



**U.S. Department
of Transportation**

Office of the Secretary
of Transportation

GENERAL COUNSEL

1200 New Jersey Avenue, SE
Washington, DC 20590

July 22, 2011

Catherine A. McMullen, Esq.
Chief, Disclosure Unit
U.S. Office of Special Counsel
1730 M Street, NW, Suite 300
Washington, DC 20036-4505

Re: OSC File No. DI-10-2602

Dear Ms. McMullen:

This letter is in response to an email from Karen Gorman, dated June 14, 2011, in which the Office of Special Counsel (OSC) raises questions concerning the supplemental report in the Foster II investigation (DI-10-2602), provided to OSC on May 18, 2011. OSC also requests again that we provide it a copy of the "final report(s) resulting from the investigation in the first referral of Mr. Foster's allegations (OSC 1), including the "sufficiency report" prepared by the Office of Inspector General (OIG), which is referenced in the supplemental report."

In response to the June 14, email I have enclosed the following three items:

- 1) Enclosed as Exhibit 1 is a second supplemental report prepared by the Federal Aviation Administration's (FAA's) Office of Audit and Evaluation (AAE), dated July 19, 2011, responding to questions one to four listed on the June 14 email;
- 2) Enclosed as Exhibit 2 is a copy of the Information Memorandum, dated January 5, 2010, prepared by the Office of Inspector General (OIG), as a review of FAA's investigation into OSC I. This is in response to OSC's request for the OIG "sufficiency report" in paragraph 2 of the June 14 email. As I advised previously, the OIG memorandum was prepared for the Department's consideration after OSC closed Foster I;
- 3) Enclosed as Exhibit 3 is the Implementation Plan dated June 27, 2009, from the first Foster investigation. OSC notes in the June 14 email that it never received the implementation plan which should have been attached to the draft reports we provided to OSC in July 2009. I note that this 2009 implementation plan has been superseded by the Foster II Action Plan.

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If you have further questions on this matter we would be happy to meet with you to discuss.

Sincerely,

A handwritten signature in black ink, appearing to read "Judith S. Kaleta". The signature is written in a cursive style with a large initial "J" and "K".

Judith S. Kaleta
Assistant General Counsel for General Law

Enclosures



Office of Audit and Evaluation (AAE)
Federal Aviation Administration
800 Independence Avenue, S.W.
Washington, DC 20591

**Federal Aviation Administration
Response to OSC Follow-up Questions
Regarding Supplemental Report
Dated
May 18, 2011**

In response to:

U.S. Office of Special Counsel (OSC)

File DI-10-2602

**Director, Audit and Evaluation (AAE-1)
Federal Aviation Administration**

July 19, 2011

1. Introduction

This document was prepared in response to an e-mail request dated June 14, 2011, from the Office of Special Counsel (OSC) to the Department of Transportation (DOT) Office of General Counsel (OGC) regarding FAA's Supplemental Report on the Foster II investigation (DI-10-2602) dated May 18, 2011. OSC has requested additional information and clarification of certain responses in the Supplemental Report. OSC also is requesting a copy of the sufficiency report prepared by the Office of Inspector General (OIG) in the first Foster referral. OGC will respond separately to the latter request. Response to the remaining questions follows:

1. OSC Request: *"In our request for supplemental information, we requested a copy of any report resulting from the 2010 audit. The initial report includes a summary of the audit findings and action plans developed based on completion of Phase 1 of the audit. The supplemental report includes a document entitled "Phase 2 Audit Findings," which consists of six bar charts reflecting the number of findings associated with the audit. This document is marked "Exhibit D," but is included as Attachment B with the supplemental report. Neither of these audit summaries provides information about the specific types of safety findings made. Therefore, we request confirmation of whether a separate report of the audit findings exists, and if so, we request a copy of the report."*

FAA Response: A separate report of the Phase 1 and Phase 2 audit findings was not prepared and none is planned. The six bar charts referenced in this question were prepared to provide a summary of the Phase 2 findings specifically for the supplemental response. Also, there was a typographical error in the header of the previous "Phase 2 Audit Findings" attachment which has now been corrected.

Specific potential safety finding information for Phase 1 was reported in Section 3.2, Finding 1, in the December 10, 2010 initial report. Specific potential safety findings for Phase 2 of the 2010 Audit were summarized in the "Phase 2 Audit Findings" document which is attached. Phase 2 of the 2010 Audit validated the FAA's concern that similar problems existed in both ASU modified helicopters and non-ASU modified helicopters.

See Attachment A

2. OSC Request: The supplemental report states that "the data from Phase 2 of the audit resulted in changes to the OSC II Action Plan to the extent that it will lead to FAA Policy changes, which will affect the entire NVIS modified fleet." The supplemental report provides an updated version of the "2010 Audit Detailed Findings and Action Plans," but this document does not appear to include any changes in the action plan items. We are requesting a copy of the most current version(s) of any and all action plans resulting from the investigation.

FAA Response: The FAA's response to question 1b of the Supplemental Report dated May 18, 2011 should have stated, the data from both Phase 1 and Phase 2 of the 2010 audit resulted in changes to the OSC II Action Plan to the extent that it will lead to FAA policy changes, which will affect the entire NVIS modified fleet. We apologize for the confusion on

the error in the report. Again, Phase 2 of the 2010 Audit validated the FAA's concern that similar problems existed in both ASU and non-ASU modified helicopters.

The term "updated" in the supplemental report applies only in that it contains the latest status of each action plan item. The action plan item description has not changed. All changes to the item descriptions were made to the action plan items before it was implemented by AVS and before it went forward to OSC in the October 29, 2010, version of the plan. Therefore the changes needed to address the NVIS fleet were already included when the OSC II supplemental report was sent. We have attached a current version of the action plan which was updated on July 15, 2011 with the current status of each item. The current status of each of the action plan items is tracked by AVS and AAE.

See Attachment B

3. OSC Request: The updated action plans state that notices for: 1) interim guidance on the special emphasis inspection of NVIS installations; and 2) the OpsSpec paragraph D093 are on track to be issued on July 15, 2011. We request that you provide confirmation that these notices were issued by no later than July 20, 2011.

FAA Response: We are providing confirmation that both OSC II Action Items requested above have been completed and issued on April, 29, 2001 and July 5, 2011 respectively. Copies of Notice N8900.152 and FAA Order 8900.1, Volume 3, Chapter 18, Section 6 have been included in this response.

See Attachment C

4. OSC Request: With respect to Item 5 in our request for supplemental information, the response provided in the supplemental report does not appear to adequately address the questions raised. Our question pertained to inspections of modified helicopters conducted by FAA, and how FAA is able to determine through its inspections that the filters installed were in fact the proper part number and color. We asked what criteria are used for visual tests and whether the helicopters are tested with goggles in night conditions, and if not, how does FAA determine that the aircraft is in full compliance with the data in the approved STC. We are therefore requesting further explanation of FAA's inspections as noted.

FAA Response: As we previously stated in the Supplemental Report, in order for an ASI to make an accurate determination of what filters are to be installed on instruments and radios as part of a NVIS modification, the ASI would refer to the approved STC data package for the specific aircraft to establish specific part number applicability.

As part of an approved NVIS installation, the installer is required to complete a day and night readability inspection in accordance with the approved STC. The installation documentation used incorporates checks for day and night-time conditions and becomes part of the STC installation documentation. A conformity inspection of the installation before operation ensures the aircraft is in full compliance. The FAA inspector would then verify through a comprehensive records review and physical inspection of the aircraft that the above actions have been accomplished correctly.

Additionally, FAA Notice 8900.152, Section 5 (see attachment C) outlines specific steps that the FAA inspector must take in order to complete a NVIS lighting installation inspection of a modified helicopter. These steps include preparation for the inspection, records review, aircraft inspection, and inspection completion documentation requirements to be recorded in the FAA's Program Tracking and Reporting Subsystem.

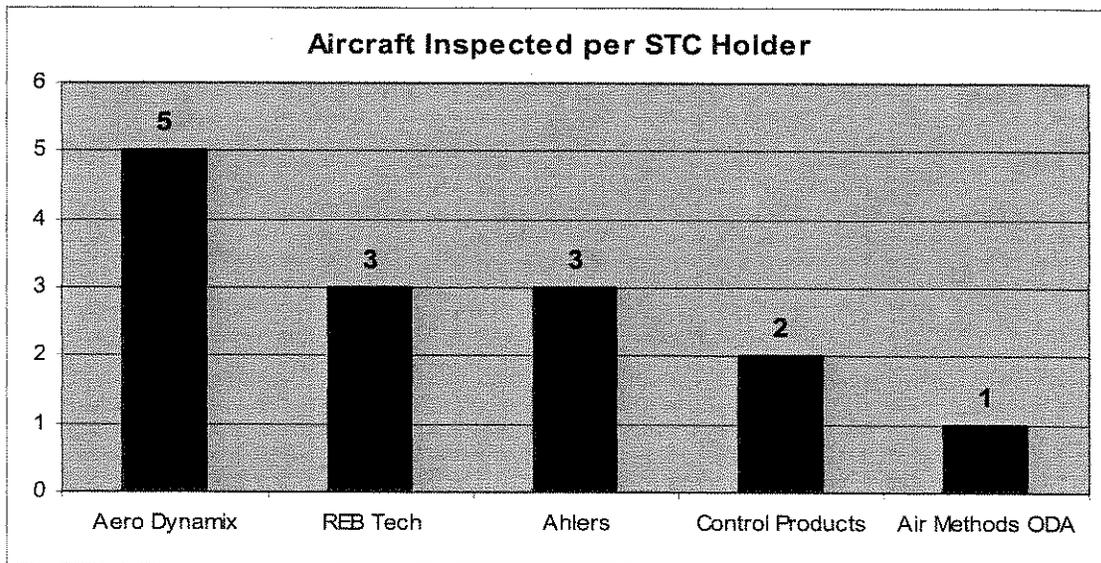
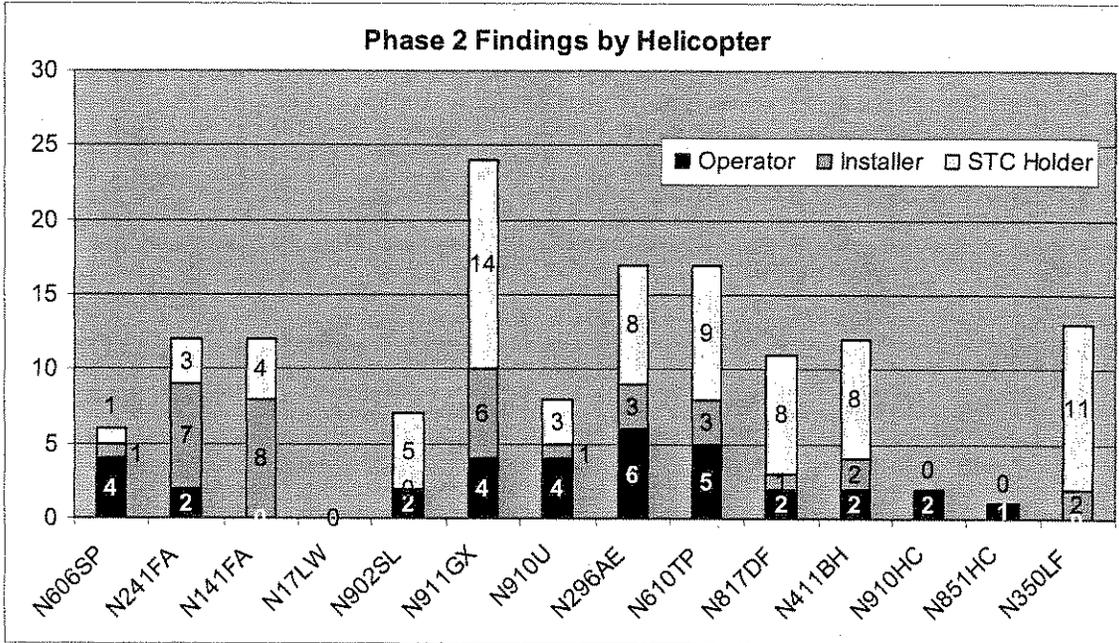
The FAA, with AAE concurrence believes that they have made significant enhancements to the certification and safety oversight of NVIS modified aircraft. Mr. Foster's disclosures to the OSC identified previous gaps in agency processes and procedures that have now been corrected or are scheduled to be corrected. These safety enhancements by the FAA are documented in the attached updated OSC II Action Plan (ref: question 2 attachment B).

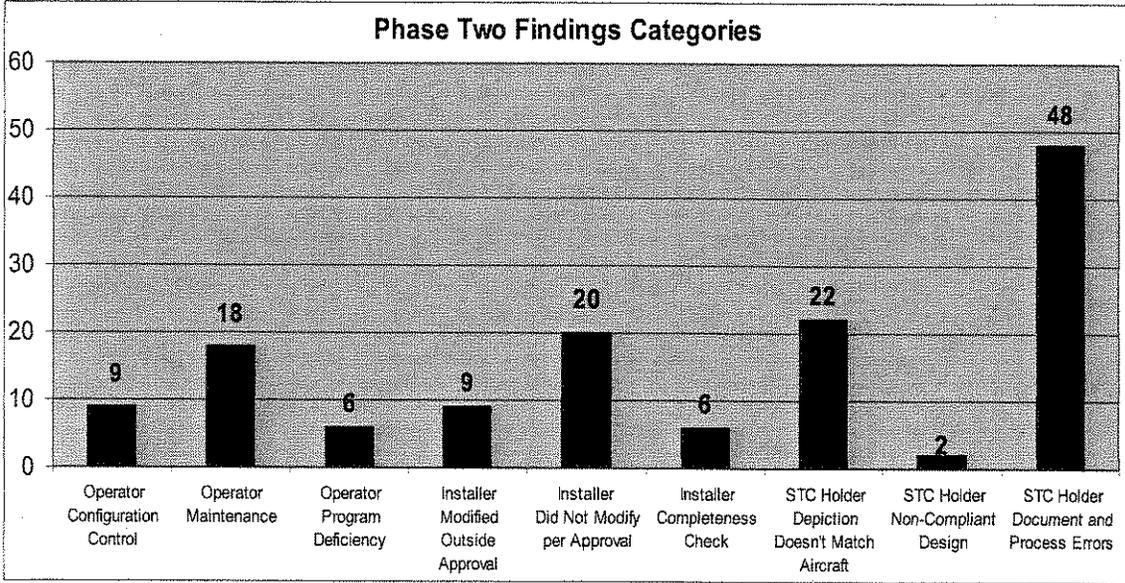
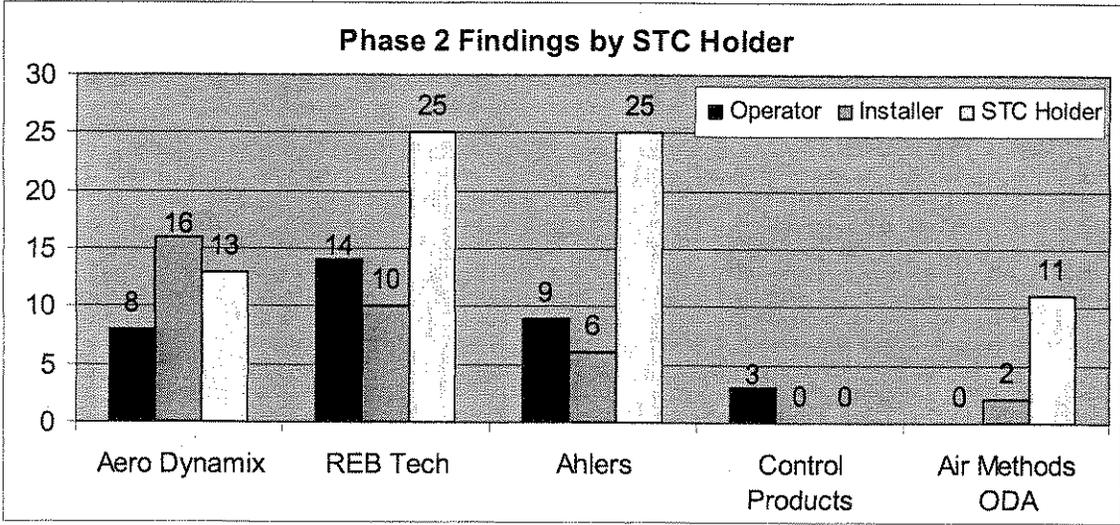
See Attachments B & C

Attachment A

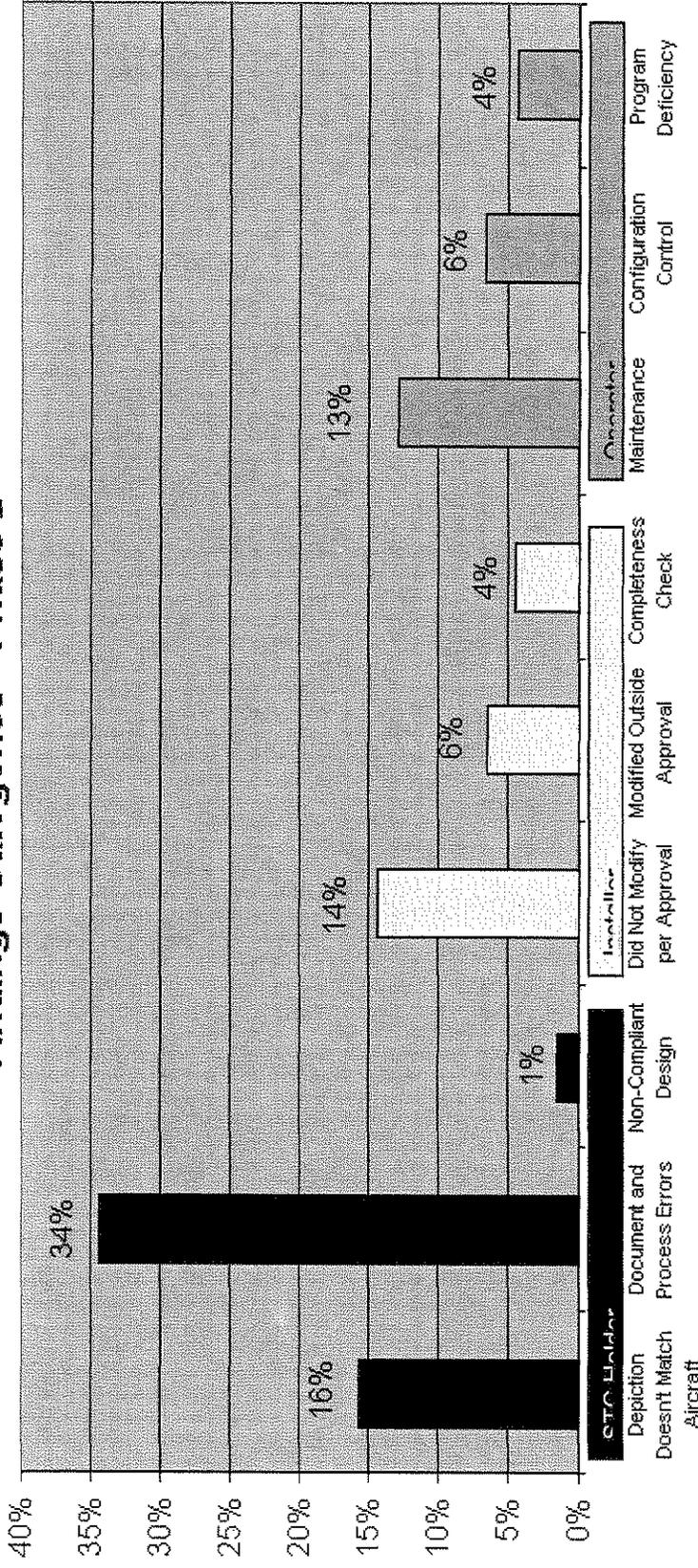
Phase 2 Audit Findings

The following bar charts indicate the Phase 2 Audit findings associated with the audit. The charts indicate there was a total of 14 helicopters inspected resulting in 142 findings. The final two bar charts indicate Phase 2 vs. Phase 1 by finding category.





Findings Categories - Phase 2



Attachment B

2010 Audit Detailed Findings and Action Plans

Finding 1

Of the 29 aircraft inspected (with findings validated) to date, all aircraft had non-compliances and/or non-conformances

- There were installation conformity errors found on all aircraft inspected
- There are currently 278 findings of which 51 (18%) are potential safety findings. *Some findings and potential safety findings are associated with multiple entities. Therefore, aggregate percentages may exceed 100%.*
 - o There are 9 STC Holder (ASU) potential safety findings (3% of the overall findings, 18% of the potential safety finding)
 - o There are 41 operator potential safety findings (16% of the overall findings, 80% of the potential safety findings)
 - o There are 13 installer (ASU) potential safety issues (5% of the overall findings, 25% of the potential safety findings)
- ASU currently has 119 STC holder findings and 72 installer findings (55% of the overall findings)
- Operators currently have 155 findings (45% of the overall findings)

| Action Plan 1 | Due | Primary Office | Status |
|--|--|------------------------|---|
| a. Appropriate FSDO PIs will formally notify operators of the findings and will track all findings through completion of action. | 1 a. (1) On receipt by PIs 1 a (2) 12/31/2010 (60 days) | CHDO | 1 a. (1): ANM-200 confirmed via telephone or email that all operators were notified. 1 a. (2): no reliable information available to show that PIs were tracking all findings as the operator addressed them, but see 1b to show that corrective actions have been completed. |
| b. AFS Technical Standards Branches will follow-up with notified PIs to confirm corrective actions complete | Monthly thereafter until complete | Regional -230 branches | All air carrier corrective actions reported complete by PI or office leadership. One public category operator declined to share corrective actions or root cause analysis information. |
| c. SACO will notify ASU of all type design issues | 11/14/2010 (30 days) | SACO | Completed on 10/20/2010 with the issue of LOI # 2010NMM560001 |
| d. SACO will evaluate STC related potential safety findings using existing COS process | 11/14/2010 (30 days) | SACO | COS Process Completed 11/10/2010 (There was one safety issue for TOT Post Light issue. There will be an ASU Service Bulletin for initial compliance, with follow-up AD issued) |

2010 Audit Detailed Findings and Action Plans

Finding 2

There are numerous drawing/documentation errors and ambiguities which may have contributed to non-conformance/non-compliance

- Failures to thoroughly assess filtration requirements led to design omissions (e.g. components not lighted in NVIS mode, lights not filtered)
- Numerous cases of document errors (e.g. ICAs, Master Drawing Lists)
 - o Recurring issues related to design and installation processes (e.g. radar altimeter Decision Height light filters coming off in service)

| Action Plan 2 | Due | Primary Office | Status |
|--|---------------------------|----------------|---|
| a. Formally notify ASU of the inaccuracies found in documents during the audit. | 12/13/2010 (60 days) | SACO | This item was completed on 10/20/2010 with the issue of LOI # 2010NM560001. |
| 1. Require ASU to provide root cause analyses for the issues found to reduce the overall error rate. | 4/27/2011 (180 days) | SACO | Complete – February 1, 2011. ASU has submitted their root cause to the Seattle ACO and are writing procedures as part of their LOI response. |
| 2. ASU to define how it will incorporate the root cause corrective action(s) for the drawing and document errors into all of its modified aircraft, not just the aircraft in the audit. | 4/27/2011 (180 days) | SACO | This item is in work with ASU. They are on a second iteration of their root cause corrective action document. Complete – April 15, 2011 - SACO has accepted ASU's definition on how they will incorporate their corrective action into their system. ASU is in the process of formalizing the written process for SACO approval. |
| 3. Corrective action must address the inadequate pre-assessment process and how it will be improved. | 10/15/2011 (12 months) | SACO | This item is in work with ASU. |
| b. SACO to monitor ASU's performance and provide follow-up management through Action Plan 3. | Started and Continuous | SACO | This item is in work by SACO and will continue through completion of Action Plan Item 3d. |
| c. Send the TSO policy clarification memorandum (AIR-100 dated 9/28/10) to all ACOs/MIDOS via email with explanation. | 11/14/2010 (30 days) | AIR-100 | Memo completed in September 2010. |
| d. SACO to work with the Rotorcraft Directorate to standardize drawing marking requirements for modified Technical Standard Order (TSO) articles; as part of the detailed corrective action, previously approved STC | 10/15/2011 (12 months) | SACO | The initial process to communicate this action plan has started via email between SACO and the Rotorcraft Directorate and it is in work. |

2010 Audit Detailed Findings and Action Plans

| | | | |
|--|---------------------------------|-------------------------|--|
| <p>drawings must be reviewed to ensure they require marking of modified TSO articles per FAA Order 8150.1.</p> | | | |
| <p>e. AIR and AFS to develop an NVIS installation conformity checklist.</p> | <p>1/15/2011 (3 months)</p> | <p>Seattle MIDO</p> | <p>There are two separate checklists associated with this action item. The initial AIR checklist was completed on 1/28/2011. The AIR checklist was part of this action plan to enable ASU's STC conformity process to continue and ability to work issues that surfaced with audit aircraft in the field.</p> |

2010 Audit Detailed Findings and Action Plans

Finding 3

The minor change process does not consistently produce compliant/conforming aircraft

| Action Plan 3 | Due | Primary Office | Status |
|--|----------------------|----------------|--|
| a. Terminate the minor change authority in the PSP. All ASU certification activities will be managed by the SACO. | 10/15/2010/ | ANM-100 | Completed by 10/15/2010 |
| b. Increase the level of involvement of FAA engineers and inspectors in future ASU projects. Add one additional engineer to project. | Started and ongoing. | SACO | Additional engineer added to the project. This item is in work by SACO and will continue through completion of Action Plan Item 3d. |
| c. Increase level of designee supervision for designees associated with ASU projects | Started and ongoing | SACO | This item is in work by SACO/MIDO and will continue through completion of Action Plan Item 3d. |
| d. Evaluate ASU's performance prior to considering re-issuance of minor change authority in the PSP. Minor change authority will not be re-issued until ASU develops and implements specific procedures to reliably produce complete and compliant STCs. | Started and ongoing | SACO | This action plan item is in work. The onus for the re-issue of the PSP resides with ASU. This action plan item will not be completed until the culmination of all other appropriate Action plan items (contained in 1, 2, & 3 above) are completed. The appropriate ANM, AIR and AFS offices are working together to determine what other objective evidence ASU must present to the FAA to enable us to reinstitute the PSP Minor Change authority and to cease the currently required 100% conformity inspection requirements levied on ASU. |

2010 Audit Detailed Findings and Action Plans

Finding 4

AFS oversight of operator maintenance/alteration is inadequate

- There is no standard process between CHDOs and the SACO for communicating issues with ASU STCs

| Action Plan 4 | | Due | Primary Office | Status |
|---------------|--|---------------------------|----------------|---|
| a. | Issue interim guidance to AFS PIs to require confirmation that OpSpecs paragraph D093 contents are correct, that operators are properly implementing ICA requirements for both aircraft NVIS equipment and goggles, and that NVIS equipped aircraft continue to meet type design requirements by conforming aircraft with NVIS STC data and other type design change data occurring after NVIS modification. | 11/15/2010 (30 days) | AFS | Completed by the memo issued by AFS-300 on December 3. |
| b. | Prescribe actions to ensure an effective and immediate surveillance plan is in place for NVIS modified aircraft. | 11/15/2010 (30 days) | AFS | Completed by the memo issued by AFS-300 on December 3. |
| c. | Establish an interim procedure for sharing potential safety findings with the appropriate certificate managing ACO. | 11/15/2010 (30 days) | AFS and AIR | Completed by the memo issued by AFS-300 on December 3. |
| d. | Establish a standard process between CHDOs, the ASW AEG and the SACO for communicating issues with ASU STCs | 4/15/2012 (18 months) | AFS | Split this action item into two parts, the second one dependent upon the results from the first one. 4 d (1) – The AEG will evaluate existing and planned communication procedures. Due by March 2011. 4 d (2) – AFS-300 will draft guidance, if required,, based on the findings of the evaluation. If required, draft guidance due 4/15/12. |
| e. | Add inspection requirements to FY 2012 National Program Guidelines. | 10/15/2011 (12 months) | AFS | - 4 e (1) – AFS-300 - Furnish draft NPG language to AFS-900 for inspection requirements for FY 2010 NPG. Completed February 2011. - 4 e (2) – AFS-900 to publish NVIS inspection requirements in FY12. NPG Order by 10/15/11. |

2010 Audit Detailed Findings and Action Plans

Finding 5

Operators failed to preserve the NVIS compatible configuration of their aircraft

- Changing the configuration of the flight deck after STC modification without consideration of the NVG compatibility of the individual components

| Action Plan 5 | Due | Primary Office | Status |
|--|---------------------------|----------------|---|
| a. Issue interim guidance to ASIs to ensure that operators properly implement ICA requirements addressing the maintenance of the NVIS compatible configuration. | 7/15/2011 (9 months) | AFS | Action will be complete upon publication of notice on special emphasis inspection of NVIS installations. The notice is on track for publication by the due date. |
| b. Publish a revision to FAA Order 8900.1 to formally provide NVIS oversight guidance | 10/15/2011 (12 months) | AFS | Action will be complete upon publication of the promised change to the 8900.1 handbook. AFS-300 completed the new draft for 8900.1, volume 6, chapter 11, section 22, in December 2010. The document is in the coordination phase. Expect publication by the 10/15/11 due date. |
| c. Issue guidance to operators to increase awareness of regulatory requirements to maintain NVG compatibility | 4/15/2011 (6 months) | AFS | Completed by publication of SAFO 10022, dated 12/15/10, on maintenance of NVIS. |
| d. Initiate a working group between the Rotorcraft Directorate, AFS and Industry (e.g., Helicopter Association International) to develop educational material that communicates the importance of maintaining NVG compatibility and possible venue FAASTeam presentations. | 4/15/2011 (6 months) | AFS | The working group is established. POC needs to enter the ongoing meeting dates in the target. This action item is owned by the FAASTeam. |

2010 Audit Detailed Findings and Action Plans

Finding 6

Operators are not properly maintaining NVIS components

- Operators are failing to follow inspection processes (e.g. daily inspections and failure to follow ICAs)
- ICAs generally lack clarity and specificity

| Action Plan 6 | Time Line | Primary Office | Status |
|---|---------------------------|--------------------------|---|
| a. Issue interim guidance to ASIs to ensure that operators properly implement ICA requirements addressing the maintenance of the NVIS configuration | 7/15/2011 (9 months) | AFS | Action will be complete upon publication of notice on special emphasis inspection of NVIS installations. The notice is on track for publication by the due date. |
| b. Issue guidance to operators to increase awareness of regulatory requirements for maintenance. | 4/15/2011 (6 months) | AFS | Completed by publication of SAFO 10022, dated 12/15/10, on maintenance of NVIS |
| c. Develop and implement an AFS surveillance program to ensure continuing compliance with required NVIS inspections. | 10/15/2011 (12 months) | AFS | Split into two parts -- one for AFS-900, the other AFS-300. - 6c(1) -- AFS-300 - Furnished draft NPG language to AFS-900 for inspection requirements for FY 2010 NPG in February 2011. Completed. - 6c(2) -- AFS-900 - Publish NVIS inspection requirements in FY12 in NPG order. Publish by 10/15/11. |
| d. Charter a work group to develop guidance for ICAs | 4/15/2011 (6 months) | AFS and AIR | The group agreed that AIR has the lead on this action item, as ICAs are specific to installation documents. This action item is complete because have already chartered the work group. Please confirm if the POC is Kevin Brane, AIR-113. |
| e. Add an ASI to the Rotorcraft AEG staff specifically dedicated to the review of ICAs for initial and amended NVIS STCs. | 4/15/2011 (6 months) | AFS-100 and ASW-200/201A | Update as of 4/19/2011: Currently using an existing AEG inspector to perform the function until the new position is filled. In this regard, the Southwest Region has already approved the position at the Regional Human Council Committee (HCC) level. Also, ASW-210 staff posted the position announcement (closed on |

