to an authorized configuration IAW applicable aircraft technical manuals or NAVAIR technical directives.

**2.2.18 EXCEPTIONS.** ACC authorized prototype configuration changes or special installations shall only be restored or reworked when specifically requested by the ACC and approved by the Cognizant Government Representative or the PMA, as applicable. Should any exception interfere with ACI or authorized work, the Cognizant Government Representative or ACC shall be consulted for disposition.

**2.2.19 DISTURBED SYSTEMS.** Aircraft systems that are disturbed so that the complete system installation, function, and operation cannot be assured shall receive a complete functional or operational check or test, as necessary, to verify proper installation, function, and operation. Flight control systems shall be re-rigged.

**2.2.20 DEFECTIVE BEARINGS.** Defective bearings (dry, rough, corroded, or otherwise unserviceable) shall be processed IAW NAVAIR 01-1A-503 and/or the aircraft OEM maintenance manual, and in a clean area apart from the hangar deck area.

**2.2.20.1 MAINTENANCE PRECAUTIONS.** To protect bearings from dirt, dust, moisture, cleaner, or other contaminants, the maintenance precautions of NAVAIR 01-1A-503 and/or the aircraft OEM maintenance manual shall be followed, with all bearing processing conducted in a clean area apart from the hangar deck when bearings have been removed from the aircraft.

**2.2.20.2 ABRASIVE MATERIAL.** Vapor blasting, vacuum blasting, sand blasting, or other uncontrolled application of abrasive material adjacent to or on exposed bearings is prohibited.

**2.2.20.3 STEAM AND CHLORINATED HYDROCARBONS.** Steam or chlorinated hydrocarbons shall not be utilized on bearings not removed from the aircraft.

**2.2.20.4 CORROSIVE CONTAMINATION.** Anti-friction bearings shall be immediately cleaned and re-lubricated IAW NAVAIR 01-1A-503 and/or the aircraft OEM maintenance manual following the inadvertent application of corrosive contaminants. Processing shall be conducted in a clean area apart from the hangar deck area.

**2.2.21 HYDRAULIC CONTAMINATION.** Hydraulic fluids in hydraulic systems shall be maintained IAW NA-62-1224 and NAVAIR 01-1A-17.

**2.2.22 REPAIR OF SYSTEM CONTROLS.** The repair or replacement of defective cables, rods, and turnbuckles shall be IAW NA-66-1032, and NA-62-1224.

**2.2.23 TEST EQUIPMENT.** Test equipment utilized in inspection requirements shall be that specified to perform the inspection or approved by the Cognizant Government Representative, and shall be within calibration limits when calibration is required. Hydraulic test stands shall have been inspected for contamination IAW NAVAIR 01-1A-17.

**2.2.24 STRUCTURAL HARDWARE.** The selection and usage of structural hardware shall be IAW NA-66-1032, NA-62-1224, NAVAIR 01-1A-1, NAVAIR 01-1A-8, or OEM/FAA DER/Navy-unique application drawings or direction.

#### NOTE

For the purpose of fastener installation, inaccessible areas are those areas in which it is impossible to reinstall the same type fastener (rivet, etc.) as installed at time of disassembly. Accessible areas are those

areas where removal of terminal boards, wire bundles, tubing, minor brackets or hoses shall provide a means of installing the original type fastener. Substitution of bucked type rivets with approved blind type fasteners shall be limited to inaccessible areas as defined and to areas having approved blind type fasteners installed at time of disassembly.

**2.2.24.1 TORQUE REQUIREMENTS.** Standard torque values shall be IAW NA-66-1032, NA-62-1224, or NAVAIR 01-1A-8 for all hardware affected by rework that requires torque and for which torque values are not specified explicitly.

**2.2.24.2 SLIP MARKS.** Slip marks shall be applied on all hardware affected by rework that requires torque stripes. If existing slip marks are misaligned or are not visible, the hardware shall be loosened, then properly re-torqued and slip marks applied.

**2.2.24.3 SELF-LOCKING NUTS.** The limitations and usage of self-locking nuts shall conform to the instructions contained in NA-66-1032, NA-62-1224, NAVAIR 01-1A-8, or AC 43.13-1B.

**2.2.24.4 SAFETY WIRING/COTTER PINNING.** All safety wiring/cotter pinning shall be IAW OEM manuals, FAA guidance, or Navy-unique direction.

**2.2.24.5 RIVETING.** All riveting shall conform to the practices and procedures of NA-66-1032, AC 43.13-1B, OEM/FAA DER/Navy-unique drawing, or NAVAIR 01-1A-8. Hard (bucked) rivets shall be used whenever use of these rivets does not require a drilled disassembly of skin or structure for installation.

**2.2.25 PIPE, TUBING, AND HOSE.** The repair, replacement, identification, fabrication, testing, and cleaning of pipe, hose, and tubing shall be IAW NA-62-1224, AC 43.13-1B, and/or NAVAIR 01-1A-20.

**2.2.26 TRANSPARENT PLASTICS.** The fabrication, maintenance, and repair of transparent plastic materials shall be IAW Sabreliner maintenance manuals, FAA approved commercial practices, or FAA DER approved procedures.

**2.2.27 REINFORCED PLASTICS.** The fabrication and repair of reinforced plastics shall be IAW NA-66-1032, FAA approved commercial practices, or FAA DER approved procedures.

**2.2.28 PROTECTIVE CAPS AND PLUGS.** Shall be immediately installed, IAW NAVAIR 01-1A-20, on fittings, hoses, and tubes opened during rework. Any item left open where contamination may have occurred shall be cleaned or flushed IAW applicable documents.

**2.2.29 NON-DESTRUCTIVE INSPECTION.** Non-destructive inspections or tests shall be performed to determine the material or structural condition of the aircraft when required IAW NA-66-1032, AC 43.13-1B, or NAVAIR 01-1A-16.

**2.2.30 RADOMES AND ANTENNA COVERS.** The assessment of damage, repair and electrical testing of radomes and antenna covers shall be IAW NA-66-1032.

**2.2.31 ELECTRICAL SYSTEMS.** The identification, installation, and maintenance of electrical and electronic wiring shall be IAW NA-62-1224, A.C. 43.13-1B, NAVAIR 01-1A-505 series, or applicable FAA/OEM service bulletins or Navy Technical Directive.

