U.S. Department of Transportation
Federal Aviation Administration

Advisory Circular

Subject: Part 91 Approved Inspection Programs

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1 PURPOSE. This advisory circular (AC) discusses the procedures to develop and submit aircraft owner- and operator-specific inspection programs in accordance with an inspection program selected under the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 91, § 91.409(f)(4), and satisfies the requirements of § 91.409(g) for review and approval by the Federal Aviation Administration (FAA). This AC can also be used to develop a program to meet the requirements of § 91.1109(b)(1). This AC is not mandatory and does not constitute a regulation. This AC describes an acceptable means, but not the only means, to develop an Approved Inspection Program (AIP). However, if you use the means described in the AC, you must follow it in all important respects.

2 AUDIENCE. Operators wishing to establish or revise an AIP under the provisions of § 91.409(f)(4) or § 91.1109(b)(1) and FAA personnel (i.e., Airworthiness inspectors and principal maintenance inspectors (PMI)) tasked with the review and oversight of these programs.

2.1 Where You Can Find This AC. You can find this AC on the FAA's Web site at http://www.faa.gov/regulations_policies/advisory_circulars.

3 GENERAL. There are many types of operators that must comply with an AIP selected under the provisions of § 91.409(f)(4). These include large airplanes and certain turbine-powered aircraft operated under part 91 and 14 CFR part 137 as well as certain experimental aircraft as mandated by their operating limitations. Additionally, fractional owners under part 91 subpart K (part 91K) must also establish an inspection program under §§ 91.1109(b)(1) through (5), of which a § 91.1109(b)(1) program is for all intents and purposes identical to a program developed under § 91.409(e). For the purpose of this AC we will only be addressing §§ 91.409(f)(4) and 91.1109(b)(1) programs.

3.1 Terminology. We generally refer to an inspection program approved under 14 CFR part 135 as an Approved Aircraft Inspection Program (AAIP), and an inspection program approved under part 91 as an Approved Inspection Program (AIP) to help keep the two programs separate and distinguishable. So the term "AAIP" should be used when referring to an inspection program approved under part 135 and the term "AIP" should be used when referring to a program approved under § 91.409(f)(4) or § 91.1109(b)(1). This is based on the wording used in § 91.409(f)(4) and (g) "inspection program… approved by the administrator". Therefore, we refer to these programs as "Approved Inspection Programs" (hereafter referred to as an "AIP" program for simplicity).

3.2 Custom Programs. These programs are custom programs designed specifically for the aircraft they are developed for, though they typically use the manufacturer's program as the basis for the program. These programs are not exclusive to only inspection items defined by the airframe manufacturer, but also inspection items from the engines, propellers, and all other equipment, components and appliances not made by the aircraft manufacturer. So these inspection programs should include items which may not be included in the aircraft manufacturer's program, ensuring the complete aircraft is inspected. This type of program can be used when the owner/operator (hereafter simply referred to as the "operator") desires more flexibility due to the type of operation (low utilization, unique operator requirements, etc.). Operators can also use this type of program in cases where the manufacturer did not provide an inspection program that accommodated the configuration of the aircraft or the intended operational environment, such as extreme heat, high salt water, or abnormally long or short flights. An AIP allows each operator to develop a program tailored to its particular needs to satisfy aircraft inspection requirements. A well-developed and monitored AIP should result in a more effective inspection program.

3.3 Program Content. The AIP program should be based on the most recently published version of the manufacturer's recommended inspection program. A general exception to this would be cases where the manufacture's program is so old (such as vintage aircraft that are no longer produced or supported) that a program does not exist or a completely new program is needed to bring the aircraft up to more desirable modern standards. Additionally, the configuration of the aircraft and any additional equipment, modifications, or repairs to the aircraft not included in the manufacturer's program must also be considered when developing an AIP. An operator must ensure that the AIP development includes inspection of all systems, including the engines, propellers, appliances, survival equipment, and emergency equipment installed on the aircraft. An AIP for transport category airplanes should use the most recently published version of the Maintenance Review Board Report (MRBR) or Maintenance Planning Document (MPD), if published. This method is similar to the process that Air Carriers use when initially setting up their aircraft inspection programs under a Continuous Airworthiness Maintenance Program (CAMP). The advantage of an AIP is that it becomes the single source for inspection data, regardless of the unique equipment and operational considerations for the given aircraft. Program content is further discussed in Section 6.1 below.

Note: For experimental aircraft, the program may be based off a current manufacturer's recommended program, a current military program (preferably the Technical Order, North Atlantic Treaty Organization (NATO) recognized version, or developed by the service organization), or based on a program previously approved for the same make/model. However, prior FAA approval of an inspection program does not guarantee an automatic approval for a similar make/model because inspection programs are aircraft specific. If no current program exists on which to base the program, consult with the relevant FAA office on the best course of action prior to starting the development process.

3.4 Instructions for Continued Airworthiness (ICA). When developing instructions for the performance of inspections, it is important to remember that an operator is required to use methods, techniques, and practices prescribed in the current manufacturer's maintenance manuals (or other methods, techniques, and practices can be used if submitted by an operator and found acceptable to the FAA). These are the ICAs prepared by the manufacturer. This information can be directly incorporated into the program as it relates to performance of inspection items or referenced; however, all referenced material must be readily accessible to the persons performing the inspections.

3.5 Bridging Document. If the aircraft is being transitioned from another type of inspection program, an operator must provide the necessary information required by § 91.417 and show how the inspection program has been appropriately bridged from the current inspection program to the AIP, in accordance with § 91.409(h).

3.6 Constraints. The following items do not constitute an acceptable AIP.

1. Submission of a commercially available aircraft maintenance-tracking program does not constitute an AIP. The data gleaned from these tracking programs may be used to support the development of an AIP, but a tracking system in-and-of itself is not a defined inspection program. The FAA will not approve these software programs as an AIP
2. Approving individual piecemeal inspection segments as an AIP, such as an avionics inspection segment while an operator also performs the manufacturer's recommended program under § 91.409(f)(3), is not permitted. There cannot be two different types of programs associated with the same aircraft. The manufacturer's program can be adopted in whole or part, but to be acceptable, the complete F4 must be a comprehensive all-encompassing program that covers the entire aircraft.

4 SHORT-TERM TASK ESCALATIONS. Short-term escalations represent a built-in inspection tolerance in an inspection, which allows for maintenance scheduling flexibility.

Note: The terms "escalation" and "extension" are sometimes used interchangeably as terms that describe the lengthening of a task intervals. Here we use the term "short-term escalation" to describe a temporary or limited duration lengthening of a task interval, while later we refer to an "extension" as the permanent lengthening of a task interval. Operators can include processes for short-term escalation of tasks or inspections in their AIP in addition to the permanent extension of tasks or inspections as described in the next section.

4.1 Restrictions. Short-term escalations cannot be used to prematurely put an aircraft back in service prior to an inspection being fully completed. When starting a part of an inspection (e.g., opening panels), the inspection must be completed before placing the aircraft back in service. Do not use short-term escalations as a means of performing piecemeal inspections, nor should they become permanent time extensions. The use of short-term escalations should not allow for the accumulation of excess time between inspections,

resulting in an overall extension in an inspection interval without the corresponding justification. Using short-term escalations should also not significantly affect the target inspection interval (see paragraph 4.3, Limits of Short-Term Escalations Intervals).

4.2 Manufacturer's Procedures. When the AIP inspection intervals are the same as the airframe, engine, propeller, rotor, or appliance manufacturer's inspection program intervals, an operator may adopt the manufacturer's published short-term escalation procedures and include them in their AIP without further justification. Additionally an operator may modify the manufacture short-term escalation intervals provided they show justification to the FAA. However, operators should exercise care that non-extendable items (such as Airworthiness Directive (AD) compliance) have not been built into the program, or are identified and excluded from the escalations. Operators can also use more restrictive criteria (shorter duration, etc.) if desired without additional justification.

4.3 Limits of Short-Term Escalations Intervals. When the AIP inspection intervals are different from the aircraft, engine, propeller, or component manufacturer's inspection intervals, or when the manufacturer did not include short-term escalation procedures, an operator may still include scheduling procedures to allow for short-term escalations. However, no more than 10 percent of the specified interval (not to exceed 500 hours/cycles or one calendar month) can be used without additional justification and supporting information. The proposed procedures must also provide for a method to reduce the time to the following scheduled inspection when escalations are used. (For example, a recurring inspection scheduled for 200 flight hours and accomplished at 215 flight hours should result in the next inspection being due in 185 flight hours from the time of completion, not 200 flight hours.)

4.4 Items That Cannot be Escalated. Short-term escalations must not allow AD compliance times, airworthiness limitation items (ALI), or life-limited part retirement times to be modified. And, for applicable aircraft, must not allow escalations for Certification Maintenance Requirements (CMR) (unless specifically allowed and designated by the CMR document), structural sampling periods imposed by the Maintenance Review Board (MRB), MRBR Failure Effect Categories 5 and 8, Critical Design Configuration Control Limitations (CDCCL).

5 PERMANENT TASK EXTENSIONS. If the AIP is for an aircraft that has a published manufacturer's program, any request for intervals greater than the manufacturer's defined intervals must be submitted with sufficient justification to support that request. For simplicity we will refer to these as "extensions" even though under an AIP these are really not extensions, they are simply the proposed interval defined for the task. When considering extension of the manufacturer's inspection intervals as part of an AIP, an operator must provide information to the FAA of how it provides for an acceptable level of safety as compared to the most recently published Original Equipment Manufacturer (OEM) inspection program (as of the date the AIP is submitted for approval). The following describes the information to be considered when task extensions are involved for an AIP.

Note: While this is not an exhaustive list, use this as the basis for what needs to be accomplished and provided to extend inspection intervals as part of an AIP.

5.1 Discussion. Title 14 CFR part 43, § 43.13 requires each person performing maintenance, alteration, or preventive maintenance on an aircraft, engine, propeller, or appliance to use the methods, techniques, and practices prescribed in the current manufacturer's maintenance manual or ICA prepared by its manufacturer, or other methods, techniques, and practices acceptable to the Administrator. Since the early 1980s, design approval holders (DAH) have been required to develop ICAs that are acceptable to the FAA. Inspection programs are one piece of those ICAs, They can be published in the manufacturer's maintenance manual as a complete program or published as a separate document as a guide (such as an MPD) for establishing initial intervals. In any case, these documents establish the initial criteria that ensure, by design, the continued airworthiness of the aircraft.

5.1.1 Task Intervals. For new aircraft type designs, a manufacturer's program's initial inspection intervals are developed in the absence of in-service experience (for the aircraft as a whole; individual components will vary). As a result, the tendency is to be conservative in the decisionmaking process when establishing initial intervals. For in-service aircraft, differences in operating environments and methods of operating can have a significant impact in the development of specific types of discrepancies, which affect the aircraft airworthiness. Manufacturers might not have anticipated or accounted for these conditions in the initial analysis by the manufacturer. Therefore, as service experience is accumulated, it may be desirable to adjust task intervals (thresholds/repeats) to reflect the results of actual in-service data. This can result in the intervals being longer or shorter depending on what the in-service results are. If, through operating experience, it is found that initial intervals are not adequate (usually found through unpredicted and/or systemic operational failures), corrections can be made. If an issue is identified fleet-wide, a manufacturer may revise its inspection program. In extreme cases, when an unsafe condition arises the FAA may also issue an airworthiness directive (AD). Operators that have unique operating conditions, specific evidence or experience, or other relevant factors can use that information to develop an AIP to suit their individual operating environments and situations.

5.2 Substantiating Information. Task intervals can be optimized based on the results of in-service experience. Likewise, a task may also be deleted, but only when it is determined that it is specific to equipment or systems that are no longer applicable due to alterations or customizations to the aircraft. The following types of data can be used to substantiate an extension to an inspection or specific items within a larger inspection. The supporting data collected and used to support the extension of tasks should use at least one of the following two methods; evaluation of in-service data or the application of statistical models, described below.

Note: In the absence of adequate justification or where substantiating information is not available, the FAA may, at their discretion, allow a small extension depending on the specific circumstances (such as a small extension of an item to align with other scheduled items). In addition, usually the task would have to have

been accomplished at least once without negative findings before even a small extension would be considered. Further extension might be allowed once the task has been repeated and sufficient data is available to make an adequate determination of the appropriateness of the interval, as per one of the following methods:

5.2.1 Method #1 - Evaluation of In-Service Data. Both scheduled (routine) and/or unscheduled (non-routine) maintenance findings related to the intent of the task. To the extent possible, data from consecutive executions of the specific task should be used to assess reliability of aircraft systems, components, or structural elements related to the task. The following are examples of the types of data that can be presented and used to justify task extensions:

5.2.1.1 **Scheduled (Routine) Findings.** These findings are a result of inspection tasks performed at a prescribed interval. Also, tasks that generate no findings are equally as important to note (if not more so) in determining effectiveness of task intervals. This data should come from completion of scheduled maintenance or inspections containing the task to be extended. This should identify the number of times (in the sampled data set) the task (or inspection) to be extended has been accomplished. Task findings for the related tasks should be evaluated and categorized for likelihood and severity (risk analysis). Especially relevant is how many cycles of no findings or insignificant findings have occurred when looking to substantiate an extension.

5.2.1.2 **Unscheduled (Non-Routine) Findings.** Mechanical irregularities and the resulting corrective actions captured from operational discrepancies and maintenance reports can be used, as applicable. Non-routine findings for the related tasks (if any) should be evaluated and categorized for likelihood and severity (risk analysis).

5.2.1.3 **Component Data (Shop Findings, No-Fault-Found Removals and Failures).** If used, information regarding component removal and replacement activity and vendor repair documents should be evaluated and categorized for likelihood and severity. This information provides the data necessary to perform component failure-mode and life-cycle analysis, when the extension or escalation of tasks associated with a specific component is desired.

5.2.2 Method #2 - Application of Statistical Models. A data-driven statistical decisionmaking process. Operators can use this when individual aircraft in-service data is not available, or they cannot reasonably obtain it. It is important to know that this is still based on data, but where directly applicable data is not available, statistical analysis can be used, if supported and validated by engineering evaluation. This is similar to the process the OEMs use to set the initial intervals. For this method, engineering analysis must be provided by the applicant and included as a part of the evaluation. Even though targeted toward air carriers, the current edition of AC 121-22, Maintenance Review Boards, Maintenance Type Boards, and OEM/TCH Recommended Maintenance Procedures, can be a useful reference for more information about this process, if applicable to the type of

aircraft in question. This type of data substantiation is highly specialized in nature and beyond the scope of the typical FAA field inspector's duties. As such, this method is outside the scope of this AC and will require submission of the relevant data for FAA engineering evaluation for the review and acceptability of this type of data.

5.3 Considerations. The following are special considerations to take into account when developing an initial submission of an AIP with integrated extensions.

5.3.1 Date of Publication. The most recently published inspection program from the manufacturer (at the time the AIP is submitted for review by the FAA) should be used as the baseline for comparison purposes, which might not necessarily be the program an operator is currently operating under. This could be relevant if an operator was utilizing an older version of the manufacturer's program under § 91.409(f)(3), or if an operator has been operating under an inspection option allowed for under § 91.409(f)(1) or (2). Any items extended or excluded from the baseline program used will require substantiating information to support an adequate justification.

5.3.2 Number of Findings. Just because an inspection does not generate any significant airworthiness findings, that alone is not justification to extend the inspection interval. Task intervals should be designed to be able to catch any problems before they become safety of flight issues. Take the following basic example, a specific task is set to be repeated every 100 flight hours, but the first issue is not discovered until 500 flight hours. The next issue is not found until 800 flight hours. This could be used as data to justify a task extension. The task was repeated eight times and only produced a discrepancy twice. However, note that in the example given, even though the first issue was not found until 500 hours, the next issue was found just 300 hours later. So, based on the data, a task interval of 500 hours would not be appropriate, but an interval of 300 hours could be appropriate.

5.3.3 Criticality. Sometimes, the criticality of the system may dictate that task intervals be designed to give more than one opportunity to find a problem before it becomes a safety of flight issue. So, in the previous example with a failure rate of 1,000 hours, a task interval of 500 hours (two chances) or 325 hours (three chances) could be needed to provide more than one opportunity to catch the failure before it occurred.

Note: This example is only meant to convey a concept, not to provide specific requirements for setting task intervals. Appropriate intervals should be based on a variety of information and more than one or two data points.

5.3.4 Data Source. If the data being used as substantiating information is from aircraft other than the target aircraft (fleet data), the sampled aircraft data presented should be of a similar representation. Ideally, the data should be from an operator's own fleet, especially if the extension is based on unique operating conditions, but data from multiple operators can be used as appropriate to the item(s) being extended. The aircraft do not need to be identical, but significant differences in the age and operation may result in the data not being adequate for use as substantiating data. The following information should be

considered to gauge the overall acceptability of fleet data used to justify an extension of specific inspections, items, or tasks.

5.3.4.1 Aircraft time (hours/cycles/years) should be similar to the target aircraft, as applicable to the tasks being extended. Alternatively, if the extension only affects specific components (such as the engine), then the data used should be similarly appropriate.

5.3.4.2 Factors such as dry/humid climate and aircraft storage practices when not being operated. If the extension is based on a specific operating environment, then the data used should be from a representative sample that spans the same environment (extremely hot and sandy (desert), extremely cold (arctic), extremely corrosive (saltwater areas), etc.). If operators are using specific operational/maintenance practices for justification then the data should quantify and support how those practices affect the intervals in question.

5.3.4.3 Aircraft specific information, such as manufacturer model, date of manufacture, and serial number specific information.

5.3.4.4 Operational information such as daily utilization rate (high, low, average), and specific operational history (including periods of prior ownership, if relevant).

5.3.5 Aircraft Utilization. If the AIP justification denotes a specified utilization, then the AIP should specify the expected utilization parameters. The intervals for tasks identified in the manufacturer's inspection program are usually based on a utilization model that is typical to the industry. An AIP for extremely high or low utilization aircraft should incorporate task intervals appropriate to their operation. Tasking requirements should be addressed on a task-by-task basis to ensure the proper evaluation in regards to the utilization parameters. For low utilization aircraft, ensure that task intervals account for early detection of discrepancies that are sensitive to time (such as corrosion or seal degradation) rather than cycles or flight-hours.

5.3.6 Grouped Tasks. If the AIP proposes to extend an entire phase or other collection of inspection tasks, each task within the inspection should be evaluated individually for any potential issues.

5.3.7 Regulatory Requirements. Modification of inspection tasks that affect the airworthiness limitations (AL), component life limits, or ADs do not necessarily have to be excluded, but they would need additional FAA approval outside of the AIP approval process (approved alteration, alternative method of compliance (AMOC), etc.) before being able to be included in the AIP. In the same fashion, if any tasks have a regulatory requirement (such as transponder or emergency locator transmitter (ELT) checks) those could not be extended without a corresponding exemption. All of these types of separate approvals should be obtained prior to the submission of the AIP for review and approval by the FAA.

5.3.8 Maintenance/Operational Practices. For calendar intervals, the FAA recognizes that aircraft maintenance/operational practices (storage procedures, maintenance routines) can

have an effect and could be used in extension justifications. However, if maintenance/operational practices are used as justification for the extension, then the AIP must address what happens if those practices are not followed. This could be in the form of new criteria that must be followed (for example the interval could be reverted back to the pre-extension level or a supplemental inspection might be added). Or it could trigger a mandatory revision be submitted for the AIP. The FAA might also require that some form of notification be made should a change in these types of conditions occur. Without this process or procedure defined in the AIP, an operator could be in violation of not following their approved program if the criteria that the AIP is based on significantly changes, which may result in a violation and enforcement action by the FAA.

5.4 Deficiencies. The requested extension time must be justified. During the review, the FAA will communicate any deficiencies or concerns it finds to the operator so they can decide to re-submit or modify their proposal. Operators can mitigate concerns raised during evaluation of the proposed extension by providing further data to substantiate the current proposal, moving the task in question to a phase inspection with a more reasonable interval, modifying the task to reduce the concern, or submitting that task on an independent inspection schedule.

5.5 FAA Approval. There is not an approval process specifically for program extensions. The approval of specific time limits is granted and documented by approval of the entire AIP. If the FAA representative does not find the program acceptable, they will provide the operator a letter of denial with the reason the program was not considered acceptable.

6 AIP PROGRAM SUBMISSION. The following describes the requirements for the submission of an AIP for the review and approval by the FAA.

6.1 Required Elements of an AIP. The program must be in writing and contain the following:

6.1.1 Inspection Tasks. The program must detail the inspection tasks for the parts and areas requiring inspection and required functional and operational checks, to include:

- Airframe, engines, propellers, and rotors;
- Appliances;
- Survival and emergency equipment;
- Auxiliary power units;
- Passenger convenience items and entertainment equipment; and
- Avionics equipment.

Note: The avionics and instrument systems are not always installed by the aircraft manufacturer and may not be included in their recommended inspection program. The avionics and instrument system inspections should be based on the equipment manufacturer's recommendations or instructions, and must be included in the

AIP. Also consider including any inspections required by regulations such as part 43 appendices E and F.

Note: For experimental aircraft with operable ejection seats or other military related systems, the inspection program must contain inspection tasks recommended by the current manufacturer or military program. However, inspection tasks for aircraft systems that have been removed or deactivated may be excluded.

6.1.2 Revision and Control Processes. The program must have a revision and control process comparable to other approved manuals (i.e., list of effective pages or revision control pages). The program should also identify the specific revision number and date, as applicable.

6.1.3 Scheduling Contact. The program must identify the person responsible for scheduling the inspections required by the program.

6.1.4 Additional FAA Approvals. The AIP must not override or alter regulatory time intervals. The program can incorporate inspections based on regulatory requirements such as the test and inspections of the ELT, altimeter/altitude reporting systems, air traffic control (ATC) transponders, repetitive AD compliance, and ALIs. However, ensure the time requirements for these items are not modified (including any provisions for short-term escalations) without a separate supporting FAA approval prior to be included in the AIP.

6.1.5 Detailed Instructions. The AIP program must contain the specific step-by-step instructions for conducting the inspections. However, the instructions can be included in a couple of ways. An operator can write their own step-by-step procedures (typically in the form of work-cards). If they develop their own procedures, they must submit those for review and approval as part of their AIP program. Alternately, the AIP can just reference the instructions already developed by the manufacturer. Either approach is acceptable. While the step-by-step instructions are indeed a part of the inspection program (by rule), they can be "incorporated-by-reference" as long as nothing is being changed from the manufacturer's defined procedure. For example, the program could identify a Phase 3 inspection and call out for it to be accomplished every 800 hours. In this instance, refer to the specific manufacturer's maintenance manual for the inspection instructions and the actual steps involved (usually in the form of some type of worksheet or checklist). In addition, how those incorporated-by-reference instructions are revised can be accomplished in a couple of different ways, as described below.

6.1.5.1 By default, instructions incorporated by reference are "frozen-in-time" as of the date the AIP is submitted for approval. In this method, the AIP must reference the specific revision of the manufacturer's instructions being referenced. The use of a subsequent revision to the referenced instructions would need to be separately approved by the FAA through a revision to the AIP. An operator would need to ensure that they retain access to the specified version of the instructions so they could provide those to maintenance providers as needed. They would also need to ensure the AIP procedures

included providing instructions to maintenance providers to use the approved version of the maintenance instructions which may not necessarily be the most recently published by the manufacturer.

6.1.5.2 The other option available to operators is referencing these instructions in an "as revised" state. Meaning: if the manufacturer updates their procedures for the performance of the referenced inspection, the AIP owner can follow the new instructions without needing further review and approval by the FAA. The logic behind this is, while the entire program (to include the instructions) is technically "FAA Approved" and therefore subject to review, the FAA will almost always accept an unchanged manufacturer's procedure without further review. Therefore, the use of this option would save both an operator and the FAA a lot of needless administrative effort if an operator always intends to follow the latest manufacturer's instructions. The FAA will typically find that following the latest version of the manufacturer's instructions to be in the best interest of safety. This might also be desirable when an operator has multiple aircraft on an AIP and wants to keep the inspections "in-sync" rather than possibly having slightly different programs for each one (due to the differences in the manufacturer's programs at the various times of submission). Note, however: this option might not be appropriate if there was some logical reason why the manufacturer's process would be inadequate given an operator's specific circumstances or when the manufacturer's instructions for a particular inspection have been modified for use in the AIP.

6.1.5.3 This can also be "mixed-and-matched", meaning that some instructions can be "as revised" where others are not, as long as this is clearly identified in the AIP. Whichever method is used, it must be clearly defined and described in the description of the AIP and clearly identified whenever the instructions are being referenced.

Note: Only the inspection procedures can be referenced. The specific time intervals are always defined and approved as part of the inspection program and cannot be changed with submitting a revision to the AIP to the FAA.

Note: If any referenced inspection procedures are not published in English, the applicant must submit an English translation of the procedures. It is to the applicant's benefit to ensure the translation is performed by a technically competent individual familiar with aviation terms and practices.

6.2 Typical Inspection Program Structure. Inspection programs should typically contain the following elements:

6.2.1 Identification Information. Title or cover page identifying the specific aircraft by make, model and serial number as well as the operator's identifying information.

6.2.2 Revision Control Information. Document revision control information (such as a list of effective pages) and procedures for revising the program. This should explain that the program is FAA approved and any changes need to be submitted to the FAA. If using the "as-revised" instructions from the manufacturer as described earlier, this is also where that should be spelled out.

6.2.3 Inspection Program Details. Description of the program to include at least the following information:

- Administrative and implementation information, including the identity of the person responsible for managing the program;
- Any training or other personnel experience requirements;
- A well-defined explanation of the components of the program, including the general structure of the program (phases, A, B, C checks, etc.), what documents are included by reference, etc.
- The provisions and process for handling short-term escalations, if applicable; and
- Any other pertinent information that a maintenance provider may need to know.

6.2.4 Inspection Items and Intervals. The list of inspection items and their associated intervals, expressed in terms of time in service, calendar time, cycles (number of system operations), or combination of these, at which they are to be inspected. In addition, the list should also include a reference to where the instructions for performing the specific inspection can be found.

6.2.5 Inspection Procedure Cards. The inspection procedure's cards if developing custom inspection procedures in lieu of using the manufacturer's provided instructions, either statically or as-revised, as described earlier.

6.3 Other Information Required for the Approval Process. Operators should provide the following supplemental information to the FAA at the time they submit the AIP for review. This information does not need to be a part of the final inspection program document, but should be submitted to assist in the approval process. For operators submitting multiple programs for similar aircraft, it may not be necessary to re-submit identical information which was already provided at an earlier time to the same FAA office, as long as the information is still applicable to the program being submitted. However, if a significant amount of time has lapsed, and the FAA office no longer has the information available, re-submission of the information may be required.

1. Copy of the most recently published version of the manufacturer's inspection program if the FAA office indicates that they do not already have access (if the FAA office has, or can get, access to the manufacturer's published ICAs then the operator need not supply a copy).
2. Copy of the FAA Approved Airworthiness Limitations Section (ALS) from the manufacturer's manual.

3. A bridging document that highlights the differences between the current inspection program and the proposed AIP program. The time in service, calendar times, or cycles of operation accumulated under the previous program must be applied in determining inspection due times under the new program.
4. Aircraft maintenance and inspection records necessary to validate or substantiate any portion of the program, including data justifying any interval extensions as described in the previous sections.

Note: Record retention, per parts 43 and 91, typically require that most maintenance records only be retained for one year or until the work is superseded. However, if an operator is only complying with these minimal record retention requirements it may not be possible for them to supply sufficient evidence to make a determination that an extension can be justified. If the extension cannot be adequately justified then it cannot be included in the AIP.

5. Status of applicable ADs (to verify that ADs were considered when developing the program).
6. A listing of the major repairs and alterations performed to the aircraft and an analysis of how they would impact the proposed inspection program (or that it does not).

Note: Similar to ADs, ICA-driven inspections from major repairs and/or alterations can be incorporated into the AIP (the preferred method), or maintained in a separate listing. But if maintained as a separate list, it must be referenced in the program and the operator must be able to produce a list of associated intervals identified by ICA on request to maintenance providers or the FAA. In addition, the listing of ICA inspections should clearly identify the intervals at which they are performed. These inspections which are referenced in a separate list are still a part of the AIP program; however, additions to the list for future modifications do not require subsequent re-approval of the program as the data associated with major repairs and alterations is already FAA approved (in the same way that changes to ADs or issuances of new ADs do not require revision, review, and re-approval of the program). However, the AIP should include a procedure for the operator to notify the managing FAA office when changes to the list are made. In addition, any new alterations need to be reviewed for any impact on other pre-existing inspections. If revisions to other inspections are necessary (or desired), then the AIP will need to be revised and the revision submitted to the managing office for approval.

7. Records of manufacturer's Service Bulletins (SB) and Service Letters (SL) that have been incorporated (if applicable to inspection tasks or items being extended).
8. Malfunction and Defect Reports (M&D) or Service Difficulty Reports (SDR) on the subject aircraft (if applicable to inspection tasks or items being extended).

9. Description of the aircraft's major event history, such as accident/incident history, major corrosion history, and other major damage that may have occurred.
10. A copy of the current aircraft equipment list to ensure inspection items specific to any installed standard or optional equipment has been included.
11. Any other relevant data (as described herein) necessary to substantiate interval extensions beyond the manufacturer's recommended time frames.

7 REVISIONS TO PREVIOUSLY APPROVED PROGRAMS. It is an operator's responsibility to provide the FAA with information to justify all aspects of the proposed AIP revision. The FAA will process revisions to the AIP program in a similar manner as the initial program reviews.

7.1 Changes to the Manufacturer's Program. If a manufacturer extends its recommended interval for a given inspection, an operator may request approval to use the new interval by submitting a revision to their AIP to the FAA. The manufacturer's documented recommendation must accompany the request. Additionally, there are cases when the FAA may not approve a task interval adjustment as recommended by the manufacturer. The FAA will take into account the individual operator's aircraft usage and experience.

7.2 Operating Experience. An operator may request task interval adjustments based on past operating experience of their aircraft or other justification they feel is relevant. The FAA will review the justification and will approve the changes, recommend additions or modifications, or reject the operator's proposal based on the information submitted.

7.3 Restrictions. Amendments or extensions have the same restrictions as specified in the original program approval process. Therefore modifications to such things as retirement times of life-limited parts, ALIs, and/or those intervals designated by ADs are not allowed without separate pre-approval by the FAA.

7.4 Scope of Review. The FAA will review revisions and amendments to approved programs only for the new or revised material provided. It is not expected that the entire program be re-reviewed for approval, nor should it be required to re-justify any existing approved intervals or processes. However, if there are safety concerns identified with the currently approved program, then the operator may be required to revise their AIP in accordance with § 91.415 as discussed below.

7.5 FAA Initiated Revisions. The FAA can mandate a program revision under certain circumstances. Section 91.415(a) states that whenever the Administrator finds that revisions to an AIP under § 91.409(f)(4) or § 91.1109 are necessary for the continued adequacy of the program, the owner or operator must, after notification by the Administrator, make any changes in the program found to be necessary by the Administrator. Section 91.415 also describes the appeal process if an operator feels the revision is not warranted.

8 COMMENTS INVITED. Please direct proposed changes to this AC to:

Federal Aviation Administration
Flight Standards Service
Aircraft Maintenance Division, AFS-300
800 Independence Ave. SW
Washington, DC 20591

John S. Duncan
Director, Flight Standards Service

Advisory Circular Feedback Form

If you find an error in this AC, have recommendations for improving it, or have suggestions for new items/subjects to be added, you may let us know by contacting Aircraft Maintenance Division (AFS-300) at 9-AWA-AFS-300-Division-Directives@faa.gov or the Flight Standards Directives Management Officer.

Subject: AC 91-AIPRO, Part 91 Approved Inspection Programs

Date: _____

Please check all appropriate line items:

☐ An error (procedural or typographical) has been noted in paragraph _____ on page _____.

☐ Recommend paragraph _____ on page _____ be changed as follows:

_____

_____

☐ In a future change to this AC, please cover the following subject:
(Briefly describe what you want added.)

_____

_____

☐ Other comments:

_____

_____

☐ I would like to discuss the above. Please contact me.

Submitted by: _____ Date: _____