

February 2, 2012

Carolyn Lerner  
Special Counsel  
U.S. Office of Special Counsel  
1730 M Street, NW, Suite 218  
Washington, D.C. 20036

Re: OSC File No. DI-10-2602

Dear Ms. Lerner,

Thank you allowing me to submit a supplemental response to the FAA's report on OSC file DI-10-2602.

Some 5 months have passed since I provided a response to the FAA reports that were generated after I filed a whistleblower complaint concerning the installation of night vision imaging systems (NVIS) for emergency helicopter operations. The original response only addressed issues that were generated, basically in 2007, from Flight Standards failure to enforce the operational and maintenance rules that allowed continued operation of the aircraft without proper action.

In January 2010, another set of problems arose from the approval of installations by the Aircraft Certification (ACO) that contained the wrong color of lights in mast bump caution warning indicators and issues with a pilot being able to know which warning indicators were flashing due to a filter that obscured the pilots vision. While the flight manuals that the pilots use to operate the aircraft state that the lights were to be red the actual installations used a light that was green and the filters did not meet the NVIS visual requirements for normal day operations. Inspectors in a Flight Standards District Office (FSDO) notified the ACO and a "study" of the problem began.

Months later the answer was to remove the filter so the pilots could see what warnings were flashing but still no resolve on making the color of the light match the requirements in the operations manual. The inspectors in the FSDO were naturally frustrated at the lack of action since our regulations require that the aircraft conform to airworthiness requirements before each flight and those flights were coming and going out of their office district. In other words, if an accident or event were to occur due to the NVIS then it would be their responsibility for failing to take action.

Eventually the inspectors generated an enforcement case to force the operator into making the aircraft airworthy. The inspector's frustration was then aggravated when the operator's certificate managing office issued a statement to the operator that they should ignore any communications from the FSDO because they were not the office that held their certificate.

You can only imagine what the finding inspector's thoughts were on the incredible intervention of another office in a matter that was so blatantly contrary to the maintenance and operations rules for the aircraft. Then add the confusion and humor that the actual owner/operator experienced about two offices in disagreement over their own rules and the ACO's intervention by telling the operator that is OK to go ahead and fly.

We can also add that the pilots were advised to adapt because the situation was as good as it was going to get instead of the FAA taking action to make the aircraft compliant before another flight. By the way, the ACO has no authority in telling any person that they can fly an aircraft because

they do not oversee maintenance or operations rules. At this time the enforcement case is still unresolved.

During the same time period that the company obtained approval for the wrong color of lights and filters it also issued dozens of kits without any approval for their installation. The FAA's answer was to again study the problem then eventually told the operator that they could not use the aircraft that were modified with the kits for goggle operations. This is contrary to regulatory requirements because the FAA does not provide for partial installations without the proper data approvals and none was generated to allow continued operation of the aircraft. Modified aircraft contain lights and filters over existing lights that can also interfere with normal day and night vision without the goggles so simply choosing to ignore the installation and not use the goggles does not fulfill the regulatory requirements for airworthiness.

The condition of all the aircraft using NVIS that were wrongly modified without approval or were modified with the approval to install the wrong color of lights and filters put them into an "unknown" safety condition. Logic, and following regulatory requirements, determines that an aircraft is unairworthy when the conformity to type design and its condition for safe operation is "unknown" because there is no data available make a determination for airworthiness.

However, even the latest Notice 8900.166 concerning operations with NVIS modifications that were accomplished in error still provides that the aircraft can continue operations in an unairworthy condition as long as it is safe to fly. Flight Standards management and the FAA Administrator continue to allow aircraft contrary to the regulations. Aircraft in an unknown status are unairworthy and prohibited from operation. Our requirements under the Enforcement Order 2150.3b state that an improper return to service is a violation of federal regulations that carries a recommended sanction of 30 to 120 days suspension or revocation for falsification so it is a serious offense that if ignored in this instance how do we enforce it on others?

Without ONE FAA following this basic precept, that an unknown condition equates to unairworthy, then this is just another nail in the coffin that the public and its own inspector workforce evaluates in the loss respect for the agency and industry voluntary compliance with its regulations.

Notice 8900.166 concerning Ahler's modifications and the previous Notice issued for ASU modifications allowed continued operation of the aircraft yet did not require generation of new approved data to provide for the actual conformity of the aircraft condition...therefore continued non-compliance of the unairworthy condition was formally endorsed.

Also, a PowerPoint presentation was provided to the Helicopter Air Medical Service industry in 2009 that in one slide (#6) stated that maintenance records are required to be kept on each NVG to ensure its conformity, airworthiness and meets the OpSec requirements yet on another slide (#8) stated that flight operations may still be conducted with aircraft that do not meet the airworthiness standards for NVIS operations. However, being airworthy for operations and airworthy for the aircraft to fly are distinctly intertwined and inseparable without approved data.

I will go further in making the statement that the responsibilities of the divisions of the FAA has been so blurred over the past several years that the Flight Standards inspector workforce has lost its direction and will to make self directed decisions on their work functions with public safety as the primary goal. The fear of being second guessed or over-ruled because of political based decisions inhibits the inspectors from performing their work. This also affects the morale of the employees in that the agency continues to remain one of the worst in all the federal agencies polled each year.

In general, the Aircraft Certification division has the responsibility for approving data and certifying aircraft to manufacturing regulations. The ACO has largely become a customer service organization that would not fit the inherently governmental description because its mandate has become to get aircraft certified and in the air so manufacturers can make money and employ more people even without the appropriate compliance with its own regulations. Take for instance this NVIS situation that has evolved since 2003 and the Eclipse Aircraft certifications with resulting congressional hearings. How does this affect the public trust or their concern for their safety for current certification activities such as the Boeing 787?

The ACO regularly approves alterations to existing aircraft that conflict with operational rules because it does not understand or have authority over those rules. It does not appear that there is sufficient oversight by Flight Standards to even prevent the ACO from telling someone it is OK to fly an unairworthy aircraft. On one hand, we are ONE FAA in the public's eye so a customer should be able to depend on what they hear yet inside the agency we should be able to say that a particular decision needs to be made by the people with that particular oversight responsibility. On the other hand, the responsible organization should be accountable in any event.

The Flight Standards division has largely become a customer service organization over the last several years as well in that management does not have a grasp on its regulations or the expertise to make decisions based on those regulations. The new management culture is based on good friend and good crony skills rather than having a good balance of experience or expertise. At one time I joked about buying Mr. Sabatini, Mr. Ballough, and several of the division managers a paper copy of the regulations to put on their desk after the American and Southwest Airlines issues in 2008, just to give them a reference for their positions. There was no excuse for the lost direction of the offices and inspectors on those certificates or for the public to be inconvenienced by cancelled flights or the loss of revenue by the airlines.

Let me emphasize that Flight Standards only has approximately 3500 inspectors world-wide. The inspectors have received no training or investigation skills to perform their duties other than general overviews of regulations and processes. The Department of Transportation and the various Administrators continue to undermine its responsibilities by trying to define its inspector work force as auditors and customer support agents. Those attempts at being PC and to present a politically impotent face on the agency do not reflect that the inspectors work has more depth and importance that does at times put them in real danger.

Flight Standards inspectors are not friends and buddies with the public because they are charged with ensuring public safety and do find criminal actions at times. There are bad people out there doing bad things on purpose that get people killed. The reality is that on the job inspectors do not know if they are working with the best citizen on earth or a drug smuggler. Most often than not, an inspector is working alone during an inspection so there is no support and he/she does not get any support from the agency when they return to the office either for regulatory findings or discussions about their personal safety.

Let me give you an example. After I was hired in 1995, I assisted an inspection of a maintenance facility where I discovered the norm was to falsify records for profit. You can look up the case in the NTSB.GOV database as Thunderbird Propeller Service (NTSB EA-4648). In my opinion, and from what I learned from other inspectors, the owner had continued to successfully operate for about 20 years by either threatening the inspectors that found discrepancies with death or harm to their families until they asked to be removed from oversight or the owner called the office manager

or supervisor and had them removed. I stood my ground and even had to threaten my supervisor, including the Southwest Region Division manager, that the case I wrote would go forward, with or without their support and I would not be removed from the certificate until the case was resolved. Don't be alarmed, this type of certificate management by assignment of accommodating inspectors is more the norm than not when a customer complains to the FAA.

At present Flight Standards has a lot of problems with its identity. If the FAA operated in a clear and transparent manner so that every decision is based on regulations and established policy then there would be no need for slight of hand, closed door decisions, manipulation or re-assignment of employees, or the questions raised by my disclosure. There would be no operators revoked in one region for fatalities then be allowed to start back up in another after a Senator works a deal with headquarters management for his buddy or constituent. There also would be no need for a another Senator to take up a pilot rights bill even though he personally may have problems making good decisions based on sound aviation principles of how to operate an aircraft.

I will close with one final note that may not be completely related to the disclosure but is of importance to the public in general. Our legal counsel driven by AGC-1 has decided that "current" no longer means up-to-date for aircraft regulatory purposes. Traditionally, the FAA required, by its own regulations (and still does), that every pilot utilize the latest version of his aircraft operating manual to fly the aircraft and that every mechanic utilize the latest version of the maintenance manuals to work on the aircraft.

Good sense would mean that any changes that the manufacturers make to their manuals is based on what they learn from the actual day to day use of their product or from accident investigations in order to provide the highest level of safety possible. The manufacturer is the expert on their product. AGC-1 by no means has any aviation expertise about maintenance or operations but has decided that an aircraft can be flown or maintained with any document that was available on the day that the aircraft was built or thereafter after complaints by the public that they didn't want to do certain work because of extra costs. That means that all safety enhancements to the aircraft or new and more safe methods to fly them are not mandatory unless put into an Airworthiness Directive (AD Note) by the FAA. I don't think any congressional member would believe that is good for the public or would give them comfort when travelling by air. While an item may not be of sufficient immediate danger to warrant an AD Note there are improvements that raise the level of safety that need to be incorporated when convenient during regular maintenance or operations.

If I was a passenger on an aircraft I would be really concerned about the safety provided by the current culture and philosophies of the FAA. If I was a mechanic I would be really concerned about my work and the liabilities imposed by my signature even if an FAA representative is saying it is OK to go when there is a question about regulations. If I was a pilot I would be really concerned about the true condition of the aircraft I am flying. My advice is that if there is any question simply ask and demand an answer in written form to cover yourself.

Sincerely,



Rand L. Foster  
Aviation Safety Inspector

Attachments:

FAA Notice 8900.166

FAA PowerPoint Presentation dated June 25, 2009

# NOTICE

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

N 8900.166

National Policy

Effective Date:  
8/25/11

Cancellation Date:  
8/25/12

**SUBJ:** Corrective Action Plan for Night Vision Imaging System Modifications  
Provided by Ahlers Aerospace, Inc.

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- 1. Purpose of This Notice.** This notice provides guidance to principal maintenance inspectors (PMI) and principal avionics inspectors (PAI) dealing with Night Vision Imaging System (NVIS) lighting Supplemental Type Certificate (STC) modifications developed and shipped by Ahlers Aerospace, Inc. of Hurst, Texas.
- 2. Audience.** The primary audience for this notice is Flight Standards District Office (FSDO) PMIs/PAIs with oversight responsibilities for helicopter emergency medical services (HEMS). The secondary audience includes Flight Standards Service (AFS) regional and headquarters offices.
- 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](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>. Air carriers (operators) can find this notice on the Federal Aviation Administration's (FAA) Web site at <http://fsims.faa.gov>. This notice is available to the public at [http://www.faa.gov/regulations\\_policies/orders\\_notices](http://www.faa.gov/regulations_policies/orders_notices).
- 4. Background.** While the first-of-type Ahlers NVIS lighting STCs were properly evaluated and approved, the Rotorcraft Certification Office (RCO) has learned that other aircraft types were modified using variations of the original Ahlers NVIS lighting STCs. These aircraft were modified using Ahlers-developed kits with modified data and configurations that required FAA approval. Ahlers neither applied for, nor received FAA approval of the modifications before shipping 64 NVIS lighting modification kits to repair stations. AFS has become aware that those repair stations have modified aircraft with the unapproved Ahlers NVIS lighting modification kits and returned the aircraft to service. A member from the NVIS Special Emphasis Investigation Team (SEIT) informally contacted all of the PMIs/PAIs who oversee these aircraft and notified them of this issue.

**5. Discussion.** The Aviation Safety (AVS) organization has carefully evaluated the circumstances surrounding this issue and has made the following conclusions.

**a. Return to Service.** Although aircraft with Ahlers NVIS lighting modification kits may have been improperly returned to service, the immediate removal from NVIS operation and day/night readability assessments as part of the corrective action plan will address any potential safety concerns that must be corrected before further flight. Therefore, an operator can keep its aircraft with Ahlers NVIS lighting modification kits in service in accordance with the Ahlers Aerospace, Inc. NVIS Response Plan timelines and requirements.

**Note:** Aircraft inspected and returned to service under this notice will not require inspection for NVIS lighting as provided in N 8900.152, Special Emphasis Inspection of Night Vision Imaging System Lighting Installations. Refer to paragraph 7 below for verification procedures.

**b. Corrective Action Plan.** AVS has developed the Ahlers Aerospace, Inc. NVIS Response Plan to identify and resolve discrepancies pertaining to Ahlers NVIS lighting modification kits as described in subparagraph 5a above. The response plan contains a list of affected aircraft (provided by Ahlers), day/night readability assessments, and the operator's compliance acknowledgement. Potential NVIS safety concerns must be corrected within the timeline addressed by the response plan before further flight. The Aircraft Maintenance Division (AFS-300) has provided the Ahlers Aerospace, Inc. NVIS Response Plan to the PMIs/PAIs with oversight responsibility of the affected aircraft. The Ahlers Aerospace, Inc. NVIS Response Plan contains three steps:

(1) Step 1. Provide the operator of the affected aircraft with a copy of this notice and the response plan.

(2) Step 2. The operator performs the day/night compatibility check attached to the response plan.

(3) Step 3. A night vision goggle (NVG)-aided ground evaluation of the cockpit by a flight test pilot Designated Engineering Representative (DER) or Organization Designation Authority (ODA) unit member with NVG special authorization.

**6. Action.** PMIs/PAIs must provide a copy of this notice and the Ahlers Aerospace, Inc. NVIS Response Plan to the affected operator within 3 business days after the publication of this notice. Afterward, PMIs/PAIs must confirm that the operator has performed the evaluation described in the Ahlers Aerospace, Inc. NVIS Response Plan and has corrected all NVIS deficiencies.


**7. Closure.** The PMI/PAI must:

- Document all discrepancies found during the evaluations of the response plan and any corrective actions taken by the operator in the comments section of the Program Tracking and Reporting Subsystem (PTRS) record.
- Verify each step of the Ahlers Aerospace, Inc. NVIS Response Plan was completed and that all requirements for each step were accomplished.

- Enter all data into the PTRS when received from the operator.
- Create a separate PTRS entry for each aircraft listed in the Ahlers Aerospace, Inc. NVIS Response Plan.
  - Use PTRS code 4634/6634 (SURV/OPR/INSP NIT VISN IMG SYS).
  - Enter "N8900.166" in the "National Use" field.

**8. Disposition.** Since this is a special emphasis activity, we will not incorporate the information in this notