Maritime Helicopters

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FAIRBANKS SATELLITE REPAIR STATION

QUALITY CONTROL MANUAL

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Record of Revisions

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Upon receipt of revisions, insert the revised page(s) in the manual and remove the replaced pages. Enter the insertion date and initials of the person incorporating the revision in the appropriate block on the Record of Revisions. . Return the Revision Notice/Acknowledgment Form MHI 019 to the Part 145 Floor Manager. This manual will be revised in accordance with Chapter 2 of this manual.

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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 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. The change bar is dropped at the next revision of that page.

2.1 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.

The Part 145 Accountable Manager shall be responsible to maintain MHI Master Manual Distribution List, Form MHI 020, listing individuals that have been assigned manuals in paper format. The listing shall indicate the name of the individual, name of the manual, manual number, revision number, and the date the completed Revision Notice/Acknowledgment, Form MHI 019 was received.

2.2 Paper Format

Hard copy manuals shall be issued by the Part 145 Accountable Manager under a manual control number and revision notification controlled by the Revision Notice/Acknowledgment, Form MHI 019 indicating receipt of revision and incorporation into the manual. Manual holders shall be responsible to insert revisions, update the Record of Revisions page by entering the Revision Number, Date, Date Inserted, Revisions Inserted By, and return the completed Revision Notice/Acknowledgment, Form MHI 019 to Part 145 Accountable Manager to indicate the manual has been revised.

2.3 Web Based

Web based company manuals maintained by the Part 145 Accountable Manager will be placed on the Maritime Helicopters company maintenance Portal. http://www.rotor-apps.com/MHI/manuals1.html 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.

3.1 Maintenance and Control of Technical Documents

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 Satellite Repair Station is current.

The Chief Inspector will maintain a listing of technical publications maintained by MHI. This listing records 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.

Technical Publication Listing (MHI Form TL-0001) will be used for this purpose. Form TL-0001 will be completed by the Chief Inspector or his/her designee and will be maintained by the Chief Inspector.

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 Satellite Repair Station order work package, the Part 145 Accountable Manager will initiate verification of Technical Publication Listing which will be presented to the Chief Inspector to perform (or assign to be performed). The Chief Inspector shall ensure that the technical data available to MHI personnel to be utilized for the particular product being maintained is current.

If completion of MHI Form T L-0001 cannot be verified in its entirety before starting work on the product, an entry will be made by the Chief Inspector, or his designated inspector, on MHI Part 145 Work Sheet MHI Form 005 similar to “prior to return to service of this product, a verification of the manual(s) revision status used during completion of the work contained in service order (enter work order number) is required.” If any work was conducted to an out-of-date procedure, the work must be re-accomplished or validated to the correct revision status procedure prior to returning the product to service.

The completed MHI Form TL-0001 will be retained in the work order.

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: MHI shall obtain information regarding customer-supplied technical data

Any documents not maintained under a revision service 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

4.1 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.

4.2 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/TPM/Forms Manual);
- 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-0005).

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-0005 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 Roster of Management, Supervisory and Authorized Inspection Personnel (Form QA-0041).

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.

4.3 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.

4.4 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.

4.5 Maintenance Inspection

Inspections will be accomplished in accordance with the OEM's technical data, instructions for continued airworthiness 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.

4.6 Work Order Systems

Work Order – aircraft and/or articles inducted in the Satellite Repair Station facility will be recorded in a work order log, Form MHI 001. 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.

Upon receipt of the statement of work or original maintenance request, Quality Assurance will issue a company Satellite Repair Station work order. A work order cover sheet, Form MHI 002 will be initiated for authorization of work. This form is pre-numbered, and that number will be the basic reference for all required maintenance entries.

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.

4.7 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.

4.8 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.

4.9 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 CRF 43.9 signoff.

4.10 Continuity of Inspection Responsibility

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

4.11 Continuity of Maintenance Responsibility

For work in progress, an entry will be entered on an 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.

4.12 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.

4.13 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 routing tag Form HSF 009, or 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.

4.14 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 routing tag, Form MHI 009. 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 routing tag, Form MHI 009.
- 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 routing tag, Form MHI 009 or 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, routing tag, Form MHI 009, or Repairable Parts Tag, Form MHI 004 as appropriate, and stowed using the appropriate stand, rack or fixture.

4.15 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 8110-3 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 012, 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/produce is consumed under an MHI work order. These items with then 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 012 as indicated within the forms 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.

4.16 Suspected Unapproved Parts (SUPS)

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

AC 21-29C 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 21-29C (as revised).

4.17 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.

4.18 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.

4.19 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.

4.20 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.

4.21 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.

4.22 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.

4.23 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.

4.24 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.

4.25 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

4.26 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/HSR 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

5 Calibration of Measuring and Test Equipment

5.1 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 users responsibility to ensure what they are using is within calibration.

5.2 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 018, with the above mentioned information if the calibration is current.

5.3 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 hangar 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.

5.4 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.

5.5 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.

5.6 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

5.7 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

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.

Corrective action is taken to remedy a deficiency or an undesirable situation. Deficiency correction is an inherit part of MHI's improvement process, which may include new or improved policies and procedures requiring revisions to MHI manuals for identified discrepant areas.

MHI will record any deficiencies and their subsequent corrective action and submit it to the Chief inspector within thirty (30) days following completion. The Chief Inspector shall maintain a record of all deficiencies and corrective actions. Problems of immediate safety will be brought to the attention of the Lead in charge for immediate corrective action when discovered.

6.1 Terminology

- Corrective Action is an action taken to eliminate the cause of a detected deficiency, nonconformity or other undesirable condition to prevent recurrence.
- Preventive Action is an action taken to eliminate the cause of a potential deficiency, nonconformity or other potentially undesirable situation.
- Root Cause is a factual and systematic analysis of the deficiency/discrepancy/situation that identifies the underlying cause(s). A deficiency may have more than one root cause. An initial review of a situation may appear that the cause is obvious, however a detailed and factual root cause analysis may identify additional and potential underlying reasons that if not addressed, may cause the situation to recur.

6.2 Responsibility

The Chief Inspector has overall responsibility for the MHI corrective action program. Other individuals have supporting duties as noted.

Items identified by the Chief Inspector as potentially involving MHI serious subject matter will require the Accountable Manager to be immediately notified. If deemed necessary by the Accountable Manager, he/she will become the single point of contact to ensure a full resolution is obtained.

6.3 Taking Corrective Action On Deficiencies

Identification Stage

Deficiencies may be discovered during FAA surveillance, customer audits, or as a result of in-process or final inspection findings on a product prior to return to service, or as the result of a post return to service deficiency.

Deficiencies discovered during FAA, customer, and MHI internal surveillance shall be investigated and corrected. Immediate action will be taken to correct the deficiency, and a comprehensive solution formulated and employed to prevent recurrence of the deficiency.

Details of the Identification Stage will be noted by the Chief Inspector, Inspector or an assigned auditor for each identified deficiency. Each deficiency shall be assigned a sequential number and will be maintained in the Chief Inspector's office upon completion. There may be supplemented by additional attachments, notes, and/or copies of relevant documents, which will become part of the completed corrective action document file.

Analysis/Investigative Stage

Depending on the nature of the deficiency/situation identified, the department head having responsibility of the deficiency may assemble a small team of informed and involved individuals associated with the article/process, or who have particular experience or expertise with the subject. The department head may appoint a single contact or individual to act as a point person throughout the process.

The investigation shall be factual-based and typically begins with an analysis of the potential cause(s) of the deficiency.

MHI analysis/investigations will consider all aspects of the deficiency to determine if any systemic, procedural, policy, manual, human factors, or training deficiency(s) exist.

Although human factors may play a part, focus will also be placed on physical factors (i.e. workplace environment, facilities, equipment, and tooling), process factors such as clarity of instructions, and training/understanding of methodology for the work to be properly accomplished.

If the review indicates that an MHI procedure is deficient, the subsequent corrective action will be developed to include a thorough review and an improvement/revision of the procedure to fully remedy the deficiency.

If the review indicates that the personnel lacked training or qualifications, appropriate corrective action(s) will be developed addressing these items.

If the review indicates that physical factors (i.e. workplace environment, facilities, equipment, or tooling), MHI will develop a comprehensive plan to fully address such factor(s), and ensure a full remedy of the deficiency.

Details of the Analysis/Investigative are to be included in the Chief Inspectors deficiency records.

Corrective Action Stage

Corrective actions shall be developed to completely address the deficiency, considering action(s) to prevent recurrence of the deficiency or other similar events.

During the development of corrective actions, consideration shall be given to all potential contributing factors including, but not limited to procedures, training, equipment, tooling, environment, and human factors.

Details and facts established during the analysis/investigative stage provides the focus, definition, and direction that the subsequent corrective action(s) must contain to fully address the deficiency and prevent recurrence.

Depending on the complexity of the discrepancy, analysis, and the resultant corrective active, the team may find it necessary to perform a table-top or similar process/exercise to test-out the planned remedy prior to its implementation. This may need to go through several iterations to ensure the remedy is complete.

If a current process or procedure identified in an MHI manual requires revision (or the creation of a new process or procedure is required), the Chief Inspector will revise the applicable manual in accordance with the procedures of that manual. The Chief Inspector will solicit ideas and concepts from the individual/team that participated in the analysis/investigation stage for the development of the revised or new process/procedure.

Details of the corrective action are to be included in the Chief Inspectors deficiency records.

Chief Inspector Review

Once the analysis/investigative stage and the subsequent corrective action stage have been completed, the results will be presented to the Chief Inspector for his/her review.

The Chief Inspector will enter the date the deficiency was received for review.

If the information contained is acceptable to address the deficiency(s), the Chief Inspector will mark “YES” in the record, and enter any additional comments if/as necessary. A Corrective Action Follow Up will be scheduled and assigned.

If the information contained on the record is not acceptable to address the deficiency(s), the Chief Inspector will mark “NO” on the form, and return it to the appropriate department head for further disposition, until an acceptable corrective action has been developed and accepted by the Chief Inspector as indicated by marking “YES” on the record.

In the case of disputed acceptability of any form response, it will be forwarded to the Accountable Manager for final determination of acceptability.

Extensions may be granted when authorized by the Chief Inspector and noted on the record.

Record’s not completed prior to their extension due date will be brought to the attention of the Accountable Manager.

Depending on the nature of the corrective action, the Chief Inspector may need to consult and coordinate with the Accountable Manager.

The Corrective Action Follow Up process is essential to ensure corrective actions are implemented, effective, and remain in place to ensure the deficiency is not repeated.

Repeat Items

Upon initiating the deficiency record, the topic details of the deficiency/discrepancy will be compared against existing records to establish if the deficiency/discrepancy is a repeat finding.

If the deficiency/discrepancy is a repeat finding, it will require the development of additional corrective actions.

6.4 Corrective Action Follow Up

The Corrective Action Follow Up process is essential to ensure corrective actions are implemented, effective, and remain in place to ensure the deficiency is not repeated. Corrective Action Follow Up audits are performed by the Chief Inspector, an Inspector, or an assigned designee.

All corrective actions will require a corrective action follow up audit.

When allowable, there should be at least a minimum of thirty (30) days of elapsed time in between the implementation of a corrective action, and a follow-up audit to ensure the corrective action(s) remains in place and is functioning as designed. The specific time period is established at the conclusion of the corrective action process and is recorded on the Chief Inspectors deficiency records.

The follow up audit interval may be adjusted due to a specific model aircraft not in work, or a corrective action for a process not currently being utilized by MHI.

The individual conducting the follow-up audit will submit their findings, including the date accomplished and present to the Chief Inspector for review.

The Chief Inspector will review the results of the follow-up audit to ensure the Corrective Action plan was implemented and effective to prevent recurrence.

If the review of the follow-up audit demonstrates the Corrective Action plan was implemented and effective to prevent recurrence, the Chief Inspector will indicate so by signing and dating, thus closing the deficiency report record.

If the review indicates the Corrective Action plan was not implemented and/or not effective to prevent recurrence, then the deficiency report record will be routed back to the respondent to revise the corrective action plan. If this is not practical or possible, then an additional deficiency report record will be generated.

In the case of disputed acceptability of any deficiency report record response, it will be forwarded to the Accountable Manager for final determination of acceptability, and coordination with the Chief Inspector.

6.5 Records

The Chief Inspector will maintain a file of completed deficiency report record’s including any associated documents for a minimum of three (3) years.