2010 Audit Detailed Findings and Action Plans

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|--|--|--|--|
| | | | <p>April 04, 2011) and received the candidate register from Human Resources (April 18, 2011). Interviews are now being scheduled. Once the selection is made, the selection will be forwarded to the HCC for approval and subsequent processing by AFS-1 and AVS-1. As of this date, the recent hiring freeze appears ready to be lifted so the selection and hiring process can be completed for this new position.</p> |
|--|--|--|--|

2010 Audit Detailed Findings and Action Plans

Finding 7

There is insufficient knowledge among AFS PIs and operators regarding NVIS-related maintenance procedures
 - Special emphasis inspection results demonstrate a need for additional training/guidance

| Action Plan 7 | Time Line | Primary Office | Status |
|--|----------------------------------|----------------|--|
| a. Develop and present appropriate briefings to improve ASI knowledge among the PIs for the 35 air carriers with NVIS authorization. | 1/15/2011 (90 days) | AFS | AFS-300 - The national NVIS briefings were conducted in February 2011. |
| b. Develop and present appropriate training and support material to improve ASI knowledge. | 10/15/2012 (24 months) | AFS | 7b(1) – Form workgroup and develop course outline by 4/30/10. The first meeting of the NVIS training development workgroup took place January 25-27. Developed the course outline in February 2011. Complete 7b(2) – Complete training course prototype by 8/31/11. The course prototype should be available in October 2011. Delay due to cancellation of key workgroup meeting that was cancelled due to the possible government shutdown. 7b(3) – Training course available to field personnel. |
| c. Develop appropriate guidance for operators (e.g., SAFO, AC) | 4/15/2011 (6 months for SAFO) | AFS | Completed by publication of SAFO 10022, dated 12/15/10, on maintenance of NVIS. |

2010 Audit Detailed Findings and Action Plans

Finding 8

OpsSpec paragraph D093 (HNVGO Maintenance Program) is not being effectively used to require appropriate maintenance

- AFS guidance for issuance of OpsSpec paragraph D093 is inadequate
- Currently issued OpsSpec paragraphs D093 do not always include requirements for maintenance of the NVGs and NVIS modified aircraft
- OpsSpec paragraph D093 is unclear

| Action Plan 8 | Time Line | Primary Office | Status |
|--|--------------------------|----------------|---|
| a. Clarify AFS guidance for issuance of OpsSpec paragraph D093 | 7/15/2011 (9 months) | AFS | Completed. AFS revised the guidance for issuance of OpSpec paragraph D093 effective 7/14/2011 |
| b. Develop and implement an AFS surveillance program to ensure compliance with the existing and revised OpsSpec paragraph D093 | 7/15/2011 (9 months) | AFS | Completed. Notice N 8900.152 was issued effective 4/28/2011. |
| c. Clarify the language in OpsSpec paragraph D093. | 4/15/2012 (18 months) | AFS | Completed. OpSpec paragraph D093 was revised and will become effective on 7/15/2011. |
| d. Revise OpsSpec paragraph D093 to better describe operator duties to maintain the NVIS equipment on their aircraft. | 4/15/2012 (18 months) | AFS | Completed. OpSpec paragraph D093 was revised and will become effective on 7/15/2011. |

Attachment C

NOTICE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

N 8900.152

National Policy

Effective Date:
4/29/11

Cancellation Date:
4/29/12

SUBJ: Special Emphasis Inspection of Night Vision Imaging System Lighting Installations

1. Purpose of This Notice. This notice provides guidance to inspectors who have oversight responsibility of air carriers equipped with a Night Vision Imaging System (NVIS) and are assigned operations specification (OpSpec) paragraph D093, Helicopter Night Vision Goggle Operations (HNVGO) Maintenance Program. (See Appendix B, Sample OpSpec D093, Helicopter Night Vision Goggle Operations (HNVGO) Maintenance Program.) This guidance contains the instructions to perform the inspections of the NVIS lighting installation, the NVIS documentation, and maintenance requirements of the approved installation. Additionally, this guidance will introduce a revision to OpSpec D093, capturing the maintenance and installation data for the NVIS and night vision goggles (NVG). An NVIS Aircraft Inspection Job Aid, which inspectors can use as a guide, is included in Appendix A, Night Vision Imaging System Aircraft Inspection Job Aid.

2. Audience. The primary audience for this notice includes principal maintenance inspectors (PMI), principal avionics inspectors (PAI), and geographic inspectors assigned to Title 14 of the Code of Federal Regulations (14 CFR) part 135 air carriers maintaining NVIS equipped aircraft as referenced in OpSpec D093. The secondary audience includes Flight Standards branches and divisions in the regions and headquarters.

3. Where You Can Find This Notice. You can find this notice on the MyFAA employee Web site at https://employees.faa.gov/tools_resources/orders_notices/. Inspectors can access this notice through the Flight Standards Information Management System (FSIMS) at <http://fsims.avs.faa.gov>. Operators may find this information on the Federal Aviation Administration (FAA) Web site at <http://fsims.faa.gov>.

4. Background. Aviation Safety (AVS) personnel have recently completed an assessment of NVIS equipped air carriers. The assessment concluded that a significant number of air carriers conducting NVG operations have not been maintaining NVIS equipment in accordance with the instructions for continued airworthiness (ICA) issued with the NVIS Supplemental Type Certificate (STC). Additionally, reviews of several air carriers' OpSpec D093 have shown that the term "night vision device" was not clear. The term "night vision device" was intended to include all necessary equipment that is installed or modified as part of the entire NVIS, not just the NVGs. FAA Order 8900.1, Flight Standards Information Management System (FSIMS),

Distribution: Electronic Only

Initiated By: AFS-300

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Volume 4, Chapter 7, Section 4, Night Vision Imaging Systems, subparagraph 4-1128F3), states “The reliability of the NVIS and safety of flight operations is dependant on the operators adhering to the instructions for continued airworthiness (ICA).” The NVIS lighting ICAs and the NVG maintenance document are required to be listed in OpSpec D093. Part 135, § 135.413 requires air carriers to maintain their aircraft in an Airworthy condition, and 14 CFR part 119, § 119.5(l) requires air carriers to operate their aircraft in accordance with the air carrier certificate and appropriate OpSpecs.

5. Action. The inspector must perform the NVIS lighting installation inspections as described within this notice. The NVIS Aircraft Inspection Job Aid is provided to guide the inspector during the inspection. The inspections are limited to a visual inspection of the aircraft records and the installation of the NVIS lighting. Additionally, the inspector must verify that the operator has performed compatibility assessments on all subsequent alterations (e.g., additional instrumentation, lighting, etc.) that were incorporated after the installation of the NVIS STC. This inspection consists of four sections as outlined in the attached job aid in Appendix A: Preparation, Records Review, Aircraft Inspection, and Closure.

Note: The inspector should not remove panels or disassemble the cockpit, cabin, and interior and/or exterior lighting.

a. Preparation. The inspector should contact the operator and schedule a time to perform the inspection. Collect the following documents for review:

- OpSpec A050, Helicopter Night Vision Goggle Operations (HNVGO).
- OpSpec D093, Helicopter Night Vision Goggle Operations (HNVGO) Maintenance Program.
- Management specification (MSpec)/OpSpec D095, Minimum Equipment List (MEL) Authorization.
- STC limitations and conditions.
- Download NVIS-related FAA Form 337, Major Repair and Alteration (Airframe, Powerplant, Propeller, or Appliance), from the electronic document retrieval system (EDRS) II database located in the Safety Performance Analysis System (SPAS).
- Applicable maintenance manuals, ICAs, and operators inspection programs.
- NVIS alteration documentation.
- Other alteration documentation that could affect NVIS compatibility.
- Master Minimum Equipment List (MMEL) Policy Letter 127, Night Vision Imaging Systems (NVIS), if available.
- Original Equipment Manufacturer (OEM)-manufactured NVIS documentation.
- Flight manual and equipment list.
- OEM and STC holder Service Bulletins (SB).

b. Records Review. The inspector must verify that the documents collected in the preparation phase are the correct documents for the aircraft being inspected. Also, verify if any modifications were accomplished after the installation of the NVIS STC. If modifications were performed after the NVIS STC, ensure that the operator has documentation verifying that a

compatibility evaluation was performed. Refer to the “Limitations and Conditions” section of the STC for the aircraft being inspected. The STCs may have varying requirements. Review applicable SBs. SBs are not regulatory unless the following situations apply:

- If an Airworthiness Directive (AD) incorporates by reference all or a portion of a SB;
- If the SB is part of the FAA-approved Airworthiness Limitations Section (ALS) of the manufacturer’s manual or type certificate (TC);
- If an FAA-approved inspection such as an Approved Aircraft Inspection Program (AAIP) or Continuous Airworthiness Maintenance Program (CAMP) incorporates SBs directly or by reference; or
- If the certificate holder’s OpSpecs list SBs as an additional maintenance requirement.

c. Aircraft Inspection. Visually inspect the aircraft NVIS lighting configuration against the ICA drawings. During the visual inspection, verify the following:

- Instrument panel modification.
- Lower console modifications.
- Overhead panel modifications.
- Internal cockpit and cabin lighting sources (e.g., map lights, utility lights, aft cabin ceiling lights, etc.).
- External lighting sources (e.g., position lights, strobe lights, search lights, etc.).
- Installed equipment with light emitting sources (e.g., medical equipment, infrared imaging systems, hoists, telecommunication equipment, etc.).

Note: Carry-on equipment is not required to be depicted on the drawings.

d. Closure. The inspector will debrief the operator about discrepancies found during the NVIS inspection. Inform the operator of MMEL PL-127 if they are unaware of this global change. The inspector must document all discrepancies found during the NVIS inspection in the comments section of the Program Tracking and Reporting Subsystem (PTRS) record. The PMI/PAI and program managers must confirm this action (i.e., inspecting and reporting of discrepancies) is complete by entering it into the PTRS no more than 180 days from the effective date of this notice. A PTRS entry must be created for each aircraft listed in OpSpec D093.

- Use PTRS Code 4634/6634 (SURV/OPR/INSP NIT VISN IMG SYS).
- Enter “N8900.152” (this notice number) in the “National Use” field.

6. Additional Information. Global extensions will not be granted to this notice. However, requests for extensions beyond 180 days will be considered on a case-by-case basis. The extension request may be submitted by memorandum, e-mail, or letter to the regional division manager. Each Regional Office (RO) will determine whether or not to grant the extension. A copy of the extension request, along with the region’s response, must be forwarded to the General Aviation Branch, AFS-350. Aircraft previously inspected for NVIS lighting installation configuration may not require re-inspection if:

- All discrepancies found on the aircraft were documented and corrected;

- The PTRS code reflects 4634/6634 (SURV/OPR/INSP NIT VISN IMG SYS); and
- This notice number is entered in the “National Use” field in the PTRS entry.

7. Disposition. We will permanently incorporate the information in this notice in FSIMS before this notice expires. Direct questions concerning technical data to the appropriate Aircraft Certification Office (ACO) as indicated on the applicable STC. Additional information is available at the following:

- Seattle ACO: 425-917-6524.
- Denver ACO: 303-342-1080.
- Rotorcraft Certification Office (RCO): 817-222-5170.
- Aircraft Evaluation Group (AEG): 817-222-5269.
- NVIS/NVG Web pages:
 - <https://employees.faa.gov/org/linebusiness/avs/offices/afs/workshops/>.
 - https://www.faa.gov/aircraft/air_cert/design_approvals/rotorcraft/nvis/.

ORIGINAL SIGNED BY
/s/ Raymond Towles for

John M. Allen
Director, Flight Standards Service

Appendix A. Night Vision Imaging System Aircraft Inspection Job Aid

Purpose. This job aid provides guidance for inspecting Night Vision Imaging System (NVIS) equipped aircraft, to assess the quality of maintenance, configuration control, and the degree of compliance with the operator's maintenance procedures on in-service aircraft.

Procedural Guidance.

- Notice N 8900.152, Special Emphasis Inspection of Night Vision Imaging System Lighting Installations.
- Safety Alert for Operators (SAFO) 10022, Maintenance of Night Vision Imaging Systems (NVIS).
- Federal Aviation Administration (FAA) Aircraft Maintenance Division, AFS-300, memorandum, National Assessment of Aircraft Equipped with Night Vision Imaging Systems and Operators authorized Operations Specification D093, dated December 3, 2010.
- Master Minimum Equipment List (MMEL) Policy Letter 127, Night Vision Imaging System (NVIS).
- Operations specifications (OpSpecs) A050, Helicopter Night Vision Goggle Operations (HNVGO); D072, Aircraft Maintenance—Continuous Airworthiness Maintenance Program (CAMP) Authorization; D073, Approved Aircraft Inspection Program (AAIP); D085, Aircraft Listing; D093, Helicopter Night Vision Goggle Operations (HNVGO) Maintenance Program; and management specification (MSpec)/OpSpec D095, Minimum Equipment List (MEL) Authorization.

Program Tracking and Reporting Subsystem (PTRS) Activity Code: 4634/6634.

Section 1—Preparation. Contact the operator and schedule a time to perform the inspection, if possible. Collect the following documents for review:

- OpSpec A050.
- OpSpec D093.
- MSpec/OpSpec D095.
- Supplemental Type Certificate (STC) limitations and conditions.
- Download NVIS-related FAA Form 337, Major Repair and Alteration (Airframe, Powerplant, Propeller, or Appliance), from the electronic document retrieval system (EDRS) II database located in the Safety Performance Analysis System (SPAS).
- Applicable maintenance manuals, instructions for continued airworthiness (ICA), and operators inspection programs.
- NVIS alteration documentation.
- Other alteration documentation that could affect NVIS compatibility.
- MMEL PL-127, if available.
- Original Equipment Manufacturer (OEM)-manufactured NVIS documentation.
- Flight manual and equipment list.
- OEM and STC holder Service Bulletins (SB).

