



MARITIME HELICOPTERS

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FAIRBANKS SATELLITE REPAIR STATION

**QUALITY CONTROL MANUAL
EN2D619D**

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FAA PRINCIPAL MAINTENANCE INSPECTOR

FAA PRINCIPAL AVIONICS INSPECTOR



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1 Introduction

This Quality Control Manuals (QCM) has been prepared in accordance with the current regulations contained in Title 14 CFR §145, and the policies and procedures used at Maritime Helicopters, Inc. (MHI). Compliance with the procedures contained in this manual, along with the associated Satellite Repair Station Manuals, are prerequisites for operation under the privileges of the Satellite Repair Station certificate.

This manual shall be kept current, and the quality control system shall be followed by all personnel who perform any duties, responsibilities, and any maintenance, preventative maintenance or alterations on behalf of this Repair Station.

Specific types of inspections are defined in this manual. A sample of the forms used as well as their method of execution used to document inspections, and all subsequent maintenance, preventative maintenance, and alterations are included in the Repair Station Forms Manual (RSFM) manual. The following inspections are specifically addressed:

- Receiving inspection
- Preliminary inspection
- Hidden damage inspection
- In process inspection
- Final inspection

The Satellite Repair Station shall not maintain or alter any article for which Homer home base it is not rated, or any article for which Homer home base is rated if it does not possess the required technical data, equipment, facilities, or trained personnel.



2 Manual Revisions

The Accountable Manager oversees the creation and revision of MHI controlled documents. Department Managers and Supervisors may submit suggestions and corrections for incorporation into this manual by contacting the Chief Inspector. Changes made to this manual will be summarized in the change summary table and indicated throughout the manual by change bars. A vertical bar (change bar) in the right margin indicates a change, addition, or deletion in the adjacent text for the current revision of that page only.

Each page has the current manual revision located on the top right. In the event that due to global changes pages have moved, the Rev date will change even though the text has not.

Change bars will be only be used for actual changes to the text of the manual. The change bar is dropped at the next revision of that page.

Manual Revisions and Control

The Chief Inspector is responsible for the content of this manual and any revisions. This manual requires FAA acceptance prior to release. Revisions to this manual must be routed for MHI internal and FAA acceptance prior to distribution. This manual cannot be published or distributed to end users prior to formal submission to and acceptance by the FAA.

Web Based

Web based company manuals maintained by the Part 145 Accountable Manager will be placed on the Maritime Helicopters company maintenance Portal accessible at <https://www.rotor-apps.com/manuals> and available to all Part 145 maintenance personnel. The Part 145 Accountable Manager is responsible for assuring all web-based company manuals are current. Any downloaded or printed material from the company maintenance Portal is considered an uncontrolled copy.

Maintenance Personnel are to use the Maritime Maintenance Web Portal for all company manuals unless internet access is not available. In the advent of no internet access to manuals, a current company paper format manual shall be used.

3 Current Technical Data

This section of the manual contains the procedures for ensuring that current technical data is available for the scope of work the Satellite Repair Station is performing. Title 14 CFR §43.13(a) requires each person performing maintenance, alteration, or preventive maintenance to use the methods, techniques, and practices prescribed in the current manufacturer's maintenance manual, instructions for continued airworthiness (ICA), or other methods, techniques, or practices acceptable to the Administrator.

The data used by the Satellite Repair Station to perform a specific maintenance function must be the current distributed revision available to maintenance and inspection personnel when the maintenance functions are started. The Part 145 Accountable Manager is responsible for ensuring the required technical data is available to Satellite Repair Station personnel.

The current revision level of the technical manuals may be confirmed by checking the current manual revision status located on the appropriate manufacturer's website. It is the responsibility of the Part 145 Accountable Manager to ensure that all technical data libraries within that facility are reviewed for current status.

Maintenance and Control of Technical Documents

Maritime Helicopters primarily uses technical data direct from each manufacturer's website for all maintenance work order packages. Entities who publish/produce technical data are responsible to conduct revisions as necessary for their product(s) as required. Revisions may be a result of new or revised procedures, changes to regulations, improvements of a product, reduced/increased inspection intervals, new methods, etc.

The schedule at which revisions occur will vary for each product and/or situation. Some entities have adopted scheduled revision service intervals (i.e., monthly, semiannual, annual, etc.), however revisions may only occur as a specific need arises and requires a change.

MHI has created the procedures in this section to ensure that technical data utilized by the repair station is current.

The Chief Inspector will maintain a listing of any technical publications maintained by MHI in hard copy at each Repair Station. This listing shall record the manual name, the provider of the publication, revision level number, revision date of publication, and details regarding what type/interval of revision service are provided.

Details provided by the technical data provider regarding their specific revision schedule will assist MHI to ensure it has the current technical data available.

During the preparation of any repair station order work package, the Part 145 Accountable Manager will verify any technical data that is not acquired directly from the manufacturers website and present it to the Chief Inspector. This assures that any hard copy technical data available to MHI personnel to be utilized for the particular product being maintained is current.



This procedure will not apply when MHI performs maintenance, preventive maintenance, or alterations for an air Carrier or commercial operator that has a continuous airworthiness maintenance program (CAMP) under 14 CFR Part 121 or Part 135, in which case MHI will follow the air Carrier's or commercial operator's program and the applicable sections of its maintenance manual regarding technical data requirements and any validation thereof.

NOTE: Maritime Helicopters is not on any revision service for any manuals at this time and accesses all applicable maintenance data direct from entities website.

Any hard copy documents not maintained under a revision service or accessed directly online at the manufacturer's website, but retained for training or reference purposes will be marked, "Training Only" or "Reference Only". "Reference Only" or "Training Only" documentation may be used only for system familiarization and training operations.

WARNING: Under no circumstances will this type of data be used as accepted/approved data for the return to service or a sign-off reference.

4 Inspection System

General

This section explains the inspection system for the Satellite Repair Station as required by Title 14 CFR §145.211. This section and the procedures apply to the operation of the satellite repair station. It is the responsibility of the Chief Inspector to establish and monitor the inspection system of the satellite repair station.

Establishing and Maintaining Proficiency of Inspection Personnel

Upon consideration of an Inspector candidate, the Chief Inspector shall determine that the individual is appropriately certificated in accordance with 14 CFR Part 65 as a mechanic with Airframe/Powerplant ratings and possesses the experience in the maintenance and/or inspection of transport category aircraft. The Chief Inspector will verify experience through previous employment records, training records, related military experience, and a verbal interview. The candidate must also demonstrate the capability to read, write, and understand the English language during the interview process.

