

FAA/HSAC PART 135 SYSTEM SAFETY RISK MANAGEMENT SAFETY ELEMENT 4.2.2 - RII TRAINING REQUIREMENTS (AW) JOB AID

The Federal Aviation Administration (FAA) is proactively moving away from compliance-based safety surveillance programs to Systems Safety Risk Management programs to eliminate air carrier's accidents and incidents. System Safety Risk Management programs was initial implemented with all CFR Part 121 air carriers and are now being applied to CFR Part 135 air carriers.

The FAA reached the limit of its ability of utilizing compliance-based oversight programs in 1996 for CFR Part 121 air carriers. Compliance-based oversight program repeated the same surveillance activities without identifying the actual root causes that could lead to an unsafe operating practice and/or accident. It was based on only looking at meeting the minimum standards established by the rules and regulations. To react to any identified unsafe condition, new rules and regulations had to be enacted, which could expand over many years. The compliance-based oversight system was not an effective means in reducing the causal factors that lead to air carrier accidents.

System Safety Risk Management program, known as Surveillance Evaluation Program (SEP), was implemented in 2001, for CFR Part 121 air carriers to assess how an air carrier operations and maintenance organizations were operating as an integrated whole safety system. For their system to be considered safe, they have to be proactive in identifying potentially unsafe hazards and risk and mitigate it to a safe state. Safety must be built into the air carriers systems by addressing the FAA's primary seven System Elements and their associated sub-elements. Each System Element identifies questions regarding the effectiveness of that system by addressing the following topics of: Responsibility, Authority, Procedures, Control, Process Measurement, and Interfaces.

In 2004 the FAA and the Helicopter Safety Advisory Conference (HSAC) established a workgroup to assess the reasons for the increase of helicopter accidents occurring in the Gulf of Mexico and develop intervention strategies. From this workgroup four of the primary root causes of Gulf of Mexico Helicopter accidents were; "Failure of Equipment/Components", "Lack of Maintenance Supervision", "Lack of Proper Procedures – Maintenance", and "Not Following Proper Procedures – Maintenance". These root causes resulted in the development of intervention questions for each of the applicable System Safety Attributes under System Safety Element 4.2.2 Required Inspection Items (RII) Training Requirements.

The primary Safety Attribute questions defined within the System Safety Element will determine if an Operator's Policies and Procedures are adequately defined in having a System Safety program; the ability to identify Risk in its daily operations; and being able to mitigate that risk to prevent the future occurrences and/or accidents.

**FAA/HSAC PART 135 SYSTEM SAFETY RISK MANAGEMENT
SAFETY ELEMENT 4.2.2 - RII TRAINING REQUIREMENTS (AW) JOB AID**

ELEMENT SUMMARY INFORMATION

A “YES” response to the questions means compliance with the statement or indicates the requirements were met. A “NO” response always indicates a negative response to the question and also means the requirements were not met. The air carrier is not complying with the requirements of the Safety Attribute question or the system is weak or inadequate in the area being evaluated. An explanation should always occur with a “NO” response.

Specific Regulator Requirements (SRR):

- 135.411(a)(2) and (b) Applicability of Maintenance Programs
- 135.413 Responsibility For Airworthiness
- 135.419 Approved Aircraft Inspection Program
- 135.424 Maintenance, Preventive Maintenance, and Alteration Organization
- 135.425 Maintenance, Preventive Maintenance, and Alteration Programs
- 135.427 Manual Requirements
- 135.429 Required Inspection Individual

Other CFRs and/or FAA Guidance:

FAA Order 8300.10, Volume 2, Chapter 70, Paragraph 5 “Evaluate FAR 135.411(a)(2) Maintenance Training Program/Record”

FAA Order 8300.10 Volume 2, Chapter 70, Paragraph 11

FAA Order 8300.10 Volume 2, Chapter 70, Paragraph 14

FAA Order 8300.10 Volume 3, Chapter 36, Paragraph 7d “Monitor Continuous Airworthiness Maintenance Program/Revision”

AC 120-16C, Paragraph 6 – as revised “Continuous Airworthiness Maintenance Programs”

FAA/HSAC PART 135 SYSTEM SAFETY RISK MANAGEMENT
4.2.2 RII TRAINING REQUIREMENTS (AW)
SECTION 1 – RESPONSIBILITY ATTRIBUTE

Objective: To determine if there is a clearly identifiable qualified and knowledgeable individual who is accountable for the quality of the process.

To meet the objective, the auditor will accomplish the following task:

1. Identify the individual who is responsible for the quality of the RII Training Requirement processes.
2. Review the description in the manual that delineates the duties and responsibilities of the individual.
3. Evaluate the individual’s qualifications and work experience (or resume if appropriate).
4. Review the appropriate organizational chart.
5. Discuss the RII Training Requirements process with the individual.

To meet the objective, the auditor will determine and record answers to the following questions:

1. Is there a clearly identifiable individual in management who is answerable for quality of the RII Training Requirements process?	Yes No (explain)
2. Does the individual understand the Procedure Attributes associated with the RII Training Requirements process?	Yes No (explain)
3. Does the individual understand the Control Attributes associated with the RII Training Requirements process?	Yes No (explain)
4. Does the individual understand the Process Measurement Attributes associated with the RII Training Requirements process?	Yes No (explain)
5. Does the individual understand the Interface Attributes associated with the RII Training Requirements process?	Yes No (explain)
6. Are the duties and responsibilities for this position clearly documented in the air carrier’s manual(s)?	Yes No (explain)
7. Are the qualification standards for this position clearly documented?	Yes No (explain)
8. Are the qualification standards for this position appropriate for the duties that are assigned?	Yes No (explain)
9. Does the individual meet the qualification standards?	Yes No (explain)
10. Does the individual acknowledge who has the responsibility for the RII Training Requirements process?	Yes No (explain)
11. Does the individual know who has authority to establish and modify the RII Training Requirements process?	Yes No (explain)

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4.2.2 RII TRAINING REQUIREMENTS (AW)
SECTION 2 – AUTHORITY ATTRIBUTE

Objective: To determine if there is a clearly identifiable qualified and knowledgeable individual who has the authority to establish and modify the RII Training Requirement processes.

To meet the objective, the auditor will accomplish the following task:

1. Identify the individual who has the authority to establish or modify the RII Training Requirements process.
2. Review the description in the Manual that delineates the duties and responsibilities of the individual.
3. Evaluate the individual's qualifications and work experience (or resume' if appropriate).
4. Review the appropriate organizational chart.
5. Discuss the RII Training Requirements process with the individual.

To meet the objective, the auditor will determine and record answers to the following questions:

1. Is there a clearly identifiable individual who has authority to establish and modify the air carrier's policies for the RII Training Requirements process?	Yes No (explain)
2. Does the individual understand the Procedure Attributes associated with the RII Training Requirements process?	Yes No (explain)
3. Does the individual understand the Control Attributes associated with the RII Training Requirements process?	Yes No (explain)
4. Does the individual understand the Process Measurement Attributes associated with the RII Training Requirements process?	Yes No (explain)
5. Does the individual understand the Interface Attributes associated with RII Training Requirements process?	Yes No (explain)
6. Is the authority of this position clearly documented in the air carrier's manual(s)?	Yes No (explain)
7. Are the qualification standards for this position clearly documented?	Yes No (explain)
8. Are the qualification standards for this position appropriate for the duties that are assigned?	Yes No (explain)
9. Does the individual acknowledge that he/she has authority for the RII Training Requirements process?	Yes No (explain)
10. Does the individual know who has the responsibility for the RII Training Requirements process?	Yes No (explain)
11. Are the procedures for delegation of authority clearly documented for the RII Training Requirements process?	Yes No (explain)

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4.2.2 RII TRAINING REQUIREMENTS (AW)
SECTION 3 – PROCEDURES ATTRIBUTE

Objective: To determine if the company has documented procedures for accomplishing RII Training Requirements process.

To meet the objective, the auditor will accomplish the following task:

1. Review the documented instructions and information related to the RII Training Requirements process to ensure that they contain who, what, where, when, and how.
2. Review the FAA Guidance and Specific Regulatory Requirements (SRR) included in the supplemental information section of this SAI.
3. Discuss the RII Training Requirements process with appropriate individual to gain an understanding of the procedures.
4. Observe the RII Training Requirements process with appropriate individual to gain an understanding of the procedures.

To meet the objective, the auditor will determine and record answers to the following questions:

1. Do written procedures meet the specific regulatory and FAA policy requirements for a RII Training Requirements process?

1.1 Does the air carrier’s manual describe an adequate organization or a chart for the performance of conducting RII training process? (SRR 135.424 (b) and 135.427(a))	Yes No (explain)
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1.2 Does the air carrier’s manual describe adequate procedures in training individuals on company designated Required Inspection Items? (SRR 135.427(b)(2).	Yes No (explain)
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1.3 Does the air carrier’s manual describe adequate procedures in training individuals on company policy regarding a separation of required inspection functions from the other maintenance, preventive maintenance, and alteration functions below the level administrative control at which overall responsibility for other maintenance, preventive maintenance and alteration functions are being exercised? (SRR 135.424(c))	Yes No (explain)
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1.4 Does the air carrier’s manual describe adequate procedures in training that the individual performing a RII is under the supervision and control of an inspection unit or department? (SRR 135.424(b))	Yes No (explain)
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1.5 Does the air carrier’s manual describe adequate procedures in training to prevent an individual that accomplishes an item of work to perform the RII on the same item of work? (SRR 135.424(c) and 135.427(b)(7))	Yes No (explain)
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1.6 Does the air carrier’s manual describe adequate training procedures for process of conducting reinspection of work performed (buy-back procedures)? (SRR 135.427(4))	Yes No (explain)
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1.7 Does air carrier’s manual describe training procedures regarding the inspection procedures, standards, and limits necessary for acceptance or rejection of the items required to be inspected? (SRR 135.427(5))	Yes No (explain)
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1.8 Does the air carrier’s manual describe training procedures to prevent any decision of an inspector regarding RII from being countermanded by individuals other than supervisory individual of the inspection unit or department? (SRR 135.427(b)(8))	Yes No (explain)
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1.9 Does the air carrier’s manual describe training procedures to ensure that required inspection items that are not completed as a result of work interruptions are properly competed before the helicopter is released to service? (SRR 135.427 (b)(9))	Yes No (explain)
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1.10	Does the air carrier's manual describe adequate training procedures to train pilots to conduct RII while operating helicopters from remote areas or sites? (SRR 135.429(d))	Yes No (explain)
1.11	Does the air carrier's training department provide written authorization to individuals who meet the training objectives are qualified and authorized to conduct RII. The written authorization should reflect the name, occupational title, extent of responsibilities, authorities, and inspection limitations. (SRR 135.429(e))	Yes No (explain)
2.	Check the training format (e.g., classroom, on-the-job, computer based). Does the training format meet the intended objectives for RII training?	Yes No (explain)
3.	Check the air carrier's training program for the duration of the course (amount of time allotted for formal and recurrent training). Is the allotted time adequate in meeting the objectives defined in the training syllabus?	Yes No (explain)
4.	Check the air carrier's training program for the RII training syllabus. Does the syllabus meet the regulatory requirements for conducting Required Inspections?	Yes No (explain)
5.	Check the air carrier's training program for grading standard (e.g., 80% equals a passing grade).	Yes No (explain)
6.	Check the air carrier's training program for skill-based requirements in the utilization of specialized tools and equipment (e.g., NDT, boroscope, oscilloscope).	Yes No (explain)
7.	Check the air carrier's training program for skill-based techniques and practices (e.g., tap test, pull testing, composite repairs).	Yes No (explain)
8.	Does the air carrier have the resources to support the written procedures for the RII Training Requirements process?	Yes No (explain)
9.	Check the air carrier's training program for acceptability of contractors RII training including criteria to evaluate contractors training syllabus.	Yes No (explain)
10.	Does the air carrier have a documented process in their manual to assess the impacts of changing procedures for the RII Training Requirements process?	Yes No (explain)

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4.2.2 RII TRAINING REQUIREMENTS (AW)
SECTION 4 – CONTROL ATTRIBUTE

Objective: To determine if checks and restraints are designed into the RII Training Requirement process to ensure a desired result is achieved.

To meet the objective, the auditor will accomplish the following task:

1. Review the documented instructions and information related to the RII Training Requirement process.
2. Discuss the RII Training Requirements process with appropriate individualnel to gain an understanding of the controls.
3. Observe the RII Training Requirements process to gain an understanding of the controls.

To meet the objective, the auditor will determine and record answers to the following questions:

1. Are the following checks and restraints built into the RII Training syllabus contains current information on the following:	
1.1 Helicopter specific requirements by make/model?	Yes No (explain)
1.2 RII policy and procedures?	Yes No (explain)
1.3 Special skilled-based techniques/practices?	Yes No (explain)
1.4 Buy-Back procedures?	Yes No (explain)
1.5 Amount of hours (classroom/OJT) needed to ensure that adequate training is provided to individuals conducting RII functions?	Yes No (explain)
1.6 Requirements for RII recurrent training?	Yes No (explain)
1.7 Training on all RII task?	Yes No (explain)
1.9 Following and not deviating from the air carrier’s RII policies and procedures?	Yes No (explain)
2. Is there control in place to ensure that air carrier’s RII training syllabus is followed?	Yes No (explain)
3 Is there control in place to ensure deficiencies in the RII training program are identified, reported to, and corrected by the responsible individual?	Yes No (explain)
4. Is there a control in place to ensure that RII Instructors’ training records show that they are properly qualified, certified, authorized and trained to perform RII Instructor duties?	Yes No (explain)
5. Is there a control in place to ensure RII training records are available and maintained in accordance with the air carrier’s policies and procedures?	Yes No (explain)
6. Is there control in place to ensure RII training facilities and training aids are adequate?	Yes No (explain)
7. Is there control in place to ensure the RII list kept up to date and reflects the names, occupational title, extent of responsibilities, authorities, and inspectional limitations?	Yes No (explain)
8. Does the certificate holder have a documented method for assessing the impact of any changes made to the controls in the RII Training Requirements process?	Yes No (explain)

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Objective: To determine if operator measures and assesses the RII Training Requirements process to identify and correct problems or potential problems.

To meet the objective, the auditor will accomplish the following task:

1. Review the documented instructions and information related to the RII Training Requirements process.
2. Discuss the RII Training Requirements process with appropriate individualnel to gain an understanding of the controls.
3. Observe the RII Training Requirements process to gain an understanding of the controls.

To meet the objective, the auditor will determine and record answers to the following questions:

1. Does the air carrier's RII Training Requirements process include the following process measurements?	
1.1. Does the air carrier document their Process Measurement methods and results?	Yes No (explain)
1.2. Does the air carrier audit process define the decision-making process for action plans to mitigate the identified Hazards and Risk?	Yes No (explain)
1.3. Does the air carrier take corrective action in response to failures detected during audits?	Yes No (explain)
1.4. Does the air carrier re-evaluate the corrective actions to determine the following; the original hazard, consequence, severity and likelihood have been mitigated effectively?	Yes No (explain)
1.5. Does the air carrier conduct an independent audit of the RII Training program at least biannually to ensure that it meet its intended function (audit by persons not associated with RII Training program)?	Yes No (explain)
1.6. Does the air carrier conduct at least 20% of its audits in a random, unannounced fashion?	Yes No (explain)
2. Does the instructor teach to the training syllabus or is there a work-around process being taught?	Yes No (explain)
3. Does the allotted time for teaching the training syllabus adequate?	Yes No (explain)
4. Does the training meet the regulatory requirements defined in the Procedures?	Yes No (explain)
5. Is the training aids adequate for teaching the training syllabus and for obtaining the necessary skill-based techniques and practices while conducting RII?	Yes No (explain)
6. Does the Process Measurement revel that individuals are properly authorized to conduct RII after completing the training course?	Yes No (explain)
7. Conduct radium selection of training records to assess type of authorizations were provided and validate it against written authorizations provided to individuals.	Yes No (explain)
8. Does the Process Measurement reveal that a RII was countermanded by an unauthorized person within the maintenance organization?	Yes No (explain)
9. Does the air carrier have a documented process in their Manual(s) to assess the impacts of changing procedures for the RII Training Requirements process?	Yes No (explain)
10. Does the company retain the records that reflect their Risk Analysis of Hazards and the how the risk was mitigated?	Yes No (explain)
11. Does the Process Measurement methods appear to be affective?	Yes No (explain)
12. Does the air carrier use their Process Measurement results to improve their programs?	Yes No (explain)

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SECTION 5 – PROCESS MEASUREMENT ATTRIBUTE

13 Are the Process Measurement results accessible to the FAA?	Yes No (explain)
14. Does the organization that conducts the process measurement have direct access to the person(s) with the responsibility and authority for the Operational Control processes?	Yes No (explain)
15. Does the air carrier have the resources to support the Process Measurement for the Operational Control process?	Yes No (explain)
16. Were all observations unrelated to the Process Measurement satisfactory?	Yes No (explain)
17. Best practices/favorable comments:	

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SECTION 6 – INTERFACES ATTRIBUTE	
Objective: To determine if operator identifies and manages the interactions between the RII Training Requirements process includes safety attributes.	
<i>To meet the objective, the auditor will accomplish the following task:</i>	
1. Review the documented instructions and information related to the RII Training Requirements process.	
2. Discuss the RII Training Requirements process with appropriate individualnel to gain an understanding of the interfaces.	
3. Observe the RII Training Requirements process to gain an understanding of the controls.	
<i>To meet the objective, the auditor will determine and record answers to the following questions:</i>	
1. Are the following interfaces identified for the RII Training Requirements process:	
1.1. Maintenance Program (Element 1.3.1)	Yes No (explain)
1.2. Inspection Program (Element 1.3.2)	Yes No (explain)
1.3. RII (Element 1.3.4)	Yes No (explain)
1.4. AD Management (Element 1.3.6)	Yes No (explain)
1.5. Continuous Analysis and Surveillance (CAS) (Element 1.3.11)	Yes No (explain)
1.6. Maintenance Training Program (Element 4.2.1)	Yes No (explain)
1.7. GMM/Equivalent (Element 1.3.14)	Yes No (explain)
1.8. RII Personnel (Element 4.1.1)	Yes No (explain)
1.9. Maintenance Certificate Requirements (Element 4.1.2)	Yes No (explain)
1.10. Director of Maintenance (Element 7.1.1)	Yes No (explain)
1.11. Altimeter Setting Sources (Element 5.1.4)	Yes No (explain)
1.12. Chief Inspector (recommend Part 135 for System Safety program (Element 7.1.2)	Yes No (explain)
1.13. Director of Safety (recommended Part 135 for System Safety program) (Element 7.1.3)	Yes No (explain)
2. List any additional interfaces identified:	Yes No (explain)
3. Are there written procedures for to ensure that interfaces occur?	Yes No (explain)
4. Are there controls to ensure that interfaces occur?	Yes No (explain)