**2.2.32 PACKINGS, GASKETS, AND SEALS.** The use of packings, gaskets, and seals shall be IAW NA-66-1032, SR-76-023, and other Sabreliner specifications, as applicable.

**2.2.33 WEIGHT AND BALANCE.** Weight and balance control of aircraft shall be IAW NA-62-1224, CNAFINST 4790.2 series, NAVAIR 01-1B-40, and NAVAIR 01-1B-50.

**2.2.34 USAGE/HANDLING OF GASES.** Usage and handling of gases shall comply with the precautionary instructions of NFPA 55. All pneumatic systems and applicable self-contained components shall be serviced with dry nitrogen conforming to NA-62-1224 and applicable FAA standards.

**2.2.35 CEMENTS, SEALANTS, AND COATINGS.** The preparation, application, selection of cements, sealants, and coatings shall be IAW NA-66-1032, SR-76-023, and NA-62-1224.

**2.2.36 ABRASIVE MATERIALS.** The use of abrasive materials to clean, buff, polish, and grind surfaces shall be IAW NA-66-1032, SR-76-023, and NA-62-1224.

## 2.3 INDUCTION INTO ACI

This paragraph contains the responsibility of the reporting custodian prior to inducting the aircraft; procedures for conducting the aircraft equipment inventory; procedures for performing the aircraft records analysis; and finally, the procedures for preservation.

### 2.3.1 REPORTING CUSTODIAN RESPONSIBILITIES PRIOR TO ACI

**2.3.1.1 ACI SPECIAL WORK REQUEST.** One month prior to scheduled induction date prepare and submit a Special Work Request, OPNAV Form 4790/65 or equivalent, to the rework activity, with one copy each to the TYCOM, the ACC, and PMA 273.

**2.3.1.2 LOOSE GEAR.** Remove all loose gear not required during rework processing, and if applicable, annotate the inventory log.

**2.3.1.3 LOGS AND RECORDS.** Deliver with the aircraft up-to-date aircraft and engine logbooks, inventory logs, the aircraft discrepancy book, the last 10 yellow sheets, six-month historical VIDS/MAF file and necessary aircraft records including weight and balance records IAW COMNAVAIRFORINST 4790.2 series. Verify that all entries are current as of the date of delivery. Ensure that any scheduled removal components (SRCs) identified with OPNAV Form 4790/28A in the aircraft logbook are inventoried and verified against installed equipment.

**2.3.1.4 SUPPORT EQUIPMENT.** Deliver with the aircraft the support equipment required on-board for routine missions.

**2.3.1.5 CLASSIFIED EQUIPMENT.** Remove all classified equipment unless ferry flight range or weight and balance limits dictate otherwise. Record all classified equipment delivered or removed in aircraft logbook.

**2.3.1.6 MISSION EQUIPMENT.** Deliver mission equipment necessary for IFR flight IAW OPNAVINST 5442.4.

**2.3.1.7 UNAUTHORIZED CONFIGURATION.** Deliver aircraft in a configuration authorized by aircraft configuration publications with only verified NAVAIR technical directives or ACC approved special installations incorporated. Any other deviations shall be authorized by the ACC.

**2.3.1.8 TIME COMPLIANCE COMPONENTS.** Inspect, remove, or replace, as appropriate, any time compliance components listed in NA-62-1224, Chapter 5, or identified by OPNAV Form 4790/28A, that will not have sufficient operating time remaining to satisfy ACI functional check flight and ferry flight time to and from the rework activity.

**2.3.1.9 DISCREPANCIES.** Clear aircraft of all discrepancies which are correctable by organizational and intermediate levels of maintenance IAW the guidance provided by CNAFINST 4790.2.

**2.3.1.10 NON-FLYABLE AIRCRAFT.** Ensure aircraft is flyable at induction IAW NAVAIR 01-60GBE-1 flight manual. Separate negotiation with PMA via the applicable ACC shall be required for the induction of non-flyable aircraft.

**2.3.1.11 SPECIAL INSPECTION.** Provide a list stating when each Special Inspection is due including those required by T-39 MED 15.

**2.3.1.12 FERRY FLIGHT.** Record discrepancies noted during ferry flight on OPNAV Form 4790/60 or commercial equivalent, and ensure logs are updated to reflect ferry flight time.

## **2.3.2 DEPOT RESPONSIBILITIES ON ACI INDUCTION**

**2.3.2.1 AIRCRAFT EQUIPMENT INVENTORY.** Rework activity shall conduct an equipment inventory jointly with the Cognizant Government Representative as soon as possible after receiving the aircraft. Inventory aircraft equipment against property listed in the latest Aircraft Inventory Record, annotate all discrepancies.

**2.3.2.2 SURVIVAL EQUIPMENT.** Inflatable survival equipment, survival kits, personnel oxygen equipment and other items of safety and survival shall be removed; stored and maintained in an "as received" condition IAW the applicable manuals during rework processing.

**2.3.2.3 LOOSE EQUIPMENT.** Loose equipment shall not be repaired, but shall be properly tagged and stored to prevent damage and deterioration.

**2.3.2.4 ACI SPECIAL WORK REQUEST.** Review the Special Work Request, OPNAV Form 4790/65 or equivalent, for authorized special work to be performed.

**2.3.2.5 HIGH TIME TIME COMPLIANCE SCHEDULED COMPONENTS.** Review aircraft logbook, records, and ACI Special Work Request for any time compliance components that are high time or shall become high time during ACI processing and check flight. Identify these time compliance components to the reporting custodian, Cognizant Government Representative, the applicable ACC, and PMA 273.

**2.3.2.6 ENGINES.** Review operating records of the aircraft power plant(s) for inspection and replacement status as established by applicable OEM documentation, FAA, or Navy-unique directives. Overdue inspections (including those on 10 percent extension) and high time time compliance scheduled components shall be identified to the reporting custodian, Cognizant Government Representative, the applicable ACC, and PMA 273 for disposition.

**2.3.2.7 REPORTED DEFECTS ANALYSIS.** Rework activity shall investigate reported defects as follows:

- a. List Defects. List defects reported by the reporting custodian, those reported by the ferry pilot, and those recorded in aircraft logbook and associated records.
- b. Verify Defects. Perform an induction power-on check and visual inspections of the aircraft, systems and power plants to verify all reported defects and to identify other possible defects. Record additional information to assist in correction of applicable defects.

**2.3.2.8 SCHEDULE ADJUSTMENTS.** Schedule inspection, removal, or replacement of applicable time compliance components; authorized special work to be performed; reported defects to be corrected, and applicable TDs to be incorporated.

**2.3.2.9 HYDRAULIC AND FUEL SYSTEMS**

**NOTE**

Unless otherwise noted in this specification, fluids, fuel, oil, grease and compounds used in servicing aircraft shall conform to the specifications in the applicable OEM manuals or Navy-unique directives.

- a. Hydraulic Systems. As soon as possible after receiving the aircraft perform a hydraulic fluid contamination check IAW NAVAIR 01-1A-17. Whenever contamination exceeds Class 5 contamination level,

notify the last reporting custodian, and inform the applicable ACC, NAVSAFECEN, and PMA 273.

- b. Fuel Contamination Check. Perform a fuel contamination check as required by CNAFINST 4790.2 and NAVAIRINST 10340.3 as soon as possible after receiving an aircraft.
- c. Usable Fuel. Record the quantity of usable fuel in aircraft inventory records, preserve IAW NAVAIRINST 10340.3 and credit appropriate records for refueling of aircraft at the conclusion of ACI.
- d. Fuel Leaks. Fill all fuel tanks to capacity to discover leaks under system pressure. Document location and describe leak characteristics. Utilize leak path analysis procedures to locate leak sources.
- e. Defueling. Defuel aircraft IAW NA-62-1224.
- f. Purging Fuel Tanks. Purge aircraft fuel tanks IAW NAVAIR 01-1A-35.

## **2.3.2.10 PRESERVATION**

- a. Aircraft and Components. Aircraft and components shall receive preservation IAW requirements of applicable OEM manuals, CNAFINST 4790.2, and Navy-unique directives.
- b. Aircraft Engines. Aircraft engines shall be removed and preserved IAW Pratt & Whitney JT12A-8 Maintenance Manual 43510.
- c. Hydraulic Reservoirs. Drain and flush the hydraulic reservoirs IAW NA-62-1224.
- d. Batteries. Remove, store, and maintain aircraft batteries IAW NAVAIR 17-15BAD-1 and MarathonNorco battery manual 24-34-00.

**2.3.2.11 SURFACE CONDITION.** In this paragraph the requirements for aircraft cleaning, condition evaluation, stripping of painted surfaces, corrosion removal and treatment, and painting and refinishing are presented.

- a. Cleaning.

- (1) Metal Surfaces. Clean external and accessible internal metal surfaces, equipment, and furnishings using methods and materials specified by NAVAIR 01-1A-509, NA-62-1224, and SR-76-023.

**NOTE**

After cleaning, take special precautions to assure thorough draining of all liquids from between faying surfaces, crevices, and inspection doors by permitting the aircraft or part to stand for a sufficient amount of time to permit such drainage. Re-clean all areas as necessary.

- (2) Plastic Surfaces. Clean transparent and reinforced plastic surfaces using methods and materials specified by NAVAIR 01-1A-509 and NA-62-1224.
- b. Evaluation of Paint System. Exterior surfaces on aircraft inducted for ACI shall not require paint evaluation. Complete strip and paint of these areas are required for each aircraft during ACI processing.
  - c. Stripping Procedures.

**NOTE**

Take adequate precautions during stripping and subsequent cleaning operations to prevent access of moisture, stripping and cleaning compounds to bearings, bearing surfaces, electrical switches, relays, connectors, engine inlet/exhaust openings, and all other electrical and electronic components. Protect plastics, glass, and rubber parts, and all electrical wiring, during stripping and cleaning using methods and materials specified by NA-66-1032, and SR-76-023 during the stripping and cleaning operations.

- (1) Exterior Surfaces. The exterior surfaces of the aircraft shall be stripped of exterior paint coatings using the designated paint stripper IAW NA-66-1032 and SR-76-023.

- (2) Interior Surfaces. Interior metal surfaces shall be stripped or refinished only to the extent necessary for the removal of corrosion and treatment of affected areas to restore protective coatings and to permit inspection for corrosion and other defects. Stripping of interior areas shall be accomplished IAW NA-66-1032 and SR-76-023.
  - (3) Well Areas. Interior of wheel well doors and speed brake door interior shall be stripped of paint finish IAW NA-66-1032 and SR-76-023. Wheel and speed brake wells shall be treated as Interior Surfaces (see above) for stripping.
- d. Examination of Stripped Surfaces. All surface areas shall be re-examined for corrosion and defective sealant following any stripping operation and prior to surface finish restoration. Perform resealing operations IAW NA-66-1032. Remove detected corrosion and treat affected areas IAW NAVAIR 01-1A-509 and/or SR-76-023. Replace corroded parts when the corrosion damage exceeds the limits specified in NA-66-1032.
  - e. Preparation of Surface Prior to Refinishing. Ensure all surfaces to be refinished are cleaned IAW NA-66-1032 and SR-76-023 to remove residual paint, paint remover, organic soils, wax deposits and other surface contaminants.
    - (1) Scuff Sanding. Scuff sand areas to be repainted to reactivate paint finish IAW NA-66-1032 and SR-76-023.
    - (2) Chemical Conversion and Prime. Apply chemical conversion coatings and prime bare metal surfaces exposed by the action of paint stripping IAW NAVAIR 01-1A-509 or SR-76-023.
  - f. Surface Restoration.
    - (1) Exterior Finishes. Exterior surfaces shall be refinished IAW NA-66-1032, SR-76-023, and NAVAIR Drawing No. (30003) 4011AS100. Apply anti-static paint to wing tips, vertical stabilizer and radome using Dynamation Research Anti-Static

Radome Coating, P/N 528X306 or equivalent, per manufacturer's instructions to these areas.

- (2) Interior Finishes. Interior surfaces shall be refinished IAW NA-66-1032 and SR-76-023. Refinish battery boxes and battery bay areas as required using material specified in SR-76-023.
- (3) Radome. Install PM Research PM-270 polyurethane boot on radome.
- (4) Landing Gear. The landing gear chassis assembly shall be refinished IAW SR-76-023 and MIL-STD-2161 using Color 17925.

**2.3.2.12 DISASSEMBLY.** In this paragraph the criteria for disassembly and the extent of disassembly are presented.

a. General Disassembly.

- (1) Critical For Disassembly/Reassembly. Aircraft shall be disassembled sufficiently to perform the inspection requirements of this specification, required restoration, additionally authorized modifications (if any), and test.
- (2) Extent of Disassembly. Normally limit disassembly to the removal of bolts and screws. However, rivet and/or blind fastener removal is permissible to determine the extent of corrosion, to permit inspection for suspected damage, to perform required repair, or to accomplish authorized modification.
- (3) Reassembly. Reassembly of all areas disassembled for inspection and rework is required. Reassembly shall be per the applicable maintenance manual.
- (4) Installation of Safety Devices and Procedures. Ensure safety devices are installed IAW Sabreliner Maintenance Manual NA-62-1224.

b. Defects Discovered During Disassembly.

- (1) During disassembly note any obvious defect(s) and specifically the following: cracks, corrosion, damaged controls, excessively worn hinges, attach

fittings, bearings, bushings, and bolts, distortion and elongation of bolt holes, and any signs that may lead to disassembly to greater depth than specified by requirements of this specification.

- (2) If corrosion damage is evident or suspected at skin laps, remove rivets and peel back skin progressively in the immediate area to determine if corrosion is between mating surfaces.

## 2.4 STRUCTURAL INSPECTION REQUIREMENTS

The inspection requirements which follow were generated as the result of maintenance engineering analysis. Each item listed shall be inspected, tested, reworked, or replaced as specified. All corrosion found during structural inspections shall be corrected and occurrences reported IAW Section 4 reporting requirements. Perform all specified NDI IAW NA-66-1032, AC 43.13-1B, and/or NAVAIR 01-1A-16. Aircraft stations are called out as F.S. (fuselage station), W.S. (wing station), B.P. (butt plane), etc. Refer to NA-62-1224 for aircraft stations diagrams.

For convenience in identification, requirements are segregated into the groupings *General*, *Radome*, *Forward Fuselage*, *Entryway*, *Intermediate Fuselage*, *Aft Fuselage*, *Wing*, and *Empennage*. Neither these groupings nor the specific ordering of the requirements below is intended as direction for or a suggestion of specific depot workflow.

### NOTE

T-39G aircraft fuselages were lengthened by the insertion of two fuselage plugs, one forward beginning at F.S. 206 and one aft beginning at F.S. 298.5, however, to maintain commonality with T-39N aircraft, the numbering system for the fuselage stations was not re-baselined. For the T-39G, station points falling within these two fuselage plugs are designated, for example, as "F.S. 206+9", indicating a position 9 inches aft of F.S. 206. Unless explicitly noted in a requirement below, for the T-39G all references to F.S. 206 and F.S. 298.5, and all references to any range of fuselage stations inclusive of F.S. 206 and/or F.S. 298.5, shall be interpreted as including the full extent of these fuselage plugs.

## 2.4.1 GENERAL REQUIREMENTS

- 2.4.1.1 Inspect all interior/exterior wiring and clamps for nicks, cuts, and installation damage.
- 2.4.1.2 Inspect all interior/exterior cannon plugs for corrosion, sealant and security.
- 2.4.1.3 Inspect all external antennae and antennae support structure for cracks, corrosion, bonding and protection.
- 2.4.1.4 Inspect F.S. 333 junction box wiring for corrosion and re-torque all terminals.

## 2.4.2 RADOME REQUIREMENTS

- 2.4.2.1 Remove radome and inspect radome structure.
- 2.4.2.2 Electrical compartment, F.S. 50-76 on the T-39N, F.S. 13-76 on the T-39G. Remove all avionics equipment from nose avionics compartment and inspect entire nose structure, F.S. 13-76. Inspect all accessible structures, frames, bulkheads, skins, longerons, racks, connectors, and avionics access doors and mating surfaces. Pay particular attention to longeron mating surfaces.
- 2.4.2.3 Inspect bulkheads, frames and angles at F.S. 50 on the T-39N and at F.S. 13 on the T-39G for corrosion, cracks and deformation. Ensure proper paint protection IAW SR-76-023.

## 2.4.3 FORWARD FUSELAGE REQUIREMENTS

- 2.4.3.1 Inspect accessible areas of nose landing gear wheel well structure fittings, longerons, frames, bulkheads, clips, beams, and brackets for cracks, corrosion, deformation, damage, and security.
- 2.4.3.2 Open lower fuselage speed brake closeout panels. Inspect accessible areas for cracks, corrosion, loose or missing fasteners, and general condition. Inspect interior speed brake well for corrosion.
- 2.4.3.3 Remove soundproof padding or panels from the cockpit and inspect revealed areas for corrosion. Remove pilot

and copilot seats, remove floor covering from all cockpit floor areas and remove console close-outs. Perform visual inspection of all cockpit floors for corrosion in all accessible areas B.P. ±9 angles at F.S. 76-143 LH/RH sides.

- 2.4.3.4 Inspect lower and intermediate longerons and skin splice LH/RH sides F.S. 76-143 for cracks, corrosion, damage and protective finish.
- 2.4.3.5 Inspect windshields and sliding windows for overheating, burned spots, cracks, deep scratches, entrapped moisture and delamination.
- 2.4.3.6 Inspect pilots' sliding window tracks for cracks, deformation, wear, and corrosion; operating mechanism for freedom of operation, security, and proper latching; and window seal for damage, cuts and tears IAW NA-62-1224.
- 2.4.3.7 Inspect cockpit glass support structure and windshield bow support for cracks, corrosion, deformation, damage, security, and protective finish.

#### 2.4.4 ENTRYWAY REQUIREMENTS

- 2.4.4.1 Remove and inspect main entrance door IAW SR-76-023 and SSB 86-1. Inspect upper fuselage door stop and cap and lower access well for corrosion.
- 2.4.4.2 Inspect main entrance door hinges, locking mechanism, bungees, and surrounding bay for binding, wear, distortion, damage, proper operation, and adjustment. Lubricate hinges in accordance with NA-62-1224.
- 2.4.4.3 Remove mat inside the entrance door and inspect for corrosion.
- 2.4.4.4 Inspect lower longeron along threshold of main entrance door, lower door stop, and fuselage side skin, upper forward skin, and upper forward corner of main entrance door frame IAW NA-62-1224.
- 2.4.4.5 Inspect interior structure below main entryway floor, F.S. 143-174, for cracks, corrosion, and paint protection.
- 2.4.4.6 Inspect under door fuselage structure F.S. 150-166.25 IAW AD 80-26-01, SSB 56, or SSB 86-1, as applicable.
- 2.4.4.7 Inspect main entryway bulkhead panels, F.S. 143 and

174, for general structural condition.

- 2.4.4.8 Inspect exposed areas below jump seat and under arced jump seat skid plate for corrosion. Inspect jump seat mount/hinges and support bulkhead structure for cracks.
- 2.4.4.9 On the T-39G remove and inspect close out doors below disabled toilet and inspect exposed structure below, F.S. 143-206, for corrosion.
- 2.4.4.10 Inspect support structure under oxygen system F.S. 143-206 for cracks, corrosion, and paint protection.
- 2.4.4.11 Inspect fuselage structure at floor level and below from F.S. 143-206 between RH/LH sides for cracks, corrosion, and paint protection.
- 2.4.4.12 Inspect LH/RH wing attach fittings at F.S. 206 for worn or defective bearings, bushings, and holes, and for cracks, corrosion, and security.
- 2.4.4.13 Inspect all bellcranks and linkages, F.S. 143-206, for security, cracks, corrosion, and paint protection.
- 2.4.4.14 On the T-39G, LH/RH sides, F.S. 143-206, open and inspect baggage compartment close out doors and all bellcranks and linkages for security, cracks, corrosion, and paint protection.
- 2.4.4.15 Remove inactive escape hatch and inspect hinge fittings, forward mounting pin receptacles, and all accessible areas for cracks, corrosion, and general material condition IAW NA-62-1224.

## 2.4.5 INTERMEDIATE FUSELAGE REQUIREMENTS

- 2.4.5.1 Inspect all cabin windows for cracks, deep scratches, entrapped moisture, and delamination. Inspect all cabin window support (pan) areas IAW NA-62-1224 and SSB 88-4.
- 2.4.5.2 Remove cabin seats, carpet, insulation, heater pads, student consoles, inertial navigation unit, and cabin floors as necessary and inspect floor support beams, LH/RH lower main intermediate longerons, and LH/RH flight control tunnels IAW NA-62-1224.
- 2.4.5.3 Inspect accessible areas of vertical attach angles, F.S. 206, for corrosion and general condition.
- 2.4.5.4 Inspect frame-to-floor clips, LH/RH sides, F.S. 215-325, for cracks, corrosion, and paint protection.

- 2.4.5.5 Inspect upper longerons, frames, and attach clips to upper longerons, F.S. 206-357, LH/RH sides, for cracks, corrosion, and paint protection.
- 2.4.5.6 Inspect lower cap angle, vertical angles, and webs on lower frames at F.S. 298.5, 307, 316, and 324 for cracks, corrosion, and paint protection.
- 2.4.5.7 Inspect LH/RH wing attach fittings and floor support beams at F.S. 264, and adjacent fittings, vertical angles, and cap angles for cracks, corrosion and paint protection. Inspect wing attach fittings for worn or defective bearings, bushings, and holes.
- 2.4.5.8 Inspect pylon support fittings located at F.S. 318 and 333 for security, corrosion, and paint protection, and eddy current inspect for cracks.
- 2.4.5.9 Inspect horizontal stiffeners on forward side of F.S. 333 bulkhead and bulkhead to side skin attach angles IAW NA-62-1224.

## 2.4.6 AFT FUSELAGE REQUIREMENTS

- 2.4.6.1 Inspect interior of aft section and lower flanges of frames, F.S. 357-519, for cracks, corrosion, deformation, and general structural condition.
- 2.4.6.2 Inspect upper and lower longerons, clips, brackets, ribs, and bulkheads between F.S. 357-519 for cracks, corrosion, deformation, and general structural condition.
- 2.4.6.3 Inspect within hellhole between F.S. 357 and F.S. 457.4 canted bulkhead all hydraulic, bleed air, electrical, air conditioning, pressurization, and flight control components for security, corrosion, & condition.
- 2.4.6.4 Inspect auxiliary fuel cell floor support structure and surrounding area IAW NA-62-1224.
- 2.4.6.5 Inspect channels on web above auxiliary fuel cell, F.S. 333-357, for cracks, corrosion, and paint protection.
- 2.4.6.6 Inspect vertical hat sections of aft side of F.S. 333 bulkhead, floor of auxiliary fuel cell bay, and pylon castings for cracks, corrosion, loose fasteners, and general structural condition.
- 2.4.6.7 Peel back aircraft skin and inspect upper longerons, F.S. 330-360, for corrosion and damage. Clean, treat,

prime, and repaint.

- 2.4.6.8 Peel back skins and inspect the upper intermediate longerons and longeron mating surfaces, RH/LH, F.S. 333-357. Remove sealant from the F.S. 357 cap angle and fuselage sufficient to inspect the upper and lower cap angle faying surface areas for corrosion.
- 2.4.6.9 Inspect F.S. 357 bulkhead, fore and aft, for cracks, corrosion, loose fasteners, and general structural condition. Remove sealant from the F.S. 357 cap angle and fuselage sufficient to inspect the upper and lower cap angle faying surface areas for corrosion.
- 2.4.6.10 Inspect pylon attaching angles and spars for evidence of cracks and corrosion.
- 2.4.6.11 Inspect pylon upper flange at F.S. 357 bulkhead for cracks and corrosion.
- 2.4.6.12 Inspect pylon match angles (LH/RH) and fuselage skin for evidence of corrosion damage migrating from angles, upper, and lower surfaces of pylon.
- 2.4.6.13 Inspect engine support fittings. Peel up inner skin as necessary and inspect inboard/outboard areas of fittings using fluorescent penetrant or acceptable alternative inspection method.
- 2.4.6.14 Inspect internal cowling skins, cowling structure, internal engine support structure and engine air inlet duct for corrosion, loose, and missing or defective fasteners.
- 2.4.6.15 Inspect vertical fillets and closeout rib below rudder at F.S. 469-505 for cracks and corrosion.

## 2.4.7 WING REQUIREMENTS

- 2.4.7.1 Remove panels as required and perform visual inspection of all accessible flight control pushrods, torque tubes, cables and bellcranks for corrosion and condition.
- 2.4.7.2 Remove all lower fuel drain valves from cavities and inspect fuel drain valve cavities and supports IAW NA-62-1224. Remove all fuel probes in the wings and inspect the interior of the wing for corrosion. Inspect fuel probes and probe wiring for damage.
- 2.4.7.3 Within the LH/RH main landing gear wheel wells inspect

all wiring exposed to the elements/exterior, such as wheel well electrical switches and wing wiring to flux valves.

- 2.4.7.4 Inspect interior structure of LH/RH main wheel well for cracks, loose/pulled rivets, and corrosion IAW SR-76-023.
- 2.4.7.5 Inspect structural fittings, longerons, frames, bulkheads, clips, beams, and brackets in all accessible areas of the LH/RH main landing gear wheel wells for cracks, corrosion, deformation, damage and security.
- 2.4.7.6 Inspect main landing gear door actuator support fittings for cracks using fluorescent penetrant or acceptable alternative method.
- 2.4.7.7 Inspect main landing gear downlock support forging using dye penetrant or acceptable alternative method, and apply corrosion preventive treatment IAW NA-62-1224.
- 2.4.7.8 Remove wing flaps and inspect wing flap track outboard spar lug using dye penetrant method IAW NA-62-1224, SSB 87-7 and AD 71-03-03.
- 2.4.7.9 Visually inspect flap sonic doublers IAW NA-62-1224 for indications of internal corrosion such as bulges, bubbles in skin and paint, and/or loose, missing, or corroded fasteners. If indications are found, peel back or remove flap skin and inspect for corrosion and damage. Clean, treat, prime, and repaint.
- 2.4.7.10 Inspect aileron sonic doublers for cracks, corrosion, damage, deformation, and condition.
- 2.4.7.11 Inspect LH/RH aileron hinge links, inboard and outboard locations, and inboard and outboard aileron supports for cracks using fluorescent penetrant or acceptable alternative method.
- 2.4.7.12 Plug gauge outboard aileron hinge link bushing holes IAW manufacturer's specifications.
- 2.4.7.13 Separate wing from fuselage IAW NA-62-1224 and NA-66-1032 and examine upper and lower skins for cracks, corrosion, damage, deformation, dents, nicks, scratches, and loose, missing, corroded, defective, or improper rivets and screws.
- 2.4.7.14 Examine accessible areas of front and rear wing spars for cracks, corrosion damage, and loose fasteners.

- 2.4.7.15 Inspect LH/RH trailing edge wing ribs at wing double canted trailing edge station 24.082, and all other accessible surfaces, IAW NA-62-1224 and/or NAVAIR 01-1A-16 for cracks using fluorescent penetrant or acceptable alternative method.
- 2.4.7.16 Inspect wing forward attach fittings for cracks IAW NAVAIR 01-1A-16 using liquid penetrant or acceptable alternate method.
- 2.4.7.17 Plug gauge wing forward attach fitting bolt holes for wear IAW NA-66-1032.
- 2.4.7.18 Visually inspect wing aft attach fittings for worn or defective bearings, cracks, corrosion, and security.
- 2.4.7.19 Inspect wing aft attach fittings using liquid penetrant or acceptable alternative method.
- 2.4.7.20 Measure wing aft attach fitting bolt holes for wear IAW NA-66-1032.
- 2.4.7.21 Perform x-ray inspection of wing forward and aft spar upper and lower caps, LH/RH sides, for cracks.
- 2.4.7.22 Separate wing into halves. Remove, strip, and NDI using fluorescent penetrant or acceptable alternative method the wing center rib and upper and lower wing panel splice plates. Perform visual inspection in order to verify the absence of cracks, corrosion, and/or stress condition.
- 2.4.7.23 Examine all accessible areas of interior of wing for cracks, damage, deformation, cleanliness, deteriorated sealant, and security of components.
- 2.4.7.24 Inspect the forward and aft wing joint stub spars for cracks using fluorescent penetrant or acceptable alternative method IAW NAVAIR 01-1A-16. Replace cracked stub spars.
- 2.4.7.25 Refinish, reinstall, and seal wing center rib, splice plates, and stub spars.
- 2.4.7.26 Accomplish required pressure checks.

## 2.4.8 EMPENNAGE REQUIREMENTS

- 2.4.8.1 Inspect all accessible internal structures of empennage for cracks, corrosion, deformations, loose, missing, or defective fasteners and general condition.

- 2.4.8.2 Inspect forward vertical fin attach points using liquid penetrant or acceptable alternative method. Inspect all accessible areas for corrosion.
- 2.4.8.3 Inspect vertical spar beam caps for corrosion, cracks, deformation, damage, and condition.
- 2.4.8.4 Inspect rudder torque tube assembly for cracks using fluorescent penetrant or acceptable alternative nondestructive inspection method.
- 2.4.8.5 Visually inspect rudder torque tube assembly for damage, deformation, corrosion, and wear. Inspect MS25083 jumper for installation, corrosion, security, and broken wire strands.
- 2.4.8.6 Inspect upper and lower rudder torque tube bearings for condition, dimensional wear, and lubrication.
- 2.4.8.7 Refinish, if required, and reinstall serviceable rudder torque tubes.
- 2.4.8.8 Inspect horizontal stabilizer attachment bolts using magnetic particle or acceptable alternative method.
- 2.4.8.9 Inspect horizontal stabilizer rear beam caps for cracks.
- 2.4.8.10 Strip area around lugs on end cap of horizontal stabilizer structural interconnect torque tube assembly and perform fluorescent penetrant or acceptable alternative nondestructive inspection of stripped area.
- 2.4.8.11 Visually inspect remainder of structural interconnect torque tube assembly for cracks, damage, deformation, corrosion, and wear.
- 2.4.8.12 Plug gauge attaching holes of structural interconnect torque tube for wear IAW NA-66-1032.
- 2.4.8.13 Refinish stripped area. Clean and lubricate bearings.

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## SECTION 3 ACI FUNCTIONAL FLIGHT CHECK & GOVERNMENT ACCEPTANCE

### 3.1 FINAL PROCESSING

**3.1.1 WEIGHT AND BALANCE.** Weigh the aircraft as required by CNAFINST 4790.2, IAW NAVAIR 01-1B-40 and NAVAIR 01-1B-50, and as follows:

**3.1.1.1 DD FORM 365-1.** Inventory the aircraft and complete Chart A, Basic Weight Checklist Record, to reflect the actual equipment inventory.

**3.1.1.2 DD FORM 365-2.** Complete Form B, Aircraft Weighing Record.

**3.1.1.3 DD FORM 365-3.** Update Chart C, Basic Weight and Balance Record, to reflect the current inventory of Chart A, plus the effect of any letter-type technical directives or modifications accomplished during ACI.

**3.1.1.4 CHART E.** Update Chart E, Loading Data, to reflect the effect of any letter-type technical directives

**3.1.1.5 DD FORM 365-4.** Complete the Weight and Balance Clearance Form F - Transport to reflect actual load disposition for tests or ferry flight.

### 3.1.2 LOGS AND RECORDS

#### 3.1.2.1 AIRCRAFT INVENTORY

- a. Conduct aircraft inventory and annotate the Aircraft Inventory Record to reflect the actual inventory IAW CNAFINST 4790.2
- b. Complete OPNAV Form 4790/112 IAW CNAFINST 4790.2, for all items marked as "missing" in the Inventory record.

#### 3.1.2.2 UPDATE LOGBOOK

Annotate the aircraft logbook IAW CNAFINST 4790.2.

- a. Record accomplishment of ACI.

- b. Incorporation of approved TD and comparison of Lists 2 and 4 of the TDSA system.
- c. Other entries and page insertions specifically directed by the Cognizant Government Representative.
- d. Accrued flight time during the period of time aircraft is at the rework activity shall be documented.
- e. Purge logbook sheets. All logbook sheets purged by the rework activity shall be placed in a separate envelope and inserted in the logbook for the reporting custodian.
- f. Record special inspections performed. Update list provided by reporting custodian to show accomplishment of at least one of all like applicable special inspections that have come due during the period of time the aircraft was undergoing ACI.
- g. VIDS/MAF Historical File. VIDS/MAF historical file shall be attached to logbook for return to reporting custodian.

**3.1.2.3 INVENTORY EQUIPMENT.** Reinstall or replace with equivalent serviceable items, on the same aircraft, all inventory equipment removed during aircraft induction.

**3.1.2.4 HYDRAULIC SYSTEM.** Sample each hydraulic system's fluid IAW NAVAIR 01-1A-17 and applicable documents. Ensure any contamination is no greater than Class 3 level.

#### **3.1.2.5 SERVICING**

- a. Depreserve engine(s) IAW engine manual 45310.

#### **NOTE**

Use only MIL-PRF-83282 hydraulic fluid in all T-39G/N aircraft hydraulic systems.

- b. Ensure systems are serviced IAW T-39 MED 15 and NA-62-1224.

**3.1.2.6 OPERATIONAL TESTS.** Accomplish all preflight, pre-start, start, taxi, and run-up tests as specified in NA-62-1224. Correct critical and major defects discovered as a result of these tests.

**3.1.2.7 COMPASS CALIBRATION.** Calibrate compasses IAW MIL-STD-765 following completion of aircraft rework and systems testing and update compass correction cards IAW NAVAIR 05-15-17. Update aircraft logbook, as required, by CNAFINST 4790.2.

**3.2 CONTRACTOR FUNCTIONAL CHECK FLIGHT & SUPPORT.** The Contractor shall perform Functional Check Flights prior to Government Acceptance Check Flight in order to eliminate any major discrepancies. Prior to each check flight perform daily/turnaround inspections of NA-62-1224 and T-39 MED 15, and any special inspections that may have become due.

### **3.3 GOVERNMENT ACCEPTANCE**

#### **NOTE**

The rework activity shall be responsible for the maintenance of the aircraft and the correction of all critical and major defects discovered until the designated governmental activity accepts the aircraft. In addition, the rework activity shall service all aircraft systems IAW T-39 MED 15 and NA-62-1224 and clean the aircraft internally and externally prior to aircraft delivery flight.

**3.3.1 SPECIAL LOOSE, & MISCELLANEOUS EQUIPMENT.** Verify all special, loose, and miscellaneous equipment and furnishings and publications identified as "installed" in the aircraft records are installed and secured. Stow all logs and records in the aircraft prior to delivery of the aircraft.

**3.3.2 ACCEPTANCE CHECK FLIGHT.** An acceptance check flight(s) shall be performed by Government/Contract personnel. The check flight requirements shall be determined by the Government and shall not be less than the requirements of NAVAIR 01-60GBE-1F and NAVAIRINST 3710.1.

**3.3.3 ACCEPTANCE.** The representative of the accepting governmental activity shall indicate acceptance of the aircraft upon completion of ACI by signature on DD Form 250 noting and certifying any discrepancies existing which have been agreed upon as non-critical and not detrimental to the airworthiness of the aircraft.

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## SECTION 4 ACI REPORTS

**4.1 GENERAL.** This section describes the engineering reports to be submitted to the T-39 PMA no later than 30 days subsequent to government acceptance of each aircraft that has undergone ACI. For commercial rework activities submission requirements shall be in accordance with the terms of the contract.

**4.2 NOTED BUT NOT CORRECTED (NBNC) REPORT.** The NBNC report shall be prepared to list minor discrepancies that were discovered but which were not required to be corrected IAW this specification. These discrepancies shall be identified IAW the requirements below. The completed NBNC report shall be attached to the aircraft logbook, and a copy provided to the OGR for transmittal to other Government parties.

### SPECIFIC REPORT REQUIREMENTS

- a. Aircraft T/M/S and BUNO.
- b. Date of ACI induction.
- c. Where appropriate, item nomenclature, part number, and serial number.
- d. Description of defect.

Report shall be typewritten on letter-size paper or shall be provided in MS Office-compatible or Adobe Acrobat digital format.

**4.3 MAINTENANCE/HISTORY SUMMARY (MHS) REPORT.** This report provides for a summary of the aircraft processing, and shall contain as a minimum the following data elements:

- a. Aircraft T/M/S and BUNO.
- b. Date of ACI induction.
- c. Total aircraft flight hours at induction.
- d. Technical Directives, OEM bulletins, FAA directives incorporated or complied with (by number and title.)
- e. Accessories/components removed for rework or replacement (cite identity, part number and serial number, if applicable, reason for removal, installed time if a Time Compliance item, and corrective action or disposition.)
- f. Special work requests.
- g. Major structural repairs.
- h. In-process time (calendar days) and dates.
- i. Rework direct maintenance man-hours (basic and over & above.)

- j. Major and critical defects discovered by compliance with the requirements of this specification (identify requirement paragraph) and corrective action taken.

Report shall be typewritten on letter size paper or shall be provided in MS Office-compatible or Adobe Acrobat digital format. A form may be developed and used for this report if desired. Completed report shall be provided to the Onsite Government Representative (OGR) for transmittal to other Government parties.

**4.4 NON-DESTRUCTIVE INSPECTION (NDI) REPORT.** This report shall be prepared and submitted for all NDIs accomplished IAW the requirements of Section 2 of this specification when such inspections disclose positive findings, and shall contain the following elements:

- a. Aircraft T/M/S, BUNO, total flight hours, date of inspection, and, for components and/or Time Compliance items, the time since last overhaul or inspection.
- b. Inspection requirement (paragraph number) from Section 2.
- c. Part number and nomenclature of all parts exhibiting defects.
- d. Narrative description of defects.
- e. Narrative description of remedial actions accomplished.
- f. Contractor's comments concerning the methods and effectiveness of the NDI accomplished.

Reports on a specific aircraft shall be forwarded as a group, and shall be typewritten on letter size paper (oversized illustrations are acceptable if deemed necessary to communicate findings) or shall be provided in MS Office-compatible or Adobe Acrobat digital format. A form may be developed and used for this report if desired. Completed report shall be provided to the OGR for transmittal to other Government parties.

**4.5 MAINTENANCE REQUIREMENTS REVIEW REPORT (MRRR).** Data is needed to evaluate the usefulness of any scheduled ACI task, and to determine if other tasks are necessary, and must be sufficient for such evaluation. The purpose of the MRRR is to facilitate Government maintenance of a database for use in these evaluations. The form which follows, or similar form of the Depot's design, shall be used to report on the individual Structural Inspection Requirements (found within Paragraph 2.4 above) of this ACI specification. The complete MRRR for an

aircraft shall consist of a package of forms, one for each requirement, and shall be provided to the OGR for transmittal to PMA 273. If the Depot so chooses, a local computer database may be developed and used for data entry, and provision of each aircraft report may be done electronically, provided the submitted report is in a format directly readable by, or readily imported into, Microsoft Access.

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## MAINTENANCE REQUIREMENTS REVIEW REPORT FORM

<b>A. STRUCTURAL INSPECTION REQUIREMENT NUMBER</b>	<b>B. AIRCRAFT T/M/S</b>	<b>C. AIRCRAFT BUNO</b>

<b>D. PART NUMBER</b>	<b>E. NOMENCLATURE</b>

**F. DEFECT CLASS**

CRITICAL  
 MAJOR

MINOR  
 NO DEFECT FOUND

<b>G. DESCRIPTION OF DEFECT</b>	
<b>TYPE DEFECT</b> (crack, corrosion, deformation, wear, etc.)	
<b>DEFECT LOCATION</b> (describe where on the aircraft the defect was found (include F.S., W.S., etc., as applicable))	
<b>DEFECT DETAILS</b> (accurately describe defect such as: Cracks - provide length, depth, age Corrosion - refer to corrosion type and condition code tables below and provide type, depth, category, extent Wear - depth and extent)	
<b>CORRECTIVE ACTION</b> (indicate if standard or non-standard repair, provide a thorough description of corrective action accomplished to include listing the document number(s) and page number(s) from which corrective action was taken)	<input type="checkbox"/> Standard Repair <input type="checkbox"/> Non-standard Repair
<b>INSPECTION MAN-HOURS</b> (provide actual man-hours required to accomplish inspection)	
<b>CORRECTIVE ACTION MAN-HOURS</b> (provide actual man-hours required to accomplish corrective action)	

**TABLE 1 - CORROSION TYPE CODE**

CODE	DEFINITION
A	DIRECT SURFACE ATTACK
B	GALVANIC OR DISSIMILAR METAL CORROSION
C	PITTING
D	INTERGRANULAR ATTACK INCLUDING EXFOLIATION
E	CREVICE ATTACK OR CONCENTRATION CELL CORROSION
F	FRETTING CORROSION
G	STRESS CORROSION CRACKING
H	CORROSION FATIGUE
I	FILIFORM CORROSION
J	MICROBIOLOGICAL CORROSION

**TABLE 2 - CORROSION CONDITION CODE**

CODE	DEFINITION
1	<p><b>SUPERFICIAL OR NEGLIGIBLE DAMAGE:</b></p> <p>A. Protective coating scarred or etched by light surface corrosion, but no observable pitting, and/or</p> <p>B. All corrosion products removable by brushing with a stiff bristle, nonmetallic brush and the corrosion may be arrested by chemical treatment.</p>
2	<p><b>MINOR DAMAGE:</b></p> <p>A. Corrosion that cannot be completely removed by brushing, but limited to a modest (not greater than 1 ft<sup>2</sup>) area, removable by hand using fine abrasive pad, and the corrosion may be arrested by chemical treatment, and/or</p> <p>B. Small areas of corrosion on non-critical parts that will not degrade the function or significantly weaken the affected part.</p>
3	<p><b>MAJOR DAMAGE:</b></p> <p>A. Extent of corrosion is greater than minor damage, but within limits of applicable maintenance or structural repair manuals, and/or</p> <p>B. Repair of corroded areas may be accomplished IAW NAVAIR 01-1A-509, SR-76-023, and/or NA-66-1032.</p>
4	<p><b>REPAIRABLE DAMAGE:</b></p> <p>Corrosion that exceeds the limits of applicable maintenance or structural repair manuals, but use of affected parts may be continued after PMA or FAA authorized repair.</p>
5	<p><b>NON-REPAIRABLE DAMAGE:</b></p> <p>Corrosion that exceeds the established repair limits, and requires replacement of the affected parts or special depot level repair.</p>