Candidates will be required to complete the MHI Employment Summary of Management, Supervisory and Authorized Inspection Personnel. MHI individuals assigned as Inspectors shall complete an initial inspection training course. The course minimum curriculum shall include the following items:

- Applicable portions of Title 14 Code of Federal Regulations (CFR) consistent with Satellite Repair Station activities;
- MHI Satellite Repair Station manuals (i.e., RSM/QCM/RSFM);
- Familiarization with Airworthiness Directive (AD's);
- Familiarization with Service Bulletins (SB's) and other technical data;
- Basic inspection methods, techniques and aids.

The completion of the initial Inspector training course shall be appropriately documented in the individual's training record.

Inspectors completing the initial training course shall be assigned to an existing Inspector for OJT (On the Job Training) and evaluation. The length of time required for the OJT period will be determined by the Chief Inspector based on the individual's previous experience and training. The Chief Inspector may elect to conduct the OJT himself/herself. Inspectors completing the OJT and evaluation shall be required to document all OJT activities during the evaluation phase on MHI Training Verification (Form TR-002).

The evaluation phase of the Inspector's indoctrination into the Inspection department shall be required for a new Inspector to demonstrate a thorough knowledge of the CFRs, and proficiency using the inspection methods, techniques, practices, aids, equipment, and tools used to determine the airworthiness of the article on which maintenance, preventive maintenance, alteration, and inspection is being performed.

Upon completion of the OJT period, the Chief Inspector will review the MHI Training Verification TR-002 forms. A post evaluation phase interview of the candidate will be required, which may additionally involve as necessary individuals that assisted during OJT activities.

Candidates determined by the Chief Inspector as meeting the requirements will be appointed as an MHI Inspector, and added to the MHI Management and Supervisor Roster (Form MHI-025), and Inspection/Return to Service Roster (Form MHI-024).

Annual recurrent training is provided for all Inspection personnel to ensure proficiency with all inspection methods and techniques. This training is provided using a curriculum developed by the Chief Inspector to include the most current inspection methods, techniques, practices, aids, equipment, and tools used to determine the airworthiness of the article on which the maintenance, preventative maintenance, alterations, or inspections are being performed.

The Chief Inspector is responsible to develop additional special training as additional Satellite Repair Station ratings or limitations are added, or when new inspection aids or techniques are used to determine the airworthiness of the article.

Inspection System Description

The Part 145 Accountable Manager is responsible for the complete performance of maintenance at the repair station. The Quality Assurance Department is responsible to ensure inspection acceptance is in accordance with either approved or acceptable data.

Maintenance, repair, and alterations will be subject to in-progress inspections by the Quality Assurance Department. Discrepancies discovered will be recorded on applicable forms as appropriate. Discrepancies recorded will be corrected before the article is submitted for final inspection.

Upon completion of a maintenance function, the mechanic will sign and date the work order forms indicating that the article is complete and ready for inspection. The maintenance action accomplished to correct a specific discrepancy will be noted in the corrective action column on the Part 145 Work Sheet, Form MHI 005. The Inspector will then inspect the article to assure the work was performed in accordance with acceptable or approved data as applicable. If for any reason the work performed is not accepted, the Inspector will write up a new discrepancy starting with "Continued from Part 145 Work Sheet item _____ page # _____" (this will refer back to the entry that is not accepted) and describe the discrepancy. The Inspector will sign off the original entry, as "not accepted, see also page #", or similarly worded statement. If a functional check is required on the article, it will be accomplished before final acceptance. The inspector's signature or initials will indicate inspection acceptance.

Maintenance Check Flights

Maintenance check flights will be conducted for any aircraft that has been maintained, rebuilt, or altered in a manner that may have appreciably changed its flight characteristics or substantially affected its operation in flight. A maintenance check flight may also be performed anytime the QA or Maintenance Department determines it is required.

Maintenance check flights may be accomplished with open, non-safety of flight, discrepancies in the work order. Quality assurance and maintenance personnel, in cooperation with the pilot, will determine that all open discrepancies are of a non-safety of flight nature and the aircraft is in a condition for safe operation.

Maintenance Inspection

Inspections will be accomplished in accordance with the OEM's technical data, instructions for continued airworthiness, Continuous Airworthiness Maintenance Program (CAMP) or an Approved Aircraft Inspection Program (AAIP) as applicable. The work order will be supplemented as necessary for articles to be replaced due to time, special inspection items, discrepancies, and airworthiness directives.

No aircraft will be approved for return to service following maintenance, as outlined above, until all discrepancies affecting airworthiness have been corrected or properly deferred.

Work Order Systems

Work Order – aircraft and/or articles inducted in the Satellite Repair Station facility will be recorded in the CALM Program. This log will be maintained by the Chief Inspector and will record each work order number identifying the product for which it was issued. This log will also annotate the manufacturer's serial number (if applicable), and a brief description of the work to be accomplished.

After completion of a preliminary inspection, assigned maintenance personnel will then enter the Statement of Work, component tag, or component record entries, and any additional discrepancies found in the maintenance work order package.

The work order will be supplemented as necessary with appropriate inspection forms and work order forms to ensure proper inspection and repair of the article involved. Any approved engineering or other approved technical data authorizing repairs or alterations will be identified in the work order as necessary. Where special drawings are made to document specific repair conditions or processes, copies of the drawings will be included in the work order and in the aircraft records.

Preliminary Inspection

All aircraft/articles delivered to the Satellite Repair Station for maintenance, alteration, or repair will have a preliminary inspection performed by Chief Inspector or designee to determine the state of preservation and to note any obvious defects. The Inspector will record this by initialing the preliminary inspection block of the Satellite Repair Station work order cover sheet, Form MHI 002. Any discrepancy found will be noted on the Part 145 Work Sheet, Form MHI 005.

Any article received that was involved in, or suspected to have been involved in, an accident, incident, or requires a special inspection, will be brought to the attention of the Chief Inspector or designee prior to the beginning of any work.

Any article, other than a complete aircraft, awaiting preliminary inspection will be segregated until the preliminary inspection is performed.

Hidden Damage Inspection

The hidden damage inspection will be performed by Chief Inspector or designee when obvious damage is observed or the article has a suspected or known incident. This inspection includes a thorough inspection for damage in areas adjacent to and surrounding the area of the damage. This inspection will also include a thorough review of all similar materials or equipment in a given system or structural area. If a hidden damage inspection is required, an entry will be made on the Part 145 Work Sheet, Form MHI 005, stating "Hidden Damage Inspection Required" (or similar wording).

The scope of this inspection will be governed by the article's manufacturer requirements. Quality assurance is responsible for listing all discrepancies noted during inspection in the work order on the Part 145 Work Sheet, Form MHI 005.

The hidden damage inspection will also be recorded in the work order by initialing the hidden damage block of the Satellite Repair Station work order cover sheet, Form MHI 002. The Part 145 Accountable Manager or designee will communicate with the customer representative or owner/operator the details of the hidden damage inspection and any resulting action(s) required.

In Process Inspection

The Chief Inspector or designee will be assigned to complete an inspection at various stages of disassembly, overhaul, and repair. These inspections are required at a frequency determined by applicable manual recommendations and/or Satellite Repair Station generated work forms. An in-

process inspection shall be performed at such times during the assembly of articles and aircraft where concealment of any items or maintenance action occurs.

When an article requires non-destructive testing, a NDT Inventory Log, Form MHI 011 must be completed by the mechanic sending the article out for testing. All articles leaving an MHI Satellite Repair Station for non-destructive testing must be identified with a NDT Parts Tag, Form MHI 010.

Inspection personnel will inspect (as applicable) aircraft and articles for the following: damage during shipping, state of preservation, proper documentation, verification of life limits, FAA approval of new articles, verification of any applicable airworthiness directives, manufacturer's service bulletins, and determination of any repairs that may be necessary. Functional tests and tear down reports will be verified as applicable.

The mechanic is responsible for obtaining an "OK to Close" from quality assurance prior to the concealment referenced above. The "OK to Close" is a visual check for FOD, security, safeties, cleanliness, etc. Quality assurance will issue "OK to Close" by initialing and noting the date next to the step. If this area is not closed out by the end of the requesting shift, a new "Ok to Close" is required by quality assurance.

Upon completion of a specific operation (i.e., verification of gear backlash, flight control rigging, engine rigging, etc.), the mechanic will sign and date the records indicating that the item is complete and ready for inspection.

If at any time during the In-Process inspection a defect is noted, the discrepancy shall be entered into the work order and an appropriate corrective action will follow depending if it requires a new article or part, or rework. Once rectified, the discrepancy shall be cleared by an appropriate CFR 43.9 signoff.

Continuity of Inspection Responsibility

Part 145 Work Sheet, Form MHI 005, will be updated by the Part 145 Floor Manager at the end of each shift.

Continuity of Maintenance Responsibility

For work in progress, an entry will be entered on a Part 145 Work Sheet, Form MHI 005, by the assigned mechanic informing the next mechanic or shift of the status of each maintenance function that is in work, but not completed.

Work Order Supplements

Appropriate supplemental forms can be used to record the maintenance, inspections, alteration, or repair and the results of inspections, functional and nondestructive tests. Work order supplements may be made from existing operator directives, checklists, or outlined maintenance procedures in the OEM maintenance manuals. All work order supplements will be reviewed by quality assurance prior to being utilized. The mechanics will indicate completion of a step by initialing next to the item, step, task, number, etc. All work order supplements will include the aircraft S/N, work order number, section and item number. All work order supplements used will become a permanent part of the work order and must remain with the work order.

Work In Process

Satellite Repair Station maintenance personnel shall utilize a work table/bench, fixture or stand, as appropriate when performing maintenance on any article.

Articles removed from an aircraft will remain identified during maintenance or alteration with the Repairable Parts Tag, Form MHI 004. Removal of the Satellite Repair Station tag for a process such as cleaning, painting, etc., which would damage the tag, is permissible. The tag shall be placed in a protective pouch and attached to the table, stand or fixture. For articles used in a paint booth, parts cleaner, or bead blaster, the tag will be stowed in a protective pouch in the adjacent area where the work is being performed. The tag is reattached as soon as practical.

Article Identification, Segregation, and Storage

Articles removed from an aircraft during the course of maintenance shall be properly identified as to serviceability status, and stored in accordance with the following procedures:

- All articles shall be stowed in a designated area and in a manner to preclude damage. This designated area shall be used exclusively for the storage requirements of specific aircraft in work. The storage of a different aircraft's articles, shop equipment, tooling and supplies, etc., is prohibited.
- The appropriate Part 145 Accountable Manager is responsible for ensuring that the maintenance personnel working under their supervision properly identifies and stores articles as they are removed from the aircraft during the course of maintenance, in accordance with these procedures.
- At the completion of maintenance activities and close out of the work order, the Part 145 Accountable Manager or his designee shall ensure that all racks and/or shelves are cleared, and any remaining articles are properly dispositioned. Any rack or shelf markings must also be removed.

Procedures for Serviceable Articles Removed from an Aircraft

- Associated hardware removed from an article must be bagged and attached to the article.
- Cowlings, access panels, doors, articles, etc., removed to facilitate maintenance and inspection activities, or for alteration/repair will be stored on or in an appropriate rack or shelving unit as provided in the immediate area where the maintenance is being performed. The shelf or rack shall be identified, at a minimum, with the work order number and aircraft serial number. When multiple aircraft are to be worked in the same hangar bay, each section or shelf being used shall be individually identified with the required minimum information.
- When removed from a storage rack or shelf for alteration/repair under the work order, the article shall be identified with a tag, Form MHI 004. The routing tag may also be used on shelving, racks or other proper storage units to identify an article that has been disassembled for repair.

Articles Removed and Determined to be Unserviceable or if Serviceability is Unknown

Articles removed from the aircraft that are determined to be unserviceable or if serviceability is unknown, shall be identified as follows:

- Unserviceable article(s) to be routed to a repair facility shall be identified with a properly completed Repairable Parts Tag, Form MHI 004.
- Unserviceable article(s) to be repaired under the designated work order removed from shall be identified by a properly completed identification Tag, Form MHI 008.
- Unserviceable articles which are determined to be beyond service limits, beyond economical repair (BER), or have reached their life limit, shall be identified with a Rejected Part tag, Form MHI 007.

- Articles of unknown serviceability shall be identified with a Repairable Parts Tag, Form MHI 004. A discrepancy will be entered in the work order Part 145 Work Sheet Form MHI 005, and the article will be routed as necessary for additional work.
- Serviceable articles(s) awaiting installation shall be stored in the designated area for the appropriate work order. The serviceability paperwork, i.e., 8130-3s or applicable tags shall remain attached to the item until it is installed.
- Large articles such as engines, transmissions, tail booms, main rotor blades and control surfaces that are removed from the aircraft shall be identified by use of the Identification Tag, Form MHI 008, or Repairable Parts Tag, Form MHI 004 as appropriate, and stowed using the appropriate stand, rack or fixture.