Section 2—Records Review.

| Item | Complete Yes/No, or Not Applicable | Task | Description |
|------|---|---|--|
| 1 | | Maintenance/Inspection Programs | Review the operator maintenance/inspection program to determine if it includes NVIS ICA procedures. If so, ensure the program contains all the applicable data to maintain the NVIS-modified aircraft (e.g., configuration drawings, ICA with appendices, etc.). |
| 2 | | Flight Manual/NVIS Flight Supplement | Review the FAA-approved NVIS flight manual and/or flight manual supplement as identified in the STC data and equipment list. |
| 3 | | ICAs | If the ICAs are not incorporated in the maintenance program, review the NVIS ICAs. |
| 4 | | Night Vision Goggle (NVG) Serviceability/Inspection | <p>Review the records for NVG daily check, preflight check and 180-day inspection of the NVIS goggles. Reference NVG maintenance procedures as applicable.</p> <p>Note: These requirements should be included in OpSpecs A050 and D093. (e.g., The requirements for check/inspection are found in the Rotorcraft Flight Manual Supplement (RFMS) or the ICAs)</p> |
| 5 | | MEL Usage for NVIS Modified Aircraft | <p>Review the operators approved MEL procedures. Determine if MMEL PL-127 has been incorporated.</p> <p>Note: Standard MMEL supplemental lighting privileges do not apply to NVIS modified cockpits/cabins.</p> |

| Item | Complete Yes/No, or Not Applicable | Task | Description |
|------|------------------------------------|---------------------------------------|---|
| 6 | | Aircraft Permanent Records | <p>Review the applicable FAA Form 337, the STC "Limitations and Conditions" section, and aircraft record entries for the NVIS modification (i.e., flight log, logbook, work orders).</p> <p>Note: In some cases, there may be multiple entries.</p> |
| 7 | | Post-NVIS STC Modifications | <p>Verify any subsequent aircraft modifications to the cockpit, cabin or aircraft exterior involving a light emitting or reflecting device were properly evaluated in accordance with the Limitations and Conditions section of the STC.</p> <p>Note: Any alteration, major or minor, could adversely affect NVIS compatibility.</p> |
| 8 | | Airworthiness Directives (AD) and SBs | <p>Review applicable ADs, Original Equipment Manufacturer (OEM) SBs, and STC holder SBs for compliance.</p> <p>Note: Ensure the operator has a process to obtain STC holder SBs.</p> |
| 9 | | Aircraft records/Approved data | <p>If possible, obtain copies or photographs of any documents with potential concerns for later evaluation by the appropriate office. These may be needed to resolve findings.</p> |

Section 3—Aircraft Inspection.

| Item | Complete Yes/No, or Not Applicable | Task | Description |
|------|------------------------------------|------------------------|---|
| 1 | | Instrument Readability | <ul style="list-style-type: none"> • Survey cockpit/cabin in daylight conditions. • Confirm all gauges/instruments are easily readable. • All colors on the gauges/instruments are easily identified. • Filters are not cracked, crazed, faded, or clouded by condensation. |

| Item | Complete Yes/No, or Not Applicable | Task | Description |
|------|---|----------------------------|---|
| | | | <ul style="list-style-type: none"> • Filtered electronic displays are easily readable at daylight brightness settings. • Caution and warnings are easy to see. • Filters are installed properly. |
| 2 | | Instrument Panel | Verify that instrument panel modifications are installed in accordance with the approved data (e.g., configuration exactly matches installation drawings, ICA, etc.). |
| 3 | | Lower Console | Verify that lower console(s) modifications are installed in accordance with the approved data (e.g., configuration exactly matches installation drawings, ICA, etc.). |
| 4 | | Overhead Panel | Verify that overhead panel modifications are installed in accordance with the approved data (e.g., configuration exactly matches installation drawings, ICA, etc.). |
| 5 | | Internal Aircraft Lighting | Verify that all internal cockpit and cabin lighting sources such as map lights, utility lights, aft cabin ceiling lights, etc., are modified in accordance with the approved data (e.g., configuration exactly matches installation drawings, ICA, etc.). |
| 6 | | External Lighting | Verify that all external lighting sources such as position lights, strobe lights, and search lights are modified in accordance with the approved data (e.g., configuration exactly matches installation drawings, ICA, etc.). |
| 7 | | Installed Equipment | Verify that installed equipment with light emitting sources such as medical equipment, infrared imaging systems, hoists, telecommunication equipment, etc., are modified in accordance with the approved data (e.g., configuration exactly matches installation drawings, ICA, etc.). (Carry-on equipment is not required to be depicted on the drawings). |

| Item | Complete Yes/No, or Not Applicable | Task | Description |
|------|------------------------------------|---------------------|--|
| 8 | | Design Deficiencies | If deficiencies are found with NVIS filtration and NVIS lighting for installed equipment that could affect aircraft operation. (See Section 4, Item 4 for more information (i.e., safety issues).) |
| 9 | | Photos | Document the aircraft configuration with photos. These photos should document multiple angles depicting all equipment that emits or reflects light. It is recommended to take these photos with power applied to the aircraft. |

Section 4—Closure.

| Item | Complete Yes/No, or Not Applicable | Task | Description |
|------|------------------------------------|---------------------------------|--|
| 1 | | Disposition Findings | Analyze findings to determine the area of responsibility (e.g., operator, modifier, or Aircraft Certification Office (ACO)/STC holder). Include any documents and photographs obtained during the inspection. |
| 2 | | Debrief Operator | Debrief deficiencies to the operator or appropriate personnel. |
| 3 | | PTRS Entry | Document activities in the PTRS database. PTRS Activity Code 4634/6634 (SURV/OPR/INSP NIT VISN IMG SYS) |
| 4 | | ACO Notification (if necessary) | Provide documentation of any type design deficiencies to the responsible ACO. Details should include at a minimum: <ul style="list-style-type: none"> • Inspector name and contact information. • Date of inspection. • PTRS number. • Aircraft make/model, tail number, and serial number. • NVIS STC number. • Applicable drawing number(s), revision levels, dates, and zones. • Equipment part numbers. • Short description of the service difficulty. |

| Item | Complete Yes/No, or Not Applicable | Task | Description |
|------|---|--------------------|---|
| | | | <ul style="list-style-type: none"> • Detailed photos of the deficiencies. |
| 5 | | Task Completion | <p>Followup options can include:</p> <ul style="list-style-type: none"> • Appropriate enforcement action when analysis of findings disclose improper maintenance. • Written notification to the operator/program manager of the necessary changes. • Communication with the certificate-holding district office (CHDO)/International Field Office (IFO) by the geographic unit finding deficiencies. |

Appendix B. Sample OpSpec D093, Helicopter Night Vision Goggle Operations (HNVGO) Maintenance Program

The certificate holder is authorized to conduct Helicopter Night Vision Goggle Operations (HNVGO) under the limitations and provisions of 14 CFR part 135 and operations specification paragraph A050, Helicopter Night Vision Goggle Operations (HNVGO), of these operations specifications using the aircraft listed in the following table. The Night Vision Imaging System (NVIS) includes the approved installed equipment and night vision goggles (NVG). The NVIS and NVGs used to conduct HNVGO shall be maintained in accordance with the maintenance documents listed in the table. The NVGs are not aircraft specific.

Table 1—Authorized NVIS and NVG Maintenance Documents

| Aircraft Registration Number | Aircraft Serial Number | Aircraft M/M/S | STC Number | Maintenance Document for Aircraft NVIS | Maintenance Document for Night Vision Goggles |
|------------------------------|------------------------|----------------|------------|--|---|
| | | | | | |

VOLUME 3 GENERAL TECHNICAL ADMINISTRATION

CHAPTER 18 OPERATIONS SPECIFICATIONS

Section 6 Parts D and E—Maintenance MSpecs/OpSpecs/LODAs

3-921 MANAGEMENT SPECIFICATION (MSPEC)/OPERATIONS SPECIFICATION (OPSPEC) GUIDANCE.

NOTE: All 300-series (300–399) OpSpecs/MSpecs/training specifications (TSpec)/letters of authorization (LOA) (Parts A, B, C, D, E, and H) require approval by the appropriate headquarters (HQ) policy division. Title 14 of the Code of Federal Regulations (14 CFR) parts 91, 91 subpart K (part 91K), 125, 125M, 133, 137, and 141 operators' nonstandard operational requests must be approved by the General Aviation and Commercial Division (AFS-800); 14 CFR parts 121, 135, and 142 nonstandard operational requests must be approved for issuance by the Air Transportation Division (AFS-200); 14 CFR part 145 repair station and all airworthiness nonstandard requests must be approved by the Aircraft Maintenance Division (AFS-300); and All Weather Operations (AWO) relating to instrument procedures must be approved by the Flight Technologies and Procedures Division (AFS-400). Any additional provisions and/or authority added to an OpSpec/MSpec/TSpec paragraph or LOA through the use of nonstandard text entered in the nonstandard text block (sometimes referred to as "Text 99") must also be approved by the appropriate HQ policy division. For detailed guidance on the process for obtaining HQ approval for nonstandard authorizations, principal inspectors (PI) must read the guidance contained in Volume 3, Chapter 3, Section 2.

MSPEC/OPSPEC D070, INTEGRATION OF AIRCRAFT FUEL TANK MAINTENANCE AND INSPECTION INSTRUCTIONS INTO THE CERTIFICATE HOLDER/FOREIGN PERSON'S/FOREIGN AIR CARRIER'S CONTINUOUS AIRWORTHINESS MAINTENANCE PROGRAM (CAMP). MSpec/OpSpec D070 was superseded by D097.

OPSPEC/MSPEC D072, AIRCRAFT MAINTENANCE—CONTINUOUS AIRWORTHINESS MAINTENANCE PROGRAM (CAMP) AUTHORIZATION.

A. MSpec/OpSpec D072. This is issued to operators subject to a Continuous Airworthiness Maintenance Program (CAMP) under 14 CFR part 91, § 91.1109; 14 CFR part 121; and 14 CFR part 135, § 135.411(a)(2). This MSpec/OpSpec contains the conditions that must be met for a certificate holder to operate its aircraft and lists the reference documents that contain the details of the operator's program.

B. Certificate Holder/Program Manager. The certificate holder/program manager is authorized to conduct operations using identified aircraft maintained in accordance with the CAMP and the limitations specified in these MSpecs/OpSpecs.

C. MSpec/OpSpec D072 CAMP Authorization. Table 1 must contain the following:

1) Each of the aircraft authorized to be maintained in accordance with the CAMP by make, model, and series (M/M/S);

2) The document(s) that encompasses all 10 elements of a CAMP. The certificate holder/program manager may have multiple manuals that encompass the CAMP. The principal inspector (PI) may elect to list all the manuals encompassing the CAMP or, if one manual references all the other manuals, then preferably that particular manual may only be listed; and

3) The certificate holder's/program manager's assigned number(s) of the CAMP document(s).

NOTE: The most current revision should be identified by () to the certificate holder's CAMP and should not require reissuance of this OpSpec unless the manual title or document number changes.

NOTE: Title 14 CFR part 125 operators are required to have an inspection program and are not subject to the requirements of a CAMP. (See part 125, § 125.247.) D072 is issued to parts 91 subpart K (part 91 K), 121, and 135 operators with a CAMP requirement.

OPSPEC/MSPEC/LETTER OF DEVIATION AUTHORITY (LODA) D073, APPROVED AIRCRAFT INSPECTION PROGRAM (AAIP). It is applicable to each aircraft subject to the requirements of 14 CFR parts 91 (including part 91 subpart K (part 91K)), 121, and 135 whose aircraft are inspected under an Approved Aircraft Inspection Program (AAIP). It is also applicable to 14 CFR part 125 operators and A125 operators who have been issued a Letter of Deviation Authority (LODA), and whose aircraft are inspected under an approved inspection program. For each aircraft identified in this OpSpec that is subject to the requirements of part 135, § 135.421, OpSpec(s) D101 through D104 will also be issued, as appropriate.

NOTE: A part 125 operator may use a continuous inspection program that is part of a current Continuous Airworthiness Maintenance Program (CAMP) approved for use under part 121 or 135. (See part 125, § 125.247(e)(1).)

NOTE: This OpSpec may be issued for turbine-powered aircraft type certificated (TC) for nine passenger seats or fewer, or that have a Supplemental Type Certificate (STC) that limits the seating configuration to nine or fewer passenger seats.

A. OpSpec/MSpec/LODA D073 Authorization. Each aircraft identified in Table 1 (or in the table of the A125 operator's LOA D073) must have the following information listed:

- The aircraft registration number;
- Serial number;
- Make, model, and series (M/M/S);
- The inspection document name; and
- The revision number.

B. OpSpec/MSpec/LODA D073. The table must list the aircraft registration number, serial number, and M/M/S of each aircraft subject to §§ 125.247 and 135.419.

NOTE: The most current revision of the approved inspection document should be identified by () and should not require reissuance of this OpSpec unless the manual title or document number changes.

OPSPEC D074, RELIABILITY PROGRAM AUTHORIZATION—ENTIRE AIRCRAFT.

A. OpSpec D074 Authorization. OpSpec D074 is authorized for operators subject to a Continuous Airworthiness Maintenance Program (CAMP) under 14 CFR part 121 and part 135, § 135.411(a)(2). This OpSpec authorizes the use of a maintenance reliability program that contains standards for determining maintenance intervals and processes. This program controls the inspection, check, overhaul, or restoration times for the entire aircraft and is the sole control as far as OpSpecs are concerned. Each make, model, and series (M/M/S) of aircraft controlled by reliability and its approved reliability document shall be identified on this OpSpec. Guidance for approving a reliability program is found in Volume 3, Chapter 40.

B. Reliability Program Authorization. OpSpec D074 Table 1 must contain the following:

- 1) The M/M/S of each aircraft controlled by a reliability program; the level of detail in specifying the series of aircraft should match the detail in the operator's program.
- 2) The document name that encompasses the reliability program and the certificate holder's assigned number(s) of the reliability document.
- 3) The current revision date of the reliability document needs to be placed in the document date block.

OPSPEC D075, RELIABILITY PROGRAM AUTHORIZATION—AIRFRAME, POWERPLANT, SYSTEMS, OR SELECTED ITEMS. OpSpec D075 is authorized for operators subject to a Continuous Airworthiness Maintenance Program (CAMP) under 14 CFR part 121 and part 135, § 135.411(a)(2). This OpSpec authorizes the use of a maintenance reliability program containing the standards for determining maintenance intervals and processes. The program controls the inspection, check, overhaul, or restoration time for airframe, powerplant, systems, or individually selected items within a system (hydraulic system, pumps, valves, actuators, etc.) and must be identified on the OpSpecs.

A. Maintenance Time Limitations Section. Airframe, powerplant, systems, or items controlled by reliability will be identified in the Maintenance Time Limitations section by an asterisk or other identifier, and a note.

B. Referenced Document. If preferred, a certificate holder may reference in its Maintenance Time Limitations section a document approved by the Administrator. The referenced document will contain at least that information required by the Maintenance Time Limitations section.

C. Program Approval. Guidance for approving this program is found in Volume 3, Chapters 40 and 43.

1) Components not subject to the certificate holder's partial reliability program must be controlled by a time limitations manual or document. This manual or document must be listed in Table 1 of OpSpec D088.

2) Table 1 must contain the following:

- The make, model, and series (M/M/S) of each aircraft controlled by a reliability program—the level of detail in specifying the series of aircraft should match the detail in the operator's program;
- The document name that encompasses the partial reliability program and the certificate holder's assigned number(s) of the partial reliability document; and
- The current revision date of the partial reliability document.

NOTE: Operators authorized OpSpec D075 must be issued OpSpec D088.

NOTE: This OpSpec does not apply 14 CFR part 125 operators.

MSPEC/OPSPEC D076, SHORT TERM ESCALATION AUTHORIZATION.

A. MSpec/OpSpec D076. This is authorized for operators subject to a Continuous Airworthiness Maintenance Program (CAMP) under 14 CFR part 121; part 91, § 91.1109; and part 135, § 135.411(a)(2). MSpec/OpSpec D076 authorizes a certificate holder/program manager to use short term escalation procedures with aircraft, powerplant, systems, or selected items without preapproval by the principal inspector (PI).

B. Short Term Escalations. Certificate holders who have short term escalation procedures incorporated into their reliability program (OpSpec D074) or partial reliability program (OpSpec D075) do not need MSpec/OpSpec D076 authorization for items covered in those programs. Items not subject to a partial reliability program must have MSpec/OpSpec D076 authorization to use short term escalations.

NOTE: See Volume 3, Chapter 37.

C. Limitations. Table 1 references the aircraft by make, model, and series (M/M/S) and the limitations (if applicable) placed on that particular M/M/S. The limitations in Table 1 are primarily for airframe check and inspection intervals. Engines and their components, as well as airframe components and appliances, are generally not limited, except for the 10 percent not to exceed 500 hours.

1) The limitation section of this table is used to restrict a particular M/M/S task below the maximum allowable 10 percent, not to exceed 500 hours. An example would be if an aircraft "A" check has an interval of 200 hours (200 x 10 percent = 20 hrs) and the PI limited the "A" check short term escalation to not exceed 20 hours.

2) It can also be used to eliminate certain tasks from being eligible for short term escalation. (An example would be if the operator was not permitted short term escalations on a particular M/M/S aircraft "B" check.)

