



# Maritime Helicopters

## RII REPAIRMEN INSPECTOR TRAINING



# PURPOSE

The Repairmen RII inspector is not there to perform maintenance. Their job is to place a second set of eyes for any obvious issue such as safety's missing, parts not installed or installed incorrectly, correct torques where used and there is no FOD left in the area before any cowling or panels are reinstalled.

The Repairmen is not there to recheck, rigging or correct hardware was used. These are the mechanics responsibilities. The Repairment is used to verify critical processes were observed and proper parts, i.e. filters installed, tools are in calibration and final checks such as cable tensions after locking turnbuckles are performed.

Additionally, they ensure all the proper maintenance entries have been made and their RII signoff has been entered into the Log Book.

If you are unsure of the task, have the mechanic review what the job entailed, what was removed and reinstalled and what checks had to be performed during and after to ensure airworthiness.

You are the last set of eyes before that aircraft fly's. When in doubt, ask the mechanic to explain the job and what reference material they used.

# RII TRAINING

Required Inspection Personnel (RII) are required by CFR 135.427 (b) and required for aircraft with seating configurations of 10 or more seats. RII Repairmen are designated by the Chief Inspector. The Chief Inspector has the overall responsibility of administration the Required Inspection Item (RII) program.

For each model aircraft authorization sought, each designated RII Repairmen Inspector must have:

- A FAA issued Repairmen Certificate,
- Successfully completed the Maritime Helicopters Inc. RII Initial Repairmen Training course and passed the written examination,
- A MHI issued RII Inspection Authorization Card.

Maritime Helicopters utilizes A&P mechanics or in the case of aircraft operating in a remote location, Repairmen with an FAA issued Repairmen Certificate. For Repairmen, an RII qualification card is also issued by Maritime Helicopters Inc. and is only valid for MHI aircraft and for what airframe is identified on the back of the MHI RII card.

Annual recurrent RII training is required for all Maritime Helicopters Inc. RII card holders. The Chief Inspector maintains the roster of RII personnel in the Maintenance Office. This roster includes name, certificate number, initial training date and latest recurrent training date.

# RII TRAINING

All perspective RII Repairmen inspectors shall go thru the RII Repairmen training program to include testing. A minimum score of 70% is required. The Repairmen inspector shall be added to the RII Roster upon successful completion of the course and issued a Maritime Helicopters RII Inspector Authorization Card.

Sample RII Inspection Authorization Card;

Front

|                                                                                                                                                                                                                                                                                                                                      |                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| <b>Maritime Helicopters, Inc.</b>                                                                                                                                                                                                                                                                                                    |                                     |
| <b>RII INSPECTION AUTHORIZATION</b>                                                                                                                                                                                                                                                                                                  |                                     |
| This is to certify that {name} certificate number <u>XXXXX</u> is authorized to exercise the privileges of the RII Inspector in accordance with the Maritime Helicopters Crewmember RII Training Program, has demonstrated competency in this area and accepts the responsibilities of a Maritime Helicopters limited RII Inspector. |                                     |
| _____<br>Repairmen Signature                                                                                                                                                                                                                                                                                                         | _____<br>Chief Inspectors Signature |
| _____<br>Date                                                                                                                                                                                                                                                                                                                        |                                     |

Back

| Date     | Authorized Aircraft                                                      |
|----------|--------------------------------------------------------------------------|
| 00/00/20 | DHC-6 RII Inspector<br>Crewmember RII Training<br>Program - Rev Original |
|          |                                                                          |
|          |                                                                          |

# Duties and Responsibilities

Required inspection items shall be inspected by designated Repairmen inspection personnel using manufacturer's manuals. The method of performing these inspections constitutes a visual inspection at critical steps of the work in process and upon completion of the work. The technician performing the work has the responsibility to have his work inspected by an RII inspector at critical stages.

An RII Repairmen must:

- a. Verify all critical processes
- b. Verify all rigging dimensions and adjustments
- c. Verify all hidden torques and safeties
- d. Look for any FOD before giving the OK to close any access panels/cowlings
- e. Ensure the use of:
  - i. Proper parts
  - ii. Proper materials
  - iii. Proper procedures

In all cases, required inspection items will be visually inspected to ensure said items are in an airworthy and safe condition.

# Duties and Responsibilities

- RII items have been inspected for security, proper installation, safety's/cotter keys in place and area clear of FOD.
- Torque wrenches have a current calibration sticker on them.
- RII task cards and MM Inspection cards have been signed and initialed.
- All tools have been accounted for.
- Any required leak checks have been performed.
- RII entries have been made in the logbook.

# CAMP PROGRAM

# CAMP PROGRAM COMPONENTS

- CASS Program
- Audits - Data Collection
- Maintenance Inspection Cards
- Proper Logbook Entries
- Proper Tagging of Parts
- Specific Requirement for each RII Item

# Continuing Analysis and Surveillance Program

## GENERAL DESCRIPTION

The Maritime Helicopters Inc. Continuing Analysis and Surveillance System was developed in accordance with FAR 135.431. It provides for the analysis of maintenance programs, alteration procedures, equipment, personnel training, and mechanical performance and contract agencies. This program is applicable to aircraft type certificated for a passenger seating configuration of ten seats or more, excluding any pilot seats.

## BASIC GOALS OF THE PROGRAM

The Primary goal of the 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.

To establish and 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.

# AUDITS

## Data Collection

- Aircraft Records
- Service Difficulty Reports
- AD's
- Malfunction or Defect Reports (FAA Form 8010-4)
- Mechanical Interruption Summary Report
- Vendor Reports
- Compliance Action Notices

# ANALYSIS AND CORRECTIVE ACTION

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.

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 CAS 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.

Problems concerning mechanical discrepancies, spare parts, scheduled maintenance, MEL items, etc. are discussed with the Director of Maintenance 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. 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

# LOGBOOK ENTRIES

The Helicopter Log Book along with the Deferred Maintenance Log constitutes the Aircraft Maintenance Log required by CFR 135. All non-cosmetic discrepancies and the corrective action taken shall be recorded in the Helicopter Log Book. All Log Book pages will be stored in the maintenance office and in the appropriate binder assigned to that aircraft. 135.65 (b)(c) & 135.439).

# LOGBOOK ENTRIES

## Record Entry Requirements

Each person who maintains, performs preventative maintenance, rebuilds or alters an aircraft, aircraft engine, propeller, appliance, or component part shall make an entry in the maintenance record of that component [in the event of engine maintenance, an entry will also be placed in the airframe log book]. An appropriate certificated mechanic or Repair Station shall provide an airworthiness release. The appropriate maintenance entry will contain the following information (ref. CFR Part 43.9).

A complete description (or reference to data acceptable to the administrator) of the work performed to include:

If time tracked parts are replaced; aircraft total time, part(s) removed and part(s) installed complete with description, part number, serial number, part total and/or TSO time, etc.

NOTE: Appropriate serviceability data must accompany corresponding maintenance entries (if applicable).

- The date of completion of the work performed.
- The name of the person performing the work.

# LOGBOOK ENTRIES

Examples of maintenance entries:

- **Discrepancy:**

05/12/97, 2449.0 hours aircraft total time. Removed main rotor retention cap P/N 123-456-789-001, S/N AMC80112 (component total time 9999.0 hours) due to 10000.0 hour retirement interval.

- **Corrective Action:**

Installed serviceable main rotor retention cap P/N 123-456-789-001, S/N AMC-80155 (component total time 1500.0 hours). Maintenance was performed in accordance with BHTI Maintenance Manual Volume XXX, 65-00-22, paragraph 65.02. {Signature of certified A&P Mechanic or an FAA Certified Repair Station holding the proper rating (Appropriate certificate number.)

# LOGBOOK ENTRIES

- **Discrepancy (as a result of maintenance performed):**

(Made by certified A&P Mechanic or an FAA Certified Repair Station holding the proper rating, if operational check flight is required according to CFR Part 91.407 or Paragraph I of the Maintenance Operational Check Flight Procedure):

05/12/97, 2499.0 hours aircraft total time. Maintenance operational check flight is due for the replacement of main rotor retention cap (maintenance performed or alteration made) according to the requirements of [CFR Part 91.407 (b) or Manufacturer (quote page and paragraph number) ]. {Signature of certified A&P Mechanic or an FAA Certified Repair Station holding the proper rating (Appropriate certificate number.)

- **Corrective Action (after maintenance operational check flight):**

(Made by designated pilots in command who have a current CFR 135.293 (a) (b) letter of competency on the make and model aircraft requiring the maintenance operational check flight or a pilot approved by the company.)

05/12/97, 2449.0 hours aircraft total time. Conducted maintenance operational check flight for the replacement of main rotor retention cap as required by BHTI Maintenance Manual Volume XXX, 65-00-22, paragraph 65.02. Aircraft returned to service. {Signature of pilot} (Appropriate certificate number).

# LOGBOOK ENTRIES

## **Buy Back Procedures**

In the event that the RII Repairmen does not approve the item of work, he will not sign off the required inspection, and will advise the technician who accomplished the item of work of the discrepancies found. The technician will then remedy the discrepancies and the inspector will repeat his inspection function. This procedure will be referred to as the “Buy-Back” procedure, and will be repeated until the item of work has been satisfactorily accomplished.

Discrepancies found by the RII Repairmen Inspector must be entered in the aircraft logbook, if that inspector cannot ensure he will see the “Buy-Back” procedure through to completion.

In the event that any required inspection is not completed as a result of work interruptions, the RII Inspector will make an entry on the appropriate form (logbook, etc.), stating the required inspection is incomplete, and a brief description of the reason why it is incomplete.

If any company authorized RII Repairmen finds an item which is questionable, the Chief Inspector or Director of Maintenance shall be consulted and shall have final authority to approve the aircraft for return to service or take other necessary action.

# LOGBOOK ENTRIES

The authorized RII Repairmen inspector's signature constitutes the approval for return to service.

If an RII inspection is required, it will be entered in the aircraft logbook as a separate entry.

If a pilot operational check is required it shall also be entered in the aircraft logbook as being due, as a separate entry. The pilot's signature at the completion of the maintenance operational check returns the aircraft to service.

The technician performing the work shall have a company authorized RII Repairmen RII perform the inspection of the required inspection item. The technician performing the work may not perform the required inspection.

**NOTE:** It is the responsibility of the maintenance technician performing the work to have that work inspected prior to approving the aircraft for return to service.

# Paperwork

The RII repairmen shall utilize the Task Cards in the Repairment Training Program for all RII tasks performed.

As each step is verified, they will initial that step in the Task Card for that job. Additionally, they will initial the Inspection Card being used from the CAMP Maintenance Manual. The information for the particular MM RII item is above the Task in the reference column. In this case, it is A 0125.11.5

## RII Task Card R 06

|     |                                                                        |             |                  |
|-----|------------------------------------------------------------------------|-------------|------------------|
| 1.4 | Verify installation L/H high pressure fuel filter element. Leak check. | A 0125.11.5 | Your<br>Initials |
|     |                                                                        |             |                  |

## DHC6 CAMP Maintenance Manual

| MAINTENANCE ACTION                          |                                                                                                                | REF | MECH<br>INITIALS | RII<br>INITIALS  |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------|-----|------------------|------------------|
| A 0125.11 73 - ENGINE FUEL AND CONTROL - LH |                                                                                                                |     |                  |                  |
| 11.5                                        | Remove High Pressure fuel filter element, inspect and install.<br>Clean or replace as required and leak check. |     | Joe<br>Mech      | Your<br>Initials |

# Paperwork

Once the mechanic has completed the inspection he will sign of the MM Inspection Card.

The Repairmen that performed the RII, in addition to initialing the Task Card will also sign the bottom of the RII Task Card with a signature and their FAA Repairmen Certificate Number;

RII Repairmen Signature; \_\_\_\_\_

RII REPAIRMEN INSPECTION AUTHORIZATION CARD CERTIFICATE NUMBER; \_\_\_\_\_

The RII Task Card will then be attached to the MM Inspection card and will remain with the records.

NOTE All the other blocks in that particular task card need not be initialed, only the particular RII task performed.

# TAGGING OF PARTS

In accordance with FAA Regulations, all parts must be properly tagged.

Examples of serviceable as removed reasons may be; troubleshooting, needed on other aircraft, rental etc. If not serviceable:

Inappropriately marked repairable or unserviceable tags with terms like “wobbles”, “worn-out”, “loose”, “leaks”, “INOP”, etc. do not give an accurate description of the damage, nor do they indicate why a part was rejected.

# TAGGING OF PARTS

## Types of Component Tags

### Yellow Tag

The Yellow Tag, or Serviceable Tag, is used to identify items that are in an airworthy condition and are ready for return to service. The maintenance release on the back of the tag must be completed including work order number, if any, date, inspector signature and/or stamp, and what type of work that was performed.

Yellow tags have an installation information section which should be filled out by the technician installing the item on an aircraft. A technician may install a yellow tag on a part that has been repaired, overhauled, inspected, functionally tested, or removed in an airworthy condition.

The technician installing the item on an aircraft will attach the yellow tag to the back of the appropriate logbook page. This tag becomes part of the aircraft records.

# TAGGING OF PARTS

## Types of Component Tags

### Green Tag

The Green Tag, or Repairable Tag, is used to identify items that are repairable or require serviceability evaluation. These tags must be filled out completely and accurately. The green tag is disposed of by the technician when the item is ready for return to service.

### Red Tag

The Red Tag, or Unserviceable Tag, is used to identify items that are not airworthy and not repairable. This tag must not be removed until the item is destroyed.

Segregation shall be strictly adhered to between red tagged and yellow or green tagged components. A separate storage area will be designated and all red tagged components placed there until item is destroyed.

# RII SPECIFIC REQUIREMENTS

Maritime Helicopters Inc. will utilize RII task cards whenever available to perform RII inspections. RII task cards can be found in FAA approved Repairment Training Program.

RII task cards are specific to each individual maintenance procedure and clearly define all the critical steps that must be inspected during the particular maintenance action. Once completed the task card will be signed and returned to the records department with the applicable log page or work order, if done by an approved repair station.

Should an RII task card not be available for a particular task the maintenance department shall be notified in writing within 24 hrs. A task card will then be created for the particular task.

# RII SPECIFIC REQUIREMENTS

Click on the Link below and review the RII Task Cards in Appendix B of the Repairmen Training Manual

## TASK CARDS

Individual Task Card are specific to specific individual maintenance procedures and clearly define all the critical steps that must be inspected during the particular maintenance action .



# Maritime Helicopters

RII INSPECTOR TRAINING  
END OF PRESENTATION