Incoming Inspection

This section of the manual describes the procedures for incoming inspection of consumables, raw materials and articles.

The Chief Inspector will ensure that all incoming aircraft materials, hardware, articles, equipment and other products procured for use by a Satellite Repair Station are subjected to an incoming inspection to assure conformance to part number, serial number, and/or other applicable specifications.

The Incoming Receiving Inspection personnel will visually inspect the consumables, raw materials, and articles for the following: damage during shipping, state of preservation, shelf life, contamination, verification of any applicable airworthiness directives, manufacturer's service bulletins, and proper documentation.

The Incoming Receiving Inspection personnel shall verify that articles received were produced under an FAA-approved process or are otherwise acceptable to the administrator. FAA-approved processes include: FAA-PMA (appropriate marking of article is required); FAA-TSO (appropriate marking of article is required); OEM articles (appropriate documentation, such as ship tickets, packing slips providing traceability back to the manufacturer is required); direct ship authority (appropriate declaration of authority is required); and certifications for standard articles, such as hardware items. Inspection personnel will also verify required FAA Form 8130-3 or other foreign national airworthiness authority (NAA) equivalent forms.

In the case of life limited articles, the incoming inspection personnel shall verify that used articles are accompanied by proper serviceability and historical records as required. All parts, new or overhauled, purchased from vendors will be checked for proper approval documentation prior to release for installation by the Repair Station. Life limited articles must be identified by part number and serial number and must be accompanied by a current status documenting accumulated total time in service, time since overhaul, time since inspection, or accumulated cycles as relevant to the article's airworthiness limitations.

If articles are acceptable and determined to have the proper documentation, the incoming inspection personnel will initial and date the packing slip and Receiving Inspection Log, Form MHI 009, to annotate that the inspection process is completed and the article(s) is accepted.

Documentation accompanying the article/product installed shall be retained with the article/product and attached to the associated work order document when the article/product is consumed under an MHI work order. These items will then be placed in the pending storage/shop issue area for proper distribution. Incoming items for articles under a Satellite Repair Station work order will be given to the assigned lead and articles for inventory will be placed in their assigned storage area.

If the articles received do not match any of the verifications or are found damaged, they will be rejected, placed in quarantine and tagged with a red tag noting the mismatch or damage found, and dispositioned as appropriate. Rejection of articles will be documented on the Receiving Inspection Log, Form MHI 009 as indicated within the form's instructions.

The container or packaging of all consumable materials having limited shelf lives will be identified using the expiration date. Any material(s) that come in lots will have appropriate serviceability paperwork accompany each item.

Suspected Unapproved Parts (SUPS)

NOTE: FAA Advisory Circular AC 21-29 (as revised) provides information regarding the Detecting and Reporting of Suspected Unapproved Parts

AC 21-29 defines a Suspected Unapproved Part (SUP) as: "A part, component, or material that is suspected of not meeting the requirements of an "approved part." A part that, for any reason, a person believes is not approved. Reasons may include findings such as different finish, size, color, improper (or lack of) identification, incomplete or altered paperwork, or any other questionable indication."

Any parts that are detected during receiving inspections or maintenance as meeting the criteria for "Suspected Unapproved" shall be marked as such, segregated, and placed in Quarantine by the Inspector assigned to receiving.

The Chief Inspector or his/her designee shall execute an FAA Form 8120-11 and forward copies to the FAA branch that oversees unapproved parts and to the repair station's cognizant Principal Inspector (PI) at the local Certificate Holding District Office (CHDO). Reference AC 21-29.

General and Function Test Requirements

New articles manufactured either under a type or production certificate, in accordance with a technical standard order (or similar FAA approved technical data), or articles that have been rebuilt by the manufacturer to production specifications, require a visual receiving inspection with no testing required.

Articles repaired or overhauled that are received from an FAA certificated Satellite Repair Station do not normally require more than a visual receiving inspection before being returned to service. However, there may be instances where a test may be required. When a test is required, the receiving Satellite Repair Station must have the test equipment needed to perform required functional checks. If this test equipment cannot be supplied, the article will be rejected and returned to the applicable vendor.

Any required functional checks will be performed in accordance with instructions contained in the appropriate manufacturer's publications.

Approvals of Major Repairs

Major repair approvals shall follow the requirements of Title 14 CFR §43, specifically §43.9 (d) and appendix B. A maintenance release is completed as a part of the work order at the time of approval for return to service. A separate maintenance Serviceable Parts Tag, Form MHI 006, will be completed (if applicable) and attached to the article. At the request of the customer, FAA Form 337 may be completed instead of or in addition to the maintenance release approval for return to service.

Approvals of Major Alterations

In all cases where a major alteration is involved, FAA form 337 will be completed per Title 14 CFR §43.9, appendix B, as prescribed by the FAA administrator.

The Satellite Repair Station personnel authorized for the approval for return to service of aircraft will indicate such approval by signing the return to service (Block 7) on FAA form 337. Authorized personnel for the Satellite Repair Station are listed on the Satellite Repair Station roster. Appropriate entries shall be made in the aircraft records pertinent to the alterations accomplished.

Existing and Pending FAA Approved Data

The Part 145 Accountable Manager shall be responsible for coordinating with the Chief Inspector to establish a data package in support of major alterations or repairs. Once this data package is acquired, it shall then be forwarded to the Chief Inspector to review for completeness.

If it is determined that a major alteration or repair requires a field approval, the Chief Inspector will contact the CHDO and submit a Field Approval request along with a data package either electronically or in writing. Upon FAA approval of FAA form 337, the Part 145 Accountable Manager shall be responsible for establishing that the alteration was made in accordance with the requirements of the approved data and that a conformity inspection was performed.

Final Inspection Procedures

All articles, after maintenance, preventive maintenance, or alterations, that need to be approved for return to service, will receive a final inspection. No aircraft or article may be released for return to service until the work order, applicable FAA airworthiness directives, and/or other related records have been reviewed for completeness and received final acceptance by the Chief Inspector.

For final inspection, prior to approval for return to service, the work order will be audited by the assigned lead mechanic to determine that all work has been inspected as required for compliance with this inspection system. The work order will then be forwarded to the Chief Inspector for final audit and approval for return to service.

The Chief Inspector or satellite repair station designee will perform the final inspection. The authorized Inspector will audit the records package as identified by the work order to determine that all work has been inspected as required, perform a complete inspection of the article for the work performed, and make an airworthiness determination. The authorized Inspector will indicate affirmative findings by initialing the final inspection block of the Satellite Repair Station work order cover sheet, Form MHI 002. If the article is accepted as complete and airworthy, the authorized Inspector will identify the article and its airworthiness by attaching the Satellite Repair Station serviceable tag or by making the appropriate logbook entry, as required. This approval will be completed, as appropriate, to the work accomplished, the article involved, the records available with the article, and the statement of work.

The authorized Inspector will notify the Part 145 Accountable Manager that the article is complete and returned to service. The work order will be turned into the Chief Inspector for review. The work order will then be archived.

Work Sign-off

These procedures apply to all personnel that perform maintenance, preventive maintenance, and/or alterations at the Satellite Repair Station. It is the responsibility of the Part 145 Accountable Manager to ensure maintenance personnel are following these procedures. It is the responsibility of the Chief Inspector to ensure that all authorized inspectors at the Satellite Repair Station are following the work sign off procedures.

All articles for which the Satellite Repair Station has performed maintenance, preventive maintenance, and/or alterations must have proper work sign offs in accordance with Title 14 CFR §43.9 and §43.11 and §145. All work performed on articles must have clear traceability to the person who performed the work.

Maintenance personnel must provide a description of the work performed; provide the date of completion, and a signature or initials on the Part 145 Work Sheet (MHI Form 005) and any associated documents for work performed. This is not the approval for return to service, but is a record of maintenance performed. The authorized Inspector will then inspect the article to assure the work was performed in accordance with approved, or acceptable technical data, and affix their signature or initials on the Part 145 Work Sheet (MHI Form 005) and any associated documents. The inspection personnel who inspected the work will follow the "Approval for Return to Service" procedure of this manual.

Approval for Return to Service

These procedures apply to all inspection personnel who perform approvals for return to service after the performance of maintenance, preventive maintenance, and/or alterations of aircraft or articles for which the Satellite Repair Station is authorized. It is the responsibility of the Chief Inspector to ensure the authorized inspectors at the Satellite Repair Station follow these procedures.

Maintenance release or approval for return to service can only be performed by inspection personnel who are authorized by the Chief Inspector. Maintenance release or approval for return to service can be accomplished by the following:

- Satellite Repair Station serviceability tag;
- FAA form 337;
- Logbook entries;
- FAA form 8130-3 (form tracking number, is the work order number followed by a dash and sequential number per article in the work order being returned to service. If there is only 1 article it will be -1);
- Historical record entry.

Maintenance release or approval for return to service is only performed for the work completed.

The inspection personnel that performed the maintenance release or approval for return to service must review the description of work performed for accuracy and completion, record the date the article is approved for return to service, sign their name, and affix the appropriate Satellite Repair Station certificate number on the maintenance release or the approval for return to service documentation.

Maintenance Release Statement for Major Repairs and Alterations

A maintenance release statement (stamp and/or preprinted tag may be utilized) shall be prepared in accordance with Title 14 CFR §43, and will be used to release to service major repairs and alterations that have been accomplished by the Repair Station. Other records required by Title 14 CFR §43.9 will be executed as required, regardless of whether an FAA form 337 or maintenance release has been used to return the article to service.

Aircraft Logbook Entry for Maintenance Check Flight and Return to Service

A logbook entry will include the following or similarly worded statement below. (The use of altered, inspected, and/or repaired shall be as applicable for that particular return to service).



Maintenance Release for Return to Service

The aircraft identified above was altered, inspected, and/or repaired in accordance with current maintenance rules of the Federal Aviation Regulations and is approved for return to service for work performed. Pertinent details of the work performed are on file at this Satellite Repair Station under Work Order No. _____.

Signature: _____ Date: _____

For: MARITIME HELICOPTERS

FAA Certified Satellite Repair Station CRS# _____

1915 Donald Ave. Fairbanks, AK 99701

Maintenance Release for the Purpose of Maintenance Check Flight

The aircraft identified above was altered, inspected, and/or repaired in accordance with current maintenance rules of the Federal Aviation Regulations. This aircraft is in a condition for safe operation and considered released for the purpose of a maintenance check flight only. Pertinent details of the work performed are on file at this Satellite Repair Station under Work Order No. _____.

Signature: _____ Date: _____

For: MARITIME HELICOPTERS

FAA Certified Satellite Repair Station CRS# _____

1915 Donald Ave. Fairbanks, AK 99701

Not Approved for Return to Service

These procedures apply to all inspection personnel who reject aircraft, components, and items for return to service after the performance of maintenance, preventive maintenance, and/or alterations of aircraft or articles for which the Satellite Repair Station is authorized. It is the responsibility of the Chief Inspector to ensure the authorized inspectors at each Satellite Repair Station follow these procedures.

A logbook entry will include the following or similarly worded statement below. (The use of altered, inspected, and/or repaired shall be as applicable for that particular not approved for return to service).

"The assembly listed above was not returned to service as an assembly at this time. The serviceable components of this assembly were removed and returned to stock as serviceable under this work order. The work order is now closed. Work Order No. _____."

Signature: _____ Date: _____

For:

MARITIME HELICOPTERS

FAA Certified Satellite Repair Station CRS# _____

1915 Donald Ave. Fairbanks, AK 99701

"The component/assembly noted above has been rejected and removed from service. The work order is now closed. Work Order No. _____."

Signature: _____ Date: _____

For:

MARITIME HELICOPTERS

FAA Certified Satellite Repair Station CRS# _____

1915 Donald Ave. Fairbanks, AK 99701



"The component/assembly noted above has been forwarded to a repair facility for recertification and thus is not approved for return to service at this time. The work order is now closed.

Work Order No. _____."

Signature: _____ Date: _____

For:

MARITIME HELICOPTERS

FAA Certified Satellite Repair Station CRS# _____

1915 Donald Ave. Fairbanks, AK 99701

"The aircraft identified above was altered, inspected, and/or repaired in accordance with current maintenance rules of the Federal Aviation Regulations and is NOT approved for return to service at this time. The work order is now closed. Pertinent details of the work performed are on file at this Satellite Repair Station under Work Order No. _____."

Signature: _____ Date: _____

For:

MARITIME HELICOPTERS

FAA Certified Satellite Repair Station CRS# _____

1915 Donald Ave. Fairbanks, AK 99701

Qualifying and surveying noncertificated person(s) who perform maintenance, preventive maintenance, or alterations for the Repair Station.

All noncertificated person(s) must follow Maritimes Repair Station QCM. Maritimes Repair Stations shall remain directly in charge of the work performed by any noncertificated person(s). All work performed by the noncertificated person(s) shall be verified by testing and/or inspection that the article is airworthy before approving it for return to service.

The noncertificated person(s) shall allow the FAA to inspect or observe work being performed on any articles for Maritimes Repair Stations.

It is the responsibility of the Chief Inspector to ensure each Repair Station authorized inspectors follow these procedures.

5 Calibration of Measuring and Test Equipment

Calibration Program

The Part 145 Accountable Manager has the administrative oversight responsibility for the calibration program. Precision tools and test equipment used in the maintenance and alteration of aircraft or articles in the Satellite Repair Station are tracked by the Part 145 Accountable Manager. When using precision tools and equipment, it is the end user's responsibility to ensure what they are using is within calibration.

Handling and Records

Company owned precision tools and test equipment that are used for returning an aircraft or article to service will be calibrated in accordance with the applicable manufacturer's specifications. All certifications and tests performed will be traceable to the NIST (or equivalent) standards. MHI Satellite Repair Station maintenance personnel will inspect tools or equipment prior to use to ensure the item has not exceeded its recalibration date.

A file system is maintained to properly identify the equipment and record the testing or calibration date of each individual piece of precision equipment. This file shall contain a listing of these tools and any documentation, such as the vendor's calibration certification, regarding the last inspection. The next inspection due date shall also be maintained by the manager of hanger operations. Calibration records of precision tools and test equipment located at the Satellite Repair Station records shall be maintained at that station.

When calibrated tools are received into the Satellite Repair Station, a calibration control sticker will be present on each item. Tooling being received back from a calibration vendor shall be quarantined if certifications and tests performed are not traceable to the manufacturer or NIST (or equivalent) standards. If an item is too small or it is otherwise impractical to affix the calibration control sticker to the tool it may then be affixed to the tool's container. This sticker shall specify the tool serial number, date that the tool was calibrated, the date recalibration is due, and identify the calibrating vendor.

Equipment found to be missing a control sticker shall be given to the Part 145 Accountable Manager or designee for verification of calibration status. The Part 145 Accountable Manager may provide a replacement Calibration Sticker; Form MHI 016, with the above-mentioned information if the calibration is current.

Notification of Recalibration

Prior to the last working day of each month, the Part 145 Accountable Manager shall provide a listing via electronic communication to the owner of any equipment coming due calibration for the coming (next/subsequent) month. With regards to company owned tools, the Part 145 Accountable Manager shall hold responsibility. With regards to individually owned tools, the applicable individual shall hold responsibility. After the equipment is returned to the user from calibration, the individual receiving the equipment shall forward copies of all shipping documents and accompanying certificates of calibration (or equivalent documents) to the manager of hanger operations. These documents shall serve as proof of calibration, as well as, receipt of the item back from calibration.

In the event that any tooling or equipment has exceeded its recalibration date, is dropped or otherwise damaged, the item will be identified as "OUT OF CAL" (or similarly worded) with a rejected part tag, Form MHI 007. This shall be done immediately by the individual that discovers the tool, and quarantined until recalibration or repair is accomplished.

Personal Tool Policy

All precision tooling or test equipment owned by a MHI Satellite Repair Station employee will be documented and handled in accordance with this section. Any personal precision tools or test equipment that is not placed onto the calibration program shall be labeled "FOR REFERENCE ONLY." This equipment will only be used for troubleshooting, diagnostic, and preliminary testing, i.e., checking for continuity or the presence of voltage, non-precision measurements, etc. Any maintenance or inspection requiring adherence to a maintenance manual procedure that calls out specific measurements, tolerances, pressures, or electrical values shall be performed with the appropriately calibrated tool or equipment.

NOTE: Torque wrenches must be in calibration at all times.

Borrowed Precision Tools

In the event that it becomes necessary to borrow a precision tool, the calibration requirements listed above will apply. The MHI Satellite Repair Station mechanic shall be responsible to obtain copies of the calibration documents for the borrowed item from the lender for review by the manager of hangar operations. Personnel receiving the borrowed equipment will examine it for any physical defects or damage prior to use.

Examples of Calibrated and For Reference Only Tools.**Must Be Calibrated**

- All Torque wrenches
- A multimeter used to parallel generators in accordance with a Maintenance Manual procedure
- A caliper or micrometer used to determine a tolerance as called out by a Maintenance Manual
- The high- and low-pressure gauges on the nitrogen and oxygen bottle regulator
- The Tire pressure gauge
- A capacitance fuel quantity test set
- Pressure gauges used to check and /or adjust fuel and oil pressures

May Be For Reference Only

- Multimeter used to check continuity
- Caliper used to make measurements when laying out sheet metal repairs

Calibration Requirements

The maximum calibration interval for calibrated tool/test equipment is one year. At no time will any person be permitted to perform work on aircraft or articles using test equipment that is out of calibration. New items of precision test equipment will be reported to the Part 145 Accountable Manager for inclusion on the MHI Repair Station's tool calibration list. A copy of the dated sales receipt showing purchase of the item as new from the manufacturer, along with a calibration report traceable to NIST, will be kept on file with the manager of hangar operations. If a vendor calibration certificate is not available at purchase, the new tool must be sent out by the owner using the repair order procedure above for initial calibration.



6 Corrective Action on Deficiencies – CASS Program

Basic Goals of the Program

MHI has established and maintains a system for the Continuing Analysis and Surveillance (CASS) of the performance and effectiveness of its maintenance program that covers maintenance, preventive maintenance, other maintenance and alterations.

Title 14 Code of Federal Regulations (CFR) §145.211(c)(1)(ix) requires that certificated repair stations provide a description of the system and procedures used for taking corrective action on deficiencies. The details contained in this section describe the system and the procedures that MHI will utilize regarding taking corrective action on deficiencies.

The primary goal of the CASS program is to:

- Ensure continued airworthiness by controlling system and component reliability. This is achieved by using monitoring methods to establish realistic maintenance task and periods to measure deterioration or failure.
- Determine the reliability of systems and structures by monitoring and recording system and components malfunctions using condition monitoring as a primary measure of the effectiveness of processes laid down in the maintenance program.

Additional goals are:

- Recognizing the need for the corrective action and establish the method of corrective action and its effectiveness, thereby improving reliability. Corrective actions may include modification action, introduction of, or changes to life limitations (overhaul, retirement) introduction or revision of inspection requirement.
- Raising statistical evidence of reliability, upon which to base corrective actions and to assist in performance improvement negotiation with manufacturers, repair organizations and internal workshops, further improving reliability.