3) If the limitation section of this table is left blank, then the operator is authorized to short term escalate all items to the maximum interval described in its manual.

NOTE: If restrictions and eliminations are requested for engine, engine components, airframe components, and appliances, then they may be listed in the limitations for that particular M/M/S as well.

OPSPEC D077, MAINTENANCE CONTRACTUAL ARRANGEMENT AUTHORIZATION—FOR AN ENTIRE AIRCRAFT.

A. OpSpec D077 Authorization. OpSpec D077 is authorized for operators subject to a Continuous Airworthiness Maintenance Program (CAMP) under 14 CFR part 121 and part 135, § 135.411(a)(2). This OpSpec authorizes a certificate holder to use a part 121 or § 135.411(a)(2) certificate holder's approved maintenance program for the maintenance of its entire aircraft. If applicable, this includes participation in the contractor's reliability program. (See Volume 3, Chapters 40 and 42.) Title 14 CFR part 125, §§ 125.245 and 125.247 authorize the operator subject to an Approved Aircraft Inspection Program (AAIP) under part 125 to enter into a contractual agreement for the accomplishment of maintenance, preventive maintenance, alterations, or required item inspection as identified in the operator's manual.

B. OpSpec D077, Maintenance Contractual Arrangement Authorization. Table 1 must contain the following information:

1) Contractor: This field must list the contractor with whom the certificate holder has entered into agreement for the specific maintenance function listed.

2) Contract Number and Date: Self-explanatory.

3) Aircraft and Powerplant (A&P) Make, Model, and Series (M/M/S): Self-explanatory.

4) Reliability Program Name/Number/Date: List the contractor's approved reliability program name, number assigned by the contractor, and current revision date (if applicable).

OPSPEC D078, MAINTENANCE CONTRACTUAL ARRANGEMENT AUTHORIZATION—FOR SPECIFIC MAINTENANCE.

A. OpSpec D078 Authorization. OpSpec D078 is authorized for operators subject to a Continuous Airworthiness Maintenance Program (CAMP) under 14 CFR part 121 and part 135, § 135.411(a)(2). This OpSpec authorizes a certificate holder to use another part 121 or § 135.411(a)(2) certificate holder's approved maintenance program for specific maintenance functions. This OpSpec identifies the functions to be performed by the contractor on the certificate holder(s) aircraft listed in the table. This OpSpec may be used for one or more contracts, aircraft/engine makes and models, or components. See Volume 3, Chapter 42.

B. OpSpec D078, Maintenance Contractual Arrangement Authorization.

OpSpec D078 authorizes and identifies the functions to be performed by the contractor on the certificate holder's aircraft listed in the table. Table 1 must contain the following information:

- 1) Contractor: This field must list the contractor with whom the certificate holder has entered into agreement for the specific maintenance function listed.
- 2) Contract Number and Date: Self-explanatory.
- 3) Aircraft and Powerplant (A&P) Make, Model, and Series (M/M/S):
Self-explanatory.
- 4) Specific Maintenance Function: This field can be as general as stating "All" for the entire aircraft and engines, or it can list specific inspections or checks.

NOTE: This OpSpec only applies to the performance of maintenance and inspections.

OPSPEC D079, RELIABILITY PROGRAM CONTRACTUAL ARRANGEMENT AUTHORIZATION.

A. OpSpec D079 Authorization. This OpSpec authorizes operators subject to a Continuous Airworthiness Maintenance Program (CAMP) under 14 CFR part 121 and part 135, § 135.411(a)(2) to participate in another part 121 or § 135.411(a)(2) (contractor's) FAA-approved reliability program for its aircraft, powerplant, systems, or selected components. See Volume 3, Chapter 41.

NOTE: Operators authorized OpSpec D079 will be automatically issued OpSpec D088.

B. OpSpec D079, Reliability Program Contractual Arrangement Authorization.

Table 1 must contain the following information:

- 1) Contractor: This field must list the contractor with whom the certificate holder has entered into agreement for the specific reliability function listed.
- 2) Contract Number and Date: Identifying number from contract (if applicable) and date signed.
- 3) Aircraft and Powerplant (A&P) Make, Model, and Series (M/M/S):
Self-explanatory.
- 4) Reliability Program Name and Number: Name of program and number assigned by contractor.
- 5) Reliability Program Date: Date of current revision.

**OPSPEC D080, LEASED AIRCRAFT MAINTENANCE PROGRAM
AUTHORIZATIONS—U.S.-REGISTERED AIRCRAFT.**

A. OpSpec D080 Authorization. This OpSpec authorizes operators subject to a Continuous Airworthiness Maintenance Program (CAMP) under 14 CFR part 121 and part 135, § 135.411(a)(2) to use a lessor's approved maintenance program for the leased aircraft. This OpSpec applies only to leases of aircraft intended to return to the lessor at a time specified in the lease.

B. Leased Aircraft Maintenance Program Authorizations. The certificate holder is authorized to maintain the aircraft listed in Table 1 in accordance with the lessor's approved maintenance program for the specific make, model, and series (M/M/S) aircraft and lease agreements identified in Table 1, except as provided in Table 2.

NOTE: Table 2 identifies specific items that will be maintained in accordance with the certificate holder's approved maintenance program.

NOTE: Specific maintenance program requirements of the certificate holder that are different than the lessor's program will be listed in Table 2.

OPSPEC D081, PARTS POOL AGREEMENT AUTHORIZATION.

A. OpSpec D081 Authorization. This OpSpec authorizes a 14 CFR part 121 certificate holder operating outside the United States under the provisions of part 121, § 121.361(b) to enter into a parts pooling agreement with foreign air carriers or agencies whose employees do not hold U.S. airman certificates. See Volume 3, Chapter 39.

B. Parts Pool Agreement Authorization. Table 1 must list the participants, along with their location, who are eligible to provide parts to the certificate holder.

OPSPEC D082, PRORATED TIME AUTHORIZATION.

A. OpSpec D082 Authorization. This OpSpec authorizes operators subject to a Continuous Airworthiness Maintenance Program (CAMP) under 14 CFR part 121 and part 135, § 135.411(a)(2) to use aircraft for which inspection and overhaul times have been established using the prorating process.

B. Prorated Time Authorization. Table 1 lists each aircraft by registration, serial number, make, model, and series (M/M/S) that shall be maintained in accordance with the adjusted times identified in the certificate holder's proration document. The table must list the individual proration document number assigned by the air carrier and current effective date.

**OPSPEC D083, SHORT TERM ESCALATION FOR BORROWED PARTS SUBJECT
TO OVERHAUL REQUIREMENTS.**

A. OpSpec D083 Authorization. This OpSpec authorizes operators subject to a Continuous Airworthiness Maintenance Program (CAMP) under 14 CFR part 121 and part 135,

§ 135.411(a)(2) relief from approved overhaul time limits when borrowing parts from another certificate holder.

B. A Certificate Holder's Authorization to Use a Borrowed Part. Provided that all of the conditions listed on the OpSpecs are met, the certificate holder is authorized to use a borrowed part (overhauled) from another operator when time in service of the available part exceeds the certificate holder's approved overhaul time limit.

OPSPEC D084, SPECIAL FLIGHT PERMIT WITH CONTINUOUS AUTHORIZATION TO CONDUCT FERRY FLIGHTS. This OpSpec authorizes 14 CFR part 119 certificate holders with an approved continuing flight authorization program to issue a special flight permit with continuing authorization to conduct ferry flights. This permit can only be issued under the guidelines set forth in 14 CFR part 21, § 21.197(c).

NOTE: Table 1 must reference the certificate holder's manual(s) that contain the approved continuing flight authorization program.

MSPEC MD084, SPECIAL FLIGHT PERMIT WITH CONTINUOUS AUTHORIZATION TO CONDUCT FERRY FLIGHTS. This OpSpec authorizes 14 CFR part 91 subpart K (part 91K) operators subject to a Continuous Airworthiness Maintenance Program (CAMP) under part 91, § 91.1411 to issue a special flight permit with continuing authorization to conduct ferry flights. This permit can only be issued under the guidelines as set forth in 14 CFR part 21, § 21.197(c).

NOTE: Table 1 must reference the certificate holder's manual(s) that contain the policies, procedures, conditions, and limitations necessary to conduct the ferry flight.

OPSPEC/MSPEC D085, AIRCRAFT LISTING. Title 14 CFR part 119 certificate holders conducting operations under 14 CFR part 121, 125, or 135 who are required to maintain liability insurance coverage under Title 49 of the United States Code (49 U.S.C.) § 41112 and its implementing regulation, 14 CFR part 205, § 205.4(b), must list their authorized aircraft in these OpSpecs/MSpecs. Program managers are required to list all aircraft in MSpec D085.

A. Liability Insurance Coverage. Section 205.4(b) states, in part, that "aircraft shall not be listed in the carrier's operations specifications with the FAA and shall not be operated unless liability insurance coverage is in force." All air carrier certificate holders are required to have continuous, effective liability insurance coverage that is in effect to ensure that the public is protected in the event of an accident. Effective liability insurance coverage is a condition for them to hold Office of the Secretary of Transportation (OST) economic authority.

B. Non-Use Suspension. For air carrier certificate holders that request to hold the liability insurance coverage in suspension on aircraft for specific periods of non-use, see Liability Insurance Suspension for Seasonal Operations (OpSpec A501) and Aircraft in Long Term Maintenance or Storage (OpSpec D106).

C. Certificate Holders Operating Aircraft under Part 125. These certificate holders are not required to maintain liability insurance, although they are required to list authorized airplanes by type and registration number on their OpSpecs, per part 125, § 125.31(b)(2).

D. Aircraft Not in Revenue Service. The aircraft listing may also contain the certificate holder's aircraft that are not in revenue service. These aircraft include, but are not limited to, those that are undergoing heavy maintenance, in storage, awaiting parts, newly purchased, or being altered. However, the certificate holder must have procedures specifying how these aircraft are handled while they are conformed to regulatory requirements for operations in air transportation and before they are released for operations in air transportation. This applies to part 119 certificate holders conducting operations under part 121, 125, or 135, regardless of the kind of operations conducted.

NOTE: Aircraft that the certificate holder newly acquires may be placed on the aircraft listing, without a conformity inspection, to permit the certificate holder to operate the aircraft under part 91 and to conduct those maintenance, preventive maintenance, or alteration activities necessary to conform the aircraft to regulatory requirements for operations in common carriage. Under no circumstances should an air carrier certificate holder who is authorized to conduct operations under either part 121 or 135 be issued a deviation under § 125.3. The prohibitive language of part 119, § 119.5(h) does not permit any aviation safety inspector (ASI) to issue such a deviation to an air carrier certificate holder authorized to conduct common carriage operations under part 121 or 135.

E. Aircraft Used Under an Interchange Agreement.

1) Due to compatibility problems with the Web-based automated Operations Safety System (WebOPSS), the use of the asterisk to identify aircraft used under an interchange agreement must be discontinued. Other methods are under study and will be incorporated into WebOPSS and this chapter when completed. Until that time, the FAA asks that the interchange aircraft be placed at the end of the D085 aircraft listing for ease of identification.

2) The table(s) must list the aircraft registration number, serial number, nose number (if applicable), and aircraft make, model, and series (M/M/S).

OPSPEC D086, MAINTENANCE PROGRAM AUTHORIZATION FOR TWO-ENGINE AIRPLANES USED IN EXTENDED RANGE OPERATION.

A. OpSpec D086 Authorization. This OpSpec authorizes operators subject to a Continuous Airworthiness Maintenance Program (CAMP) under 14 CFR parts 121 and 135, as applicable, to use certain approved aircraft in extended range operations. Airworthiness aviation safety inspectors (ASI) must be familiar with OpSpec B342 and shall coordinate with the principal operations instructor (POI) before approving OpSpec D086. See Volume 4, Chapter 6.

B. Maintenance Program Authorization for Two Engine Airplanes Used in Extended Range Operation. Complete the following tables as described below:

1) Table 1 must include the approved aircraft registration number, airplane make, model, and series (M/M/S), and the maximum diversion time in minutes.

2) Table 2 identifies the reliability program, which continually assess the propulsion and airframe systems with the extended range fleet. The following must be included:

- Airframe and Powerplant (A&P) M/M/S: Self-explanatory,
- Program Name: Enter the name of the reliability program,
- Program Number: Assigned number of the program by the air carrier, and
- Program Date: Enter date of approval.

3) Table 3 identifies the Configuration Maintenance Procedures (CMP) document for extended range operations and must include the following:

- A&P: Self-explanatory,
- FAA-approved CMP Document Name/Number: Enter document name and assigned number for which the CMP is contained,
- Document Date: Enter date the above document was originally approved, and
- FAA-Approved Amendment Number: Enter in the current amendment number and date, if applicable, to the above approved document.

OPSPEC D087, MAINTENANCE PROGRAM AUTHORIZATION FOR LEASED FOREIGN REGISTERED AIRCRAFT OPERATED BY U.S. AIR CARRIERS. This OpSpec authorizes operators subject to a Continuous Airworthiness Maintenance Program (CAMP) under 14 CFR part 121 and part 135, § 135.411(a)(2) to maintain leased, foreign-registered aircraft by adopting the foreign air carrier's maintenance program.

NOTE: If a principal inspector (PI) approves a revision to an adopted foreign maintenance program, that approval must be done on an individual basis by amending this OpSpec.

NOTE: Any aircraft make, model, and series (M/M/S) listed on this OpSpec must also be listed in OpSpec D072.

A. OpSpec D087 Authorization. Table 1 must be completed as follows:

- Foreign Air Carrier: Enter the name of the foreign air carrier,
- Identification/Registration Number: Self-explanatory,
- Aircraft M/M/S: Self-explanatory,
- Lease Date: Self-explanatory, and
- Maintenance Program Revision Number/Date: Revision number and date of the foreign air carrier's leased maintenance program; original approval of the maintenance program must be identified with "ORIG."

NOTE: If during the lease period a U.S. air carrier operating a foreign aircraft has accepted the foreign air carrier's maintenance inspection program as their own, all parties are reminded that the foreign aircraft is still subject to the country

of origin's rules and regulations. If the foreign airworthiness certificate is enforcing the maintenance inspection, program and time limitations cannot be altered by the U.S. lessee without prior approval of the country of origin's civil aviation authority (CAA). If a change is requested, it must be through the foreign air carrier who will request the change. If the foreign CAA agrees to the changes, the approval is forwarded to the U.S. air carrier via the foreign air carrier. The U.S. air carrier will make a request for any changes through the Federal Aviation Administration (FAA) certificate-holding district office (CHDO). If all parties agree, the PIs may amend the inspection time and this OpSpec.

B. Differences Between the Certificate Holder's Adopted and Approved Programs.

Table 2 identifies differences between the certificate holder's adopted maintenance programs for leased, foreign-registered aircraft and the certificate holder's approved program (if applicable). Each item or system that is considered a difference or exception must be listed in Table 2 as follows:

- Air Transportation Association of America (ATA) Chapter: Enter the ATA code for the applicable item or system,
- Primary Maintenance Process: List maintenance requirements for the item or system (overhaul, inspect, replace, etc.),
- Inspection and Check Period: List inspection and/or check frequency/interval, and
- Other: This field can be used for general comments.

NOTE: Do not combine items into one row of this table. Each item must be broken down into ATA chapters and listed individually in this table.

OPSPEC D088, MAINTENANCE TIME LIMITATIONS AUTHORIZATION.

A. OpSpec D088 Authorization. This OpSpec authorizes operators subject to a Continuous Airworthiness Maintenance Program (CAMP) under 14 CFR part 91 subpart K (part 91K), part 121, part 125, § 125.247 (as well as operators under 14 CFR part 135, § 135.411(a)(2) and those that have an Approved Aircraft Inspection Program (AAIP) requiring maintenance time limitations manual) to use a separate approved document or approved section in the certificate holder/operator's manual. This OpSpec is issued to approve the time limitations of each maintenance task not covered under the partial reliability program (part 125 is not included in the reliability statement). See Volume 3, Chapters 40 and 43 for further information.

NOTE: This OpSpec must be issued in conjunction with OpSpec D075.

B. Maintenance Time Limitations Authorization. Table 1 must include the following:

- Aircraft make, model, and series (M/M/S): Self-explanatory,
- Manual/Document Name and Number: Manual name and air carrier assigned number for that manual that houses the FAA-approved time limitations for maintenance tasks not covered under the partial reliability program, and
- Manual/Document Date: List the date of the current revision of the manual.

MSPEC/OPSPEC D089, MAINTENANCE TIME LIMITATIONS SECTION.

A. Operators Subject to a Continuous Airworthiness Maintenance Program (CAMP). This OpSpec authorizes operators subject to a CAMP under 14 CFR part 121, part 91, § 91.1109, and part 135, § 135.411(a)(2) requiring a maintenance time limitations manual to use a separate approved document or approved section in the certificate holder/program manager's manual. See Volume 3, Chapter 43.

B. Referenced Document(s). The referenced documents must be approved by the Administrator and must have procedures for affecting revisions and revision control acceptable to the Airworthiness principal inspector (PI).

C. Maintenance Time Limitations Section. Table 1 must include the following:

- Aircraft make, model, and series (M/M/S): Self-explanatory,
- Manual/Document Name and Number: Manual name and air carrier assigned number for that manual that houses the FAA-approved time limitations for maintenance tasks, and
- Manual/Document Date: List the date of the current revision of the manual.

NOTE: This OpSpec is to be issued only if the operator is not issued OpSpec D074 or D075.

OPSPEC D090, COORDINATING AGENCIES FOR SUPPLIERS EVALUATION (C.A.S.E.).

A. OpSpec D090 Authorization. This OpSpec authorizes operators subject to a Continuous Airworthiness Maintenance Program (CAMP) under 14 CFR part 121 and part 135, § 135.411(a)(2) to become a member of the C.A.S.E. program.

B. Authorizing Certificate Holders to Use C.A.S.E. This OpSpec authorizes certificate holders to use C.A.S.E. as a means of qualifying a vendor for services, parts, and materials to satisfy the requirements of part 121, § 121.373 and/or § 135.431, as applicable.

OPSPEC D091, REQUIREMENTS AIR CARRIER MAINTENANCE PROVIDERS. A new term, Essential Maintenance, has replaced Substantial Maintenance. The newly revised version of D091, which has two tables, has replaced the former three-table addition. The new design specifically addresses the Required Inspection Item (RII). This OpSpec is issued to air carriers certificated under 14 CFR part 119, conducting operations under 14 CFR part 121.

A. Essential Maintenance. Essential Maintenance encompasses any RII on-wing accomplishment after any maintenance or alteration. This maintenance, if done improperly, would result in a failure effect that would endanger the continued safe flight and landing of the airplane if it was performed improperly or if improper parts or materials were used. Essential Maintenance is the accomplishment of the air carrier designated inspection item on-wing. Essential Maintenance does not encompass any off-wing maintenance.

NOTE: Until further notice, this OpSpec is not to be issued to 14 CFR part 135, 10 or more operators.

B. Guidance.

1) Before issuing an initial OpSpec D091 or when the certificate holder adds an essential maintenance provider to the certificate holder's maintenance provider listing required by § 121.369(a), ensure that the certificate holder has conducted an onsite audit of each essential maintenance provider or the added essential maintenance provider, as appropriate. The certificate holder's onsite audit should, at least, determine that the essential maintenance provider has:

- An organization that is adequate to perform essential maintenance.
- Competent personnel and adequate facilities and equipment for the proper performance of essential maintenance.

2) In addition, ensure that the certificate holder has provisions within its Continuing Analysis and Surveillance System (CASS) to determine that each essential maintenance provider listed in its maintenance provider listing performs essential maintenance in accordance with the certificate holder's maintenance program and manual.

C. Further Information. See Volume 6, Chapter 2, Section 40, Inspect a Part 121 Certificate Holder's Use of Other Persons to Perform Maintenance, Preventive Maintenance, and Alterations on its Aircraft, for information about the meaning of essential maintenance, and for additional, more detailed guidance for issuing this OpSpec.

D. Accomplishing Maintenance with Other Maintenance Providers. The certificate holder is authorized to make arrangements with other persons (maintenance providers) to accomplish maintenance, preventive maintenance, or alterations on its behalf.

E. Listing Maintenance Providers. The certificate holder shall list in its manual system (not in this OpSpec) the maintenance providers required by § 121.369(a). Each maintenance provider shall be listed by corporate or company name, business address and location, and a general description of the contracted work, using the following categories:

1) Aircraft Maintenance.

a) Heavy Maintenance. An example of heavy maintenance is the inspection and repair of the aircraft airframe performed at specified time intervals. These intervals are based upon the guidelines of the aircraft manufacturer, National Aviation Authority (NAA), FAA, or European Aviation Safety Agency (EASA), as further refined by the airline/operator. Scheduled inspections are typically based on a fixed number of flight hours. There are four levels of inspection for commercial jet aircraft, usually termed "A," "B," "C," and "D" checks. "A and B" checks are normally considered part of line maintenance. "C and D" checks are classified as "heavy maintenance."

b) Line Maintenance. Line maintenance includes light regular checks that ensure the aircraft is fit for flight, troubleshooting, defect rectification, and component replacement. Aviation Maintenance Technicians (AMT) diagnose and correct issues on the aircraft and carry

out these checks on an ad-hoc basis or scheduled interval. Line maintenance consists of three primary activity categories: transit checks, daily/weekly checks, and A checks. Historically, line maintenance included B checks, which rarely exist these days.

- 2) Aircraft engine work includes off-airplane maintenance of aircraft engines.
- 3) Propeller work includes off-airplane maintenance of propellers and propeller control components.
- 4) Component work includes off-airplane maintenance of individual components.
- 5) Specialized service includes services such as x-ray, plating, eddy current, painting, shot peening, plasma spray, composite structures maintenance, weighing, welding, etc.

F. Table 1. The certificate holder shall provide to its assigned principal maintenance inspector (PMI), the maintenance provider listing referenced in § 121.369(a). Additionally, if this listing is incorporated within a larger manual or series of manuals, the certificate holder shall provide the appropriate volume and section number to indicate where the maintenance provider listing can be found. (See the Table 1 sample below.)

Table 1

| Document Name and Number | Volume/Chapter/Section |
|-----------------------------|------------------------|
|-----------------------------|------------------------|

G. Table 2. The certificate holder shall make available to the assigned PMI, the location and name(s) of individual(s) responsible for the listing referenced in subparagraph E1)b) above. The phone number, e-mail address, and physical mailing address must be provided for the named individual(s).

Table 2

| Name of Individual | Phone | E-mail Address | Mailing Address | Date Updated |
|--------------------|-------|----------------|-----------------|--------------|
| | | | | |

MSPEC/OPSPEC D092, MAINTENANCE PROGRAM AUTHORIZATION FOR AIRPLANES USED FOR OPERATIONS IN DESIGNATED REDUCED VERTICAL SEPARATION MINIMUM (RVSM) AIRSPACE.

A. MSPEC/OpSpec D092 Authorization. This MSPEC/OpSpec authorizes operators under 14 CFR part 91 subpart K (part 91K), and 14 CFR parts 121, 125, and 135 with an FAA-approved RVSM maintenance program to allow certain approved aircraft to operate in RVSM airspace.

B. Authorization for Airplanes Used for Operations in RVSM Airspace. Table 1 must include the registration number and the make, model, and series (M/M/S) of the aircraft approved for RVSM airspace.

OPSPEC D093, HELICOPTER NIGHT VISION GOGGLE OPERATIONS (HNVGO) MAINTENANCE PROGRAM.

A. OpSpec D093 Authorization. This OpSpec is issued to operators authorized to conduct Helicopter Night Vision Goggle Operations (HNVGO) under the limitations and provisions of 14 CFR part 135 and current A050 OpSpecs using specific approved aircraft.

B. HNVGO Maintenance Program. Table 1 of this OpSpec must include the aircraft registration number, serial number, and make, model, and series (M/M/S), and the name of the maintenance document with the current revision number/letter for the Night Vision Imaging System (NVIS). Additionally, the maintenance document(s) for the night vision goggles (NVG) with the current revision number/letter must be listed in the table.

Table 1—Authorized NVIS and NVG Maintenance Documents

| Aircraft Registration Number | Aircraft Serial Number | Aircraft M/M/S | STC Number | Maintenance Document for Aircraft NVIS with Revision Numbers | Maintenance Document for Night Vision Goggles with Revision Numbers |
|------------------------------|------------------------|----------------|------------|--|---|
| | | | | | |

MSPEC/OPSPEC D095, MINIMUM EQUIPMENT LIST (MEL) AUTHORIZATION.

A. MSPEC/OpSpec D095 Authorization. This MSPEC/OpSpec is issued to operators under 14 CFR part 91 subpart K (part 91K), and 14 CFR parts 121, 125, and 135 authorized to use an approved MEL.

B. MEL Authorization. This table must list the aircraft make, model, and series (M/M/S) for aircraft authorized for the use of an MEL.

MSPEC/LOA OPSPEC D097, REPAIR ASSESSMENT PROGRAM FOR PRESSURIZED FUSELAGES. Aging aircraft programs for 14 CFR part 91 subpart K (part 91K), and 14 CFR parts 121, 125, and 129, § 129.14 that include approval sections for each of the aging aircraft CFRs. OpSpec/MSPEC/LOA D097 is the means by which the principal inspector (PI) will approve the operator's incorporation of the applicable aging aircraft regulations, as well as any revisions that he or she needs to incorporate into the Continuous Airworthiness Maintenance Program (CAMP). It allows the PI to select the applicable CFR and accomplish individual approvals for each, including the approval date. Once the new D097 is signed and issued to the operator, the existing D097, Repairs Assessment for Pressurized Fuselages, will automatically archive. If the D070, Fuel Tank System Maintenance Program, was issued previously, the PI should manually archive it when the new D097 has been issued. The PI should select the regulatory references applicable to the operator and insert the approval dates into the operator's CAMP.

NOTE: Table 1 must include the registration number, serial number, aircraft make, model, and series (M/M/S) along with the maintenance document, which incorporates the comprehensive repair assessment program.

OPSPEC D100, AUTHORIZATION TO PERFORM WORK AT PLACE OTHER THAN ITS FIXED LOCATION. This OpSpec only applies to 14 CFR part 145 repair stations. The certificate holder may perform work at a place other than its fixed location (as listed in paragraph A001 and paragraph A101, if issued, of these OpSpecs), provided it has the facilities, material, equipment, and technical personnel to perform the work authorized in the following table.

Table 1

| Work Authorized | Repair Stations Manual References | Quality Control Manual References |
|------------------------|--|--|
| Text Box | Text Box | Text Box |
| | | |

A. Fixed Locations. The certificate holder *may not* perform *continuous* operation at a facility other than the station's fixed location listed in paragraph A001 and paragraph A101, if issued.

B. Line Stations. Privileges of a line station, as set forth by the European Aviation Safety Agency (EASA) certificate and scope of work and located within the country where the main facility is domiciled, are listed in Table 1.

C. Special Circumstance or on a Recurring Basis. Work may be due to a special circumstance or on a recurring basis. If the work is due on a recurring basis, the repair station must have procedures in its manual.

**MSPEC/OPSPEC D101, ADDITIONAL MAINTENANCE REQUIREMENTS—
AIRCRAFT ENGINE, PROPELLER, AND PROPELLER CONTROL (GOVERNOR).**

A. MSPEC/OpSpec D101 Authorization. This OpSpec applies to all certificate holders and program managers maintaining aircraft under 14 CFR part 135, § 135.411(a)(1) and part 91, § 91.1109. This includes aircraft subject to an Approved Aircraft Inspection Program (AAIP) under § 135.419. See Volume 3, Chapter 38 or Volume 2, Chapter 4.

B. Additional Maintenance Requirements. Table 1 must include the following:

- Airplane make, model, and series (M/M/S),
- Engine, propeller, and Governor make and model,
- Engine, propeller, and Governor maintenance document that contains the additional maintenance requirements, and
- Engine, propeller, and Governor time in service interval.

NOTE: The most current revision of the maintenance document should be identified by “()” and not require reissuance of this OpSpec unless the manual title or document number changes. All entries should be filled out and any item not applicable should be identified by “N/A.”

**MSPEC/OPSPEC D102, ADDITIONAL MAINTENANCE REQUIREMENTS—
ROTORCRAFT.**

A. MSpec/OpSpec D102 Authorization. This MSpec/OpSpec applies to all certificate holder/program managers maintaining aircraft under 14 CFR part 135, § 135.411(a)(1) and part 91, § 91.1109. This includes aircraft subject to an Approved Aircraft Inspection Program (AAIP) under § 135.419. See Volume 3, Chapter 38 or Volume 2, Chapter 4.

B. Additional Rotorcraft Maintenance Requirements. Table 1 must include the following:

- Rotorcraft type,
- Engine make and model,
- Maintenance document for engine, rotor main, and auxiliary that contains the additional maintenance requirements, and
- Engine time in service interval.

**OPSPEC D103, ADDITIONAL MAINTENANCE REQUIREMENTS—SINGLE ENGINE
IFR.**

A. OpSpec D103 Authorization. This OpSpec applies to all certificate holders maintaining aircraft under 14 CFR part 135, § 135.411(a)(1). This includes aircraft subject to an Approved Aircraft Inspection Program (AAIP) under § 135.419. See Volume 3, Chapter 38 or Volume 2, Chapter 4.

B. Additional Single-Engine Instrument Flight Rules (IFR) Maintenance Requirements. Table 1 must include the following:

- Registration number,
- Serial number,
- Aircraft make, model, and series (M/M/S),
- Maintenance instructions/document that contains the additional maintenance requirements, and
- Other limitations as necessary (engine trend monitoring, oil analysis program, etc.).

**MSPEC/OPSPEC D104, ADDITIONAL MAINTENANCE REQUIREMENTS—
EMERGENCY EQUIPMENT.**

A. OpSpec D104 Authorization. This MSpec/OpSpec applies to all certificate holder/program managers maintaining aircraft under 14 CFR part 135, § 135.411(a)(1). This includes aircraft subject to an Approved Aircraft Inspection Program (AAIP) under § 135.419. See Volume 3, Chapter 38 or Volume 2, Chapter 4.

B. Additional Emergency Equipment Maintenance Requirements. Table 1 must include the following:

- Emergency equipment items,
- Maintenance document that contains the additional maintenance requirements, and
- Limitations and provisions field contains the intervals/frequency of the additional maintenance requirements (in hours, cycles, calendar-time, etc).

NOTE: The most current revision of the maintenance document should be identified by “()” and not require reissuance of this OpSpec unless the manual title or document number changes. All entries should be filled out and any item not applicable should be identified by “N/A.”

OPSPEC D105, AIR CARRIER EMERGENCY EVACUATION SYSTEMS (EES) MAINTENANCE PROGRAM REQUIREMENTS.

A. OpSpec D105 Authorization. This OpSpec applies to all 14 CFR part 119 certificate holders conducting operations under 14 CFR part 121. The OpSpec must be issued to all air carriers and if their aircraft is not equipped per the Type Certificate Data Sheet (TCDS), then place “N/A” in the applicable section of the table. OpSpec D105 contains the conditions and requirements for EES that must be met on a continuing basis for all airplanes operated under part 121. This OpSpec is one of the required OpSpecs issued to all certificate holders conducting operations under part 121.

B. Review the Operator’s Program. Review the operator’s program to ensure that all conditions of this OpSpec are met. If review is satisfactory, issue the OpSpec.

OPSPEC D106, AIRCRAFT IN LONG TERM MAINTENANCE OR STORAGE.

A. OpSpec D106 Authorization. This OpSpec applies to all certificate holders maintaining aircraft in accordance with 14 CFR part 121 or 135 who request to hold the liability insurance coverage (required by their economic authority) in suspension on aircraft for specific periods of non-use, such as long term maintenance or long term storage. See OpSpec paragraph A501 and OpSpec paragraph D106.

B. Long Term Maintenance or Storage. Table 1 must contain the following:

- End of Operation: Enter the day on which the air carrier elects to cease operating the aircraft,
- Registration Number: Enter the aircraft registration number, and
- Serial Number: Enter the aircraft serial number.

OPSPEC D107, LINE MAINTENANCE AUTHORIZATION. This paragraph permits a part 145 certificate holder to perform line maintenance for certificate holders that conduct operations under parts 121 and 135, and for foreign air carriers or foreign persons operating a U.S.-registered aircraft operating under part 129.

NOTE: OpSpec D107 will only be issued when the repair station is performing line maintenance at an airport other than the airport at which their fixed base of

operations is located or if the repair station is limited to “line maintenance only” in OpSpec A003.

A. Required Rating. The part 145 certificate holder must be appropriately rated to perform the maintenance. At a minimum, the repair station must have a limited airframe or airframe class rating to perform inspections and minor maintenance associated with a line maintenance authorization.

B. Limited Airframe Rating. A repair station with a limited airframe rating must state in the “Limitations” cell of OpSpec A003 “(limited to line maintenance only).” The actual limitations will be listed in OpSpec D107. Regardless of the type of airframe rating of the repair station, OpSpec A003 must be issued to perform line maintenance. The certificate holder must also have the facilities, equipment, trained personnel, and technical data to perform such line maintenance.

C. OpSpec D107 Table 1. Table 1 of OpSpec D107 lists the locations where the repair station may perform line maintenance. The table consists of six sections:

- 1) Section 1 identifies the name of the air carrier.
- 2) Section 2 identifies the air carrier four-letter designator.
- 3) Section 3 identifies the aircraft make/model.
- 4) Section 4 identifies the International Civil Aviation Organization (ICAO) airport identifier and the name of the airport.
- 5) Section 5 identifies the physical address where line maintenance is being performed, listing:
 - Street,
 - City,
 - State, and
 - Zip code.
- 6) Section 6 identifies any line maintenance limitations.

D. Performing Operations. Once line maintenance is authorized, the repair station can perform operations on a continuous basis.

NOTE: Before granting OpSpec D107 authorization, the certificate holder must obtain from the air carrier a maintenance contractual arrangement authorization to perform the specified maintenance.

NOTE: Once OpSpec D107 is granted, the repair station must list the maintenance functions on the OpSpec (e.g., unscheduled maintenance, overnight checks).

NOTE: Once OpSpec D107 has been issued, OpSpec D100 cannot be issued.

OPSPEC D485, U.S.-REGISTERED AIRPLANE INSPECTION AND RECORDS

RECORDATION. The certificate holder who conducts operations under 14 CFR part 121, 135, or 129 using the airplanes identified on this OpSpec may not use those airplanes in air transportation unless inspections are accomplished as required by the applicable regulations in part 121, 135, or 129, as applicable.

A. Applicable Airplanes. The airplanes that this inspection and records review is applicable to include:

- 1) All part 121 airplanes (part 121, § 121.1105).
- 2) All part 135 multi-engine airplanes used in scheduled service (part 135, §§ 135.422 and 135.423).
- 3) All part 129 U.S.-registered multi-engine airplanes (part 129, § 129.105).

NOTE: See part 129 U.S.-registered aircraft below.

B. Excluded Airplanes. The airplanes that may be excluded from this inspection and records review are:

- 1) Airplanes operated solely within the state of Alaska.
- 2) Airplanes that are operated under part 135 as “On-Demand.”
- 3) Airplanes in storage and not currently being operated under part 121, 135, or 129 operations. However, the required records review and inspection must be accomplished before such airplanes in storage may be placed into service after the applicable compliance date in accordance with the sections of the CFR listed in subparagraph A.
- 4) Airplanes that have not reached the age of the required records review and inspection.

C. Records Review Completion. This paragraph serves as notification to the FAA of completion of the required records review and airplane inspection to comply with the Aging Airplane Safety Act (AASA). Official notification to the operator will be made by the certificate-holding district office (CHDO) and this date will be used to determine due date of next required inspection. Table 1 of this paragraph must be completed as described in subparagraph D below.

D. Paragraph Completion Instructions. The following instructions are to be used to complete the required records and airplane inspection in Table 1 of this paragraph. Remember: *all* cells in the table *must* be filled out before activating the paragraph.

- 1) Load *all* airplanes in the certificate holder’s aircraft authorization information into Columns 1 through 4.

- 2) For each airplane that requires this records review and inspection:
 - a) Enter the date of airplane manufacture as indicated on the airframe data plate or the original airworthiness certificate, whichever is oldest, in Column 5.
 - b) Enter "Not Completed" in Column 6, 7, and 8, as applicable, to indicate that the inspection and/or records review has not yet been complete.
 - c) When the appropriate inspection is complete, insert the month and year of the accomplishment in Column 6 and 7, as applicable.
 - d) When both inspections are complete, enter the date (month/year) that the official notification was sent to the certificate holder in Column 8.
- 3) For airplanes that are operated solely within the state of Alaska:
 - a) Load the airplanes in Columns 1 through 4 per subparagraph D1).
 - b) Select and enter "Alaska Intrastate-N/A" (for not applicable) in Column 5, 6, 7, and 8.
- 4) For airplanes that are operated under part 135 as "On-Demand":
 - a) Load the airplanes in Columns 1 through 4 per subparagraph D1).
 - b) Select and enter "On Demand (135)-N/A" (for not applicable) in Column 5, 6, 7, and 8.
- 5) For airplanes in storage that will not have the required records review and inspection accomplished:
 - a) Load the airplanes in Columns 1 through 4 per subparagraph D1) above.
 - b) Enter the date of airplane manufacture as indicated on the airframe data plate or the original airworthiness certificate, whichever is oldest, in Column 5.
 - c) Select and enter "Storage-Not Completed" in Column 6, 7, and 8.
- 6) For airplanes that have not reached the age where the required records review and inspection must be accomplished:
 - a) Load the airplanes in Columns 1 through 4 per subparagraph D1).
 - b) Enter the date of airplane manufacture as indicated on the airframe data plate or the original airworthiness certificate, whichever is oldest, in Column 5.
 - c) Select and enter "Below Threshold-N/A" (for not applicable) in Column 6, Column 7, and Column 8.

E. Processing the Paragraph. Process the paragraph and activate it. This paragraph may be considered valid if completed, signed, and activated by the FAA. It does not require the signature of the operator for the paragraph and its data to be considered valid.

Table 1

| *Registration No. (Col.1) | *Serial No. (Col.2) | *Nose-Number, If Applicable (Col.3) | *Airplane M/M/S (Col.4) | Date of Airplane Manufacture (Col.5) | Airplane Inspection Completed (Col.6) | Records Review Competed (Col. 7) | Operator Notification (Col.8) |
|---------------------------|----------------------|-------------------------------------|-------------------------|--------------------------------------|---------------------------------------|----------------------------------|-------------------------------|
| [LOAD Operator Data] | [LOAD Operator Data] | [LOAD Operator Data] | [LOAD Operator Data] | <input type="text"/> | ComboBox | ComboBox | ComboBox |

NOTE: Items marked with an "*" will be loaded from the certificate holder's aircraft authorization airplane information.

OPSPEC D485, U.S.-REGISTERED AIRPLANE INSPECTION AND RECORDS RECORDATION. Title 14 CFR part 129, § 129.33 requires the Administrator of the FAA to make inspections and review the maintenance and other records of each U.S.-registered multi-engine airplane a foreign air carrier uses in its operation to the United States and each U.S.-registered aircraft operated solely outside the United States in common carriage by a foreign person or foreign air carrier, part 129. The foreign air carrier or foreign person who conducts operations under part 129 using the multi-engine airplanes identified in OpSpec paragraph D085 and this OpSpec paragraph may not use those airplanes in such operations unless inspections and records review are accomplished as required by § 129.33, as applicable.

A. U.S.-Registered Multi-Engine Airplanes. The U.S.-registered airplanes that this inspection and records review is applicable to include all U.S.-registered multi-engine airplanes operated under part 129.

B. Airplanes in Storage. The U.S.-registered multi-engine airplanes that may be excluded from this inspection and records review are those airplanes in storage that are not currently being operated in part 129 operations. However, the required records review and inspection must be accomplished before such airplanes in storage may be placed into service after the applicable compliance date in § 129.33.

C. Foreign Air Carrier Notification. This paragraph serves as notification to the foreign air carrier or foreign person by the FAA International Field Office (IFO) of completion of the required records review and airplane inspection to comply with § 129.33. Table 1 of this paragraph must be completed according to the instructions in subparagraph D. Official notification to the operator will be made by the FAA IFO and this date will be used to determine the due date of next required inspection.

D. Paragraph Completion Instructions. The following instructions are to be used to complete the required records and airplane inspection in Table 1 of this paragraph. Remember: *all* cells in the table *must* be filled out before activating the paragraph.

1) Load all the multi-engine airplanes listed in the foreign air carrier's or foreign person's Aircraft Authorization inventory into Columns 1 through 4.

2) For each airplane that requires the records review and inspection required by § 129.33, the assigned FAA IFO will:

a) Enter the date of airplane manufacture as indicated on the airframe data plate or the original airworthiness certificate, whichever is oldest, in Column 5.

b) Enter "Not Completed" in Columns 6, 7, and 8, as applicable, to indicate that the inspection and/or records review has not yet been complete.

c) When the appropriate inspection is complete, insert the month and year of the accomplishment in Columns 6 and 7, as applicable.

d) When both inspections are complete, enter the date (month/year) that the official notification was sent to the certificate holder in Column 8.

3) For each U.S.-registered multi-engine airplane for which the foreign carrier or foreign person has provided notification that the airplane is in storage and will not have the required records review and inspection accomplished, the assigned FAA IFO will:

a) Load the airplanes in Columns 1 through 4 per subparagraph D1).

b) Select and enter "Storage-Not Completed" in Columns 5, 6, 7, and 8.

4) For each U.S.-registered airplane that has not reached the age where the required records review and inspection must be accomplished, the assigned FAA IFO will:

a) Load the airplanes in Columns 1 through 4 per subparagraph D1).

b) Select and enter "Below Threshold-N/A" (for not applicable) in Columns 5, 6, 7, and 8.

Table 1

| Registration No. (Col.1) | *Serial No. (Col.2) | *Nose-Number, If Applicable (Col.3) | *Airplane M/M/S (Col.4) | Date of Airplane Manufacture (Col.5) | Airplane Inspection Completed (Col.6) | Records Review Completed (Col. 7) | Operator Notification (Col.8) |
|--------------------------|----------------------|-------------------------------------|-------------------------|--------------------------------------|---------------------------------------|-----------------------------------|-------------------------------|
| [LOAD Operator Data] | [LOAD Operator Data] | [LOAD Operator Data] | [LOAD Operator Data] | <input type="text"/> | ComboBox ▼ | ComboBox ▼ | ComboBox ▼ |

NOTE: Items marked with an "*" will be loaded from the certificate holder's aircraft authorization airplane information.

E. Assigned FAA IFO Notification. Each foreign air carrier or foreign person must notify their assigned FAA IFO at least 60 days before the date on which the airplane and airplane records will be made available for the inspection and records review.

F. Paragraph Issuance. The assigned FAA IFO will issue/amend this paragraph as necessary to each applicable foreign carrier or foreign person operating U.S.-registered multi-engine airplanes under part 129. This paragraph may be considered valid if completed, signed, and issued by the FAA. It does not require the signature of the operator for it to be valid.

OPSPEC E096, WEIGHT AND BALANCE (W&B) CONTROL PROCEDURES. This operation specification (OpSpec) authorizes certificate holders operating aircraft under 14 CFR part 91 subpart K (part 91K) and 14 CFR parts 121, 125, and 135 to use one of two aircraft W&B control programs:

A. Individual Aircraft Weights. The certificate holder is authorized under part 91K, part 121, § 121.135, part 125, § 125.91(b), and part 135, § 135.185(a) to use individual aircraft weights outlined in the operator's empty W&B program.

B. Average Fleet Aircraft Weights. The certificate holder is authorized under part 91K, § 121.153(b), or § 135.185(b)(2) to use average fleet aircraft weights outlined in the operator's W&B control program.

NOTE: This OpSpec does not authorize the use of average fleet aircraft weights for a part 135 reciprocating powered aircraft of nine or less passenger seats. For further information see E096 and the current edition of AC 120-27, Aircraft Weight and Balance Control.

C. Procedures. Conduct final review of this OpSpec per the guidance in Volume 3, Chapter 47, Section 1.

D. Empty W&B Program. Individual aircraft weights outlined in the certificate holder's empty W&B program in Table 1 must include the following:

- Aircraft by make, model, and series (M/M/S),
- Weighing interval, and
- W&B control procedures.

E. Fleet Aircraft Weight Requirements. Fleet aircraft weights outlined in the certificate holder's W&B control program in Table 2 must include the following:

- Aircraft by M/M/S,
- Fleet weighing sample interval, and
- Fleet W&B control program.

NOTE: Part D and E OpSpecs may be approved only by the assigned Airworthiness principal inspectors (PI) or by aviation safety inspectors (ASI) authorized by the unit supervisor to sign for the PIs in their absence. Specific paragraphs within part A of the OpSpecs are the joint responsibility of Operations and Airworthiness PIs. Approval of part A paragraphs may be indicated by the signature of any one of the three assigned PIs.

RESERVED. Paragraphs 3-922 through 3-985.



Memorandum

U.S. Department of
Transportation
Office of the Secretary
of Transportation
Office of Inspector General

Subject: **INFORMATION**: OIG Review #C08E000467CC
Re: Improper Modifications to Emergency Service
Helicopters

Date: January 5, 2010

From: Robert A. Westbrook *Robert A. Westbrook*
Acting Assistant Inspector General
for Special Investigations and Analysis, JI-3

Reply to
Attn. of:

To: Judy S. Kaleta
Assistant General Counsel for General Law
Office of the Secretary of Transportation

This transmits our review of the Federal Aviation Administration's investigation into whistleblower concerns raised to the U.S. Office of Special Counsel (OSC) by FAA Aviation Safety Inspector Rand Foster.

As detailed below, we find that FAA has sufficiently addressed the initial concerns referred by OSC as well as the additional issues identified during the initial OIG review.

ALLEGATIONS

OSC referred for investigation the following disclosures made by Mr. Foster:

1. Aviation Specialties Unlimited (ASU) in Boise, Idaho, modified more than 300 emergency service helicopters with a night vision imaging system (NVIS) which allows the pilot the use of night vision goggles; however, the modifications were performed in a manner contrary to FAA policy.
2. An FAA employee improperly granted 67 field approvals of the modifications, despite knowledge that such approvals were contrary to FAA Order 8900.1 Volume 4 Chapter 9.

3. After FAA discovered that the modifications did not comply with national regulatory requirements, and in some instances might pose a safety hazard, FAA prepared a Notice of National Policy declaring the helicopters' airworthiness certificates invalid and establishing procedures to bring the helicopters into compliance. However, given intense public scrutiny of the agency following Congressional hearings in April and June 2008, FAA failed to formally issue the policy in an effort to avoid additional public scrutiny.

BACKGROUND

Then-Secretary Peters delegated investigation of these issues to FAA. In response, FAA's Associate Administrator for Aviation Safety appointed an investigative team consisting of personnel with specific expertise in helicopter operations, flights standards, and investigations. The team issued their first report of findings on August 25, 2008. In October 2008, we reviewed this report for sufficiency. We identified two additional individuals with possible information related to events who had not been interviewed, and 18 issues requiring further explanation to support the investigative findings (to include three additional issues raised by witnesses during interviews). Moreover, five of FAA's findings and conclusions were missing supporting documentation. Finally, we determined that while the report contained a recommendation to refer confirmed falsification to us for possible criminal investigation, no such referral was made.

Based on this review, on January 5, 2009, then-Secretary Peters requested that the OIG continue to provide additional review and analysis of FAA's work. FAA provided us a supplemental report on June 25, 2009, and an implementation plan for corrective action on July 24, 2009. However, on July 30, 2009, OSC declined to provide an additional 60-day extension to the Department. Associate Special Counsel Reukauf transmitted the matter to members of Congress and the President, indicating that OSC had concluded its involvement in the matter.

Despite OSC's close-out letter, we nonetheless reviewed FAA's supplemental response, corrective action implementation plan, and supporting documentation. We conclude that FAA has sufficiently addressed the initial concerns referred by OSC, as well as the additional issues we identified in our first review.

ANALYSIS OF FAA'S ORIGINAL FINDINGS AND CORRECTIVE ACTIONS

Improper modification of emergency service helicopters

FAA substantiated the allegation that Aviation Specialties Unlimited (ASU) and its Director of Maintenance improperly modified nearly 250 emergency service helicopters and falsified documents related to these modifications. These false data packages submitted by ASU affected nearly 250 U.S. registered emergency service helicopters that had received modifications to install a Night Vision Imaging System (NVIS), a supplemental lighting system that allows the pilots to use night vision goggles. The vast majority of the helicopters were used by hospitals, fire departments, sheriff, police and fire departments, and paramedic companies transporting patients for emergency medical services. Such modifications were in violation of Federal Aviation Regulations 43.12, 43.13(a), and 145.219(c). FAA initiated action to revoke ASU's certificate. Prior to revocation, however, ASU voluntarily surrendered their certificate which automatically cancelled any legal enforcement action by FAA. In addition, the Director of Maintenance's Airframe and Powerplant certificate was revoked for falsification of records.¹

An FAA inspector improperly granted field approvals of ASU's improper modifications

FAA substantiated the allegation that a Boise Flight Standards District Office employee improperly granted 67 field approvals to helicopters modified by ASU. FAA subsequently took administrative action against the employee for failing to follow national policy and against the Boise FSDO manager for failing to provide appropriate oversight.

FAA's corrective action plan for inspections of the affected helicopters was unusual, but did not violate FAA policy.

FAA developed a corrective action plan which authorized inspections of the impacted helicopters by review of cockpit photograph and review of drawings contained in data packages for various Supplemental Type Certificates, instead of grounding all affected helicopters until they could be inspected. All inspections were completed by October 31, 2008. FAA determined that, based on the drawings and photographs, only one physical inspection of a helicopter was

¹ On April 9, 2009, the US Attorney's Office, District of Idaho, declined criminal prosecution on this matter, indicating that administrative actions taken by FAA were sufficient and criminal remedies were not warranted.

required in order to ensure conformance to national standards. The inspection was conducted and no irregularities were found. FAA concluded that despite the assertions contained in the OSC disclosure, no safety risk was ever present; instead the issue was a matter of improper paperwork.

We found that while such inspection methods may be unorthodox, this practice did not violate any law, rule or regulation. Moreover, FAA's Associate Administrator for Aviation Safety, its Director of the Flight Standards Division, the Director of the Seattle Aircraft Certificate Office (SEA ACO) and FAA's Chief Scientist all opined that the statistical data relied upon was accurate, and the methodology used created less risk to public safety than grounding emergency service helicopters, making them unavailable for emergency services for an indeterminate amount of time.

We find FAA's investigation of this issue sufficient, and are not aware of any additional facts that would support a finding of a substantial and specific danger to public safety.

FAA management was initially slow to respond with a plan for corrective action

FAA's investigation determined that Northwest Mountain Region managers were slow to respond, specifically finding that a "lack of decision-making or [earlier] development of a clear cut plan has [contributed to the perception] that nothing was being done [to address the issue]." In addition, the team made 13 recommendations for corrective action. In a July 1, 2009, Memorandum to OIG, FAA's Associate Administrator for Aviation Safety committed to completing the team's recommendations between July 31, 2009, and June 30, 2012. We reviewed the plan and determined it sufficiently responds to the investigative recommendations for corrective actions.

Initial drafts of a Notice regarding ASU modified helicopters did not meet FAA requirements; therefore it could not be issued to the ASU-modified helicopter operators. Moreover, the situation involving the ASU-modified helicopters did not meet the necessary requirements to issue an Airworthiness Directive (AD), therefore FAA continued to revise the language in the Notice.

FAA did not issue an AD or a Notice regarding ASU modified helicopters because the modified helicopters did not meet the requirements to issue an AD (namely that the entire fleet of a specific type or model of helicopter is impacted), nor did early drafts of the Notice meet agency requirements. After revisions, FAA issued Notice N8900.51 on September 17, 2008, outlining the corrective action plan for NVIS modifications performed by ASU.

After multiple interviews of personnel involved with the corrective action plan, FAA found no evidence, other than the complainant's statement, that concerns regarding negative publicity slowed the Notice process. Therefore FAA did not substantiate the allegation.

ANALYSIS OF ADDITIONAL CONCERNS IDENTIFIED BY OIG

As discussed above, in addition to supplemental investigative work related to the OSC referral, we requested that FAA examine and respond to the following additional concerns we identified as a result of our review of FAA's report. These additional items and our analysis are discussed in further detail below:

The statistical data used by FAA to reach its conclusions was a matter of professional judgment.

Based on FAA's supplemental response, we found that the methodology used by FAA chief scientist Ann Azevedo was reasonable. Witnesses disagree about FAA's approach. While there may be differences of opinion, deference should be afforded to FAA's chief scientist for the following reasons. First, there is an absence of evidence of a violation of any established statistical methodology or standard. Second, FAA represents that this methodology is the approach used in other similar analyses. Third, the alternative analysis proposed by some witnesses may itself not be statistically sound given the relatively small population size and the significant percentage of the population modified by ASU. We find that this is ultimately a matter of professional judgment on which reasonable minds may disagree.

Statement of Ali Bahrami regarding customer service versus safety

In his statement provided to investigators, Mr. Bahrami stated that "we felt that if ASU lost their repair station certificate, they would lose the ability to do the work and to make parts for a third party they might contract with. Gave them a PMA when revoked certificate so they could continue to make parts. ASU is the more affordable choice."

In our original review, we opined that "given ASU's history of falsification, these statements give FAA the appearance that it was more about customer service and money than safety."

FAA's supplemental response provides additional context for Mr. Bahrami's statement that adequately address our original concerns. This context includes the

eventual revocation of ASU's mechanic certificate, the identification of falsification of records by ASU and the pursuit of available remedies by FAA, and heightened surveillance activities that resulted in ASU filing a customer complaint. FAA also adequately addressed the concern relating to ASU's recertification and the gap in the current regulatory process permitting a recertification application immediately following a revocation. We find these facts outweigh the single statement of Mr. Bahrami.

Appearance of Financial Consideration for ASU

In our original review, we asked FAA to clarify what role financial considerations played in allowing the SEA ACO to approve drawings after a photograph from the operator was provided to ASU, especially in light of a statement attributed to Mrs. Atwood that ASU "could not spend the money to send a mechanic to re-inspect every aircraft." We also originally questioned why Mrs. Atwood was not interviewed by the investigative team.

FAA's supplemental response provides additional facts that adequately address our original concerns. According to the ASU Special Investigations Team, Mrs. Atwood was not an FAA regulated party and could not be compelled. Moreover, her alleged statement by itself has limited evidentiary value. Sending a mechanic to re-inspect every aircraft would have undoubtedly cost ASU money. The fact at issue is whether FAA improperly considered ASU's financial consideration. While Foster alleges that "this concern added to the decision to allow SEA ACO to approve the drawings," the Special Investigations Team found no evidence to support this allegation---to the contrary, according to the supplemental response, "FAA has a long history of using photography" for inspections." Moreover, FAA immediately began emergency revocation of its repair station certificate when it learned of the falsification of records without regard to ASU's financial position.

Statements from the former Project Manager and his subsequent removal from the project

In our original review, we noted that FAA's report did not adequately address the perception that FAA was "purposely keeping ASU solvent," the perception that ASU was "cutting corners," or the reasons why Project Manager Rich McAuley was removed from the project.

FAA's supplemental response adequately addresses these concerns. Additional fact finding will not likely be profitable. Perceptions and general statements are difficult to prove or disprove. FAA acknowledges that it took too long for AVS management in the Northwest Mountain Region to decide on a course of action.

According to the ASU Special Investigation Team, the inquiry into "why" this was has been exhausted and no specific evidence was developed that any officials committed an illegal act. FAA acknowledges the appearance of coziness, but points to facts to the contrary and their rulemaking recommendation. According to one witness, Mr. McAuley eventually became convinced that the Corrective Action Plan was the appropriate methodology to address the issue. FAA states that the materials and processes used by ASU for installing the NVIS had been previously approved by FAA. These materials and processes greatly reduced the cost, but were found by FAA "to be congruent with existing systems in the aircraft and the installations were done safely." The FSDO manager told investigators he took over the project to ensure that ASU "played by the book." Mr. McAuley resumed a role after becoming the Aircraft Certification point of contact mentioned in the FAA notice.

CONCLUSION

In summary, we have reviewed the original disclosure, FAA's response, FAA's supplemental report, and additional documentation. Based on our review, we have determined that FAA's investigation contains all information required under 5 U.S. Code Sec. 1213, and that FAA's findings appear reasonable and its corrective actions are sufficient.

If you have any questions or concerns about this report, please contact me at (202) 366-1415.



Federal Aviation Administration

Memorandum

Date: JUL - 1 2009

To: Rick Beitel, Assistant Inspector General for Washington Investigative Affairs

From: Margaret Gilligan, Associate Administrator for Aviation Safety, AVS-1

Prepared by: Phyllis Duncan, AFS-4, 202-267-8017

Subject: Implementation Plan for Recommendations Included in the Report on OIG
Complaint 08IH-B66-I-000 and OSC File No. DI-08-1904

I accept the results and recommendations presented in the original and supplemental reports on OIG Complaint 08IH-B66-I-1904 and commit to put into action the recommendations as indicated in the attached Implementation Plan.

If you have any further questions, please contact Mr. Martin J. Ingram, 718-553-3201, or Ms. Phyllis Duncan, 202-267-8017.

Attachment

**IMPLEMENTATION PLAN FOR RECOMMENDATIONS
FROM FAA'S INVESTIGATIVE REPORT ON CIG Complaint 08IH-B66-1-000 and OSC File No. D1-080-1904**

| Recommendation | Office | Milestone | Comments | Date Complete |
|---|--------------------|------------|--|---------------|
| 1. Flight Standards and Aircraft Certification must keep the corrective action plan on schedule. | ANM-100 ANM-200 | 10/31/2008 | Corrective action plan completed on schedule. | 10/30/2008 |
| 2. Clarify and strengthen Flight Standards policy on not using field approvals for NVIS with a change to FAA Order 8900.1, Flight Standards Information Management System, volume 4, chapter 9, section 1, Perform Field Approval of Major Repairs and Major Alterations. | AFS-300 | 12/31/2009 | | |
| 3. Expand Flight Standards policy on the issuance of NVIS operations specifications to include airworthiness and avionics coordination with a change to FAA Order 8900.1, volume 4, chapter 7, section 4, Night Vision Imaging Systems. | AFS-300 | 12/31/2009 | | |
| 4. a. Review the content of the expired notice on NVIS and incorporate the expired guidance permanently in Order 8900.1. | AFS-300 | 6/30/2012 | | |
| a. Until completion of rulemaking change Flight Standards policy in 8900.1 to require a risk assessment on a revoked repair station if it reapplies for certification less than a year after revocation or surrender of its certificate. | AFS-300 | 12/31/2009 | | |
| 5. Limit the number of people involved in a special or sensitive project to reduce delays and confusion and expedite arriving at a consensus solution. | AVS | Continuous | AVS can include this concept in new manager training provided to newly appointed supervisors and managers. | |
| 6. For operators whose aircraft have NVIS installations—regardless of who did the modification—FAA should require operators to | | | | |

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| <p>conduct an annual conformity inspection to assure that any subsequent modifications have not invalidated the NVIS modification.</p> | <p>AFS-200</p> | <p>10/31/2009</p> | <p>This can be accomplished with a SAFO issued to part 135 HEMS operators.</p> | |
| <p>a. Operators could incorporate this conformity inspection into the annual inspection required by 14 CFR section 91.409.</p> | <p>AFS-200</p> | <p>10/31/2009</p> | <p>This can be incorporated into policy documents for inspectors conducting surveillance of part 135 HEMS operators.</p> | |
| <p>b. FAA inspectors could confirm operator actions during scheduled surveillance, focusing on HEMS aircraft when they are not on operational assignment or are out of service for scheduled maintenance.</p> | <p>AFS-300 AFS-500</p> | <p>12/31/2009</p> | | |
| <p>7. Review existing NVIS training for inspectors and determine the need to improve that training.</p> | <p>AFS-300 AFS-500</p> | <p>12/31/2009</p> | | |
| <p>a. Consider adding system safety approaches (distinguishing genuine safety concerns, risk management, etc.) to oversight of all aspects of NVIS.</p> | <p>AFS-300</p> | <p>12/31/2009</p> | <p>Item a. can be accomplished with an update to inspector policy documents.</p> | |
| <p>8. Consider having the Rotorcraft Directorate issue all rotorcraft STCs versus the closest ACO.</p> | <p>AIR-1</p> | <p>12/31/2009</p> | | |
| <p>a. At a minimum ASW-100 should coordinate on and participate in all issuances of rotorcraft STCs by other ACOs.</p> | <p>AIR-1</p> | <p>12/31/2009</p> | | |
| <p>9. Use the events regarding ASU-modified aircraft as a case study on how to improve coordination and communication between and within each other when addressing new technologies.</p> | <p>AFS-1 AIR-1</p> | <p>6/30/2010</p> | <p>The Services could develop a case and provide this to all levels of management in AFS and AIR to foster better communication and cooperation.</p> | |
| <p>10. Evaluate using the Minimum Equipment List as a method to address NVIS malfunctions or when subsequent cockpit modifications may have invalidated the NVIS STC to allow continued HEMS operations until a conformity inspection, as recommended in Number 6 above.</p> | <p>AFS-300</p> | <p>12/31/2009</p> | | |
| <p>11. To heighten the credibility of the photographs used for evaluating conformity, consider certifying copies of digital photographs as true copies when</p> | <p>ANM-100 ANM-200</p> | <p>OBE</p> | <p>Because the CAP is complete, this recommendation is moot. However, ANM-100 and ANM-200 should prepare a report for AFS-1</p> | |

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| <p>using them to determine if full or partial evaluations of NVIS modified cockpits are necessary before issuance of an STC.</p> | | | <p>and AIR-1, as well as, AVS-1, outline how they used photographs to determine conformity, how they determined the photographs were accurate, and photography can be used in future such instances. This evaluation could be completed by 12/31/2009.</p> | |
| <p>12. Consider the possibility of a one-time special emphasis inspection of ASU modifications after completion of the corrective action plan.</p> <p>a. Flight Standards could sample a percentage of aircraft from ASU's 14 CFR part 135 customers (available on ASU's Web site) and validate the results of the CAP.</p> | AFS-300 | 03/12/2009 | <p>Flight Standards can accomplish this through issuance of a life-limited notice requiring the inspection, similar to the AD conformity evaluations conducted in April and May 2008.</p> | |
| <p>13. Refer the falsification issue (ASU former director of maintenance) to the OIG for criminal investigation.</p> | ANM-200 | 7/31/2009 | | |