Correcting Deficiencies

When it is revealed that a component or system shows an excessive failure rate, an investigation is conducted to determine the cause.

The following areas are examined:

- Training
- Maintenance and Operations Procedures
- Test Equipment
- Manuals

Contact with and assistance from applicable manufacturers, vendors or other operators with similar equipment may be used to determine if the failure is inherent to the design. The results of the investigation, along with any recommended corrective action, are presented at the next CASS meeting.

When a corrective action is required for problems discovered by the CASS program, the committee will decide on the corrective action and delegate the responsibility of implementing the corrective action to the Part 145 department. Status of the corrective action will be reviewed at the next CASS meeting.

Problems concerning mechanical discrepancies, spare parts, scheduled maintenance, MEL items, etc. are discussed with the Accountable Manager and corrective action taken, if required.



The Compliance Action Notice or CAN Memo system may be used to initiate corrective action on deficiencies if immediate action is indicated. Revisions to maintenance programs, additional training, changes to policies and procedures, changes to time limitations, or other changes, will follow as necessary.

CASS Personnel

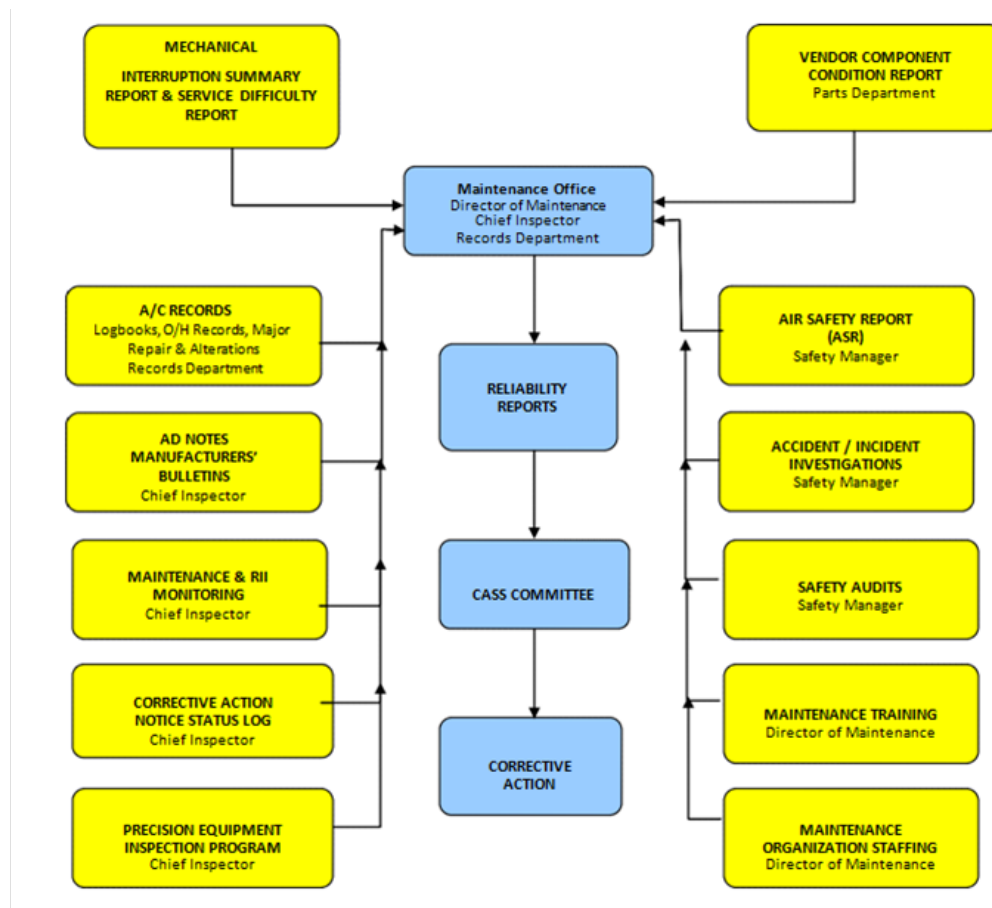
Accountable Manager

The Accountable Manager shall ensure that a Continuing Analysis and Surveillance System is introduced and operated to meet the requirements of MHI Inc. and Federal Aviation Regulations. The Accountable Manager also has the responsibility to ensure sufficient properly certificated, trained and authorized personnel are available and suitably assigned to perform the continued maintenance program, reliability, monitoring, and improvement functions. The Accountable Manager makes all assignments for surveillance and any subsequent investigations. The Accountable Manager shall delegate personnel to fulfill the duties and responsibilities of the program its self.

Chief Inspector

The Chief Inspector is responsible for ensuring procedures by which technical data is analyzed are in place and followed. The Chief Inspector also has responsibility for approving revisions to and determining compliance with the Part 145 Maintenance Program.

Program Flow Chart





CASS Processes

Surveillance - An information gathering/audit process that Maritime uses to collect data to measure Maritimes' program execution and results.

Analysis - An analysis process that Maritime uses to identify any maintenance program deficiencies and any necessary corrective actions.

Corrective Action - A planning process that Maritime uses to ensure that it implements its corrective actions.

Follow-up. A performance measurement process that Maritime uses to verify that its corrective actions are effective. This is also an information-gathering and analysis process, thereby closing the loop.

Surveillance

Initial and follow-up surveillance can and should have proactive and reactive aspects to them.

Maritimes' surveillance gathers data using an internal audit program to support measurement of performance (program execution). Maritimes' primary type of audit is work-in-progress that evaluates if the worker is following the manual, looking at areas such as manuals and other maintenance technical data, aircraft condition, actual in-process maintenance practices, training, publications, and ground operations.

Maritimes' analysis of operational performance data from a systems point of view can result in identification of a system's weakness before a specific unwanted event (such as an improper installation) occurs, which is a proactive process. Investigating and correcting an undesirable operational event related to the maintenance program after it has occurred, though reactive, also is a necessary and desirable procedure.

Data Analysis and Responsibilities

Maritime shall analyze the data to identify indications of maintenance program weaknesses. Additionally, Maritime gathers data that will support the measurement of effectiveness of the CASS program, generally a collection of flight operational data such as accidents/incidents, mechanical delays and cancellations, in-flight engine shutdowns, unscheduled landings, engine performance, pilot logbook write-ups, and unconfirmed components or parts removals.

Corrective Action

Based on the results of the analysis, MHI develops a corrective action, if necessary, taking human factors into account so that its corrective action is likely to be successful. Once it is determined what the corrective action is, Maritime will develop and implement a corrective action plan, record it, then follow-up to measure effectiveness.

Follow-up Measurement Process

Using the data collected by the CASS, a System Reliability Report is compiled and published quarterly unless otherwise requested.

The report contains data collected from aircraft records, Service Difficulty Reports, Mechanical Interruption Summary Reports, Aircraft Safety Reports, and Vender Component Condition Report.

Follow-up measures shall include;

- Repetitive defects are monitored on a continuous basis by the Accountable Manager and the Chief Inspector. Findings and actions are evaluated and presented at quarterly CASS meetings.
- Actions requiring change to the Part 145 Maintenance Program are presented by the Chief Inspector at the CASS meeting.



- Review of operator's reliability reports, OEM requirements and warranty reports are carried out on a progressive basis. An overview of findings is reviewed at the CASS meeting where appropriate.
- Where an item of significance is noted, the Accountable Manager or the Chief Inspector will notify the CASS Committee of the detailing the cause and summarizing initial investigation actions.
- The Air Safety Report log is reviewed by the CASS Committee for any required resultant actions.
- Comparison of operational reliability is made with established or allocated standards where appropriate.
- The Accountable Manager or the Chief Inspector recommend changes to the Maintenance Program pertaining to possible maintenance practices to improve reliability and recommend changes to overhaul/repair agencies, if considered necessary, at the CASS Committee Meeting.

Risk-Based Decisions

Maritimes' CASS takes into account the need to manage risk to an acceptable level, as well as the practical limitations that the Maritime must face when addressing deficiencies. Consequently, Maritime will set priorities and make choices for planning audits and other information-gathering activities, analyzing data, and selecting and implementing corrective actions. Maritime shall tie setting such priorities directly to a risk assessment process, so that the resulting maintenance program achieves its objectives.

Scope of CASS

- Airworthiness responsibility,
- Part 145 Maintenance, Maritime CAMP/AAIP and Maintenance Manuals,
- Maritime maintenance organization,
- Accomplishment and approval of maintenance and alterations,
- Maintenance schedule,
- RII's,
- Maintenance recordkeeping system,
- Contract maintenance,
- Personnel training, and
- CASS.

Attributes of System Safety

- Clear authority,
- Clear responsibility,
- Specific written procedures,
- Effective controls,
- Performance measures, and
- Well-defined interfaces.

CASS Design

Maritime shall not divide responsibility/authority into two or more parts due to the likely possibility that activity such as auditing and operations data analysis are poorly coordinated. Maritimes' CASS committee ensures good communications and coordination of all CASS functions, maintaining regular senior level management involvement. This oversight group provides a form of control over critical aspects of Maritimes' CASS operation and measure the performance and effectiveness of the CASS itself.

CASS Meetings

In addition to the many elements within Maritimes' maintenance organization, there are many interfaces between the CASS and functions or organizational elements of Maritime that are outside



maintenance. Interface occurs at quarterly CASS meetings. Included in the CASS program meetings are flight operations and safety.

When a corrective action is required for problems discovered by the CASS program, the committee will decide on the corrective action and delegate the responsibility of implementing the corrective action to the appropriate department. Status of the corrective action will be reviewed at the next CASS meeting.

Repetitive defects are monitored on a continuous basis by the Accountable Manager and the Chief Inspector. Findings and actions are evaluated and presented at quarterly CASS meetings. Actions requiring change to the Part 145 Maintenance Program are presented by the Quality and Safety Manager, or his designee, at the meeting.

CASS review's reliability reports, OEM requirements and warranty reports on a progressive basis. An overview of findings is reviewed at the CASS meeting where appropriate. Where an item of significance is noted, the Accountable Manager or the Chief Inspector will notify the CASS Committee of the detailing the cause and summarizing initial investigation actions. Comparison of operational reliability is made with established or allocated standards where appropriate.

Procedural accomplishments are reviewed by CASS committee. The committee consists of the following, or in their absence, their designee:

- Accountable Manager
- Chief Inspector
- Director of Operations
- Safety Manager

Problems concerning mechanical discrepancies, spare parts, scheduled maintenance, MEL items, etc. are discussed with the Accountable Manager and corrective action taken, if required.

The Compliance Action Notice or CAN Memo system may be used to initiate corrective action on deficiencies if immediate action is indicated. Revisions to maintenance programs, additional training, changes to policies and procedures, changes to time limitations, or other changes, will follow as necessary.

Minutes or reports of all CASS meetings are maintained by the Quality and Safety Manager and shall contain the following information:

- Date of the CASS meeting.
- Personnel present at the CASS meeting.
- Findings noted during the month.
- Corrective actions taken.

When the item is repaired and returned to service condition, a report is completed and forwarded to the Maintenance Office.

Status of investigations.

The Committee also meets when the Accountable Manager or Chief Inspector deems it is necessary to consider emergency situations such as engine failures, critical structural failures, or other



emergency items to determine the cause, corrective action necessary. The committee shall make an assessment if any action needs to be taken to prevent reoccurrence.

The total effectiveness of the program is reviewed annually by the CASS Committee and the technical staff. Any change or adjustment to the method or procedure is made as necessary. This provides a form of control over critical aspects of Maritimes' CASS operation and measure the performance and effectiveness of the CASS itself.

Committee meetings are held quarterly to review all information and data, and to initiate appropriate corrective action as required. In conjunction with the CASS meetings, all previous action taken by the Committee is evaluated to determine if any changes or adjustments are necessary.

When it is revealed that a component or system shows an excessive failure rate, an investigation is conducted to determine the cause, the following areas are examined:

- Training
- Maintenance and Operations Procedures
- Test Equipment
- Manuals

Data Identification

The quantity of maintenance log defects is recorded by the CASS. All unscheduled removals are recorded in part number and description order with the following details:

- Manufacturer's part number and serial number
- Aircraft and position
- Date of installation, removal and repair
- Reported defect
- Hours and cycles run
- Workshop report findings
- Approved life or monitored "on condition"

System Reliability Report

Using the data collected by the CASS, a System Reliability Report is compiled and published quarterly unless otherwise requested. The report contains data collected from aircraft records, Service Difficulty Reports, Mechanical Interruption Summary Reports, Aircraft Safety Reports, and Vender Component Condition Report.

Report distribution goes, as a minimum, to attendees of the quarterly Continuing Analysis and Surveillance Committee meeting.

Either Maritime or shops of a certified Repair Station complete the teardown reports. Shops complete these reports when the subject item is removed for the following reasons:

- Unscheduled removals.
- Scheduled removals that have unusual condition (wear, corrosion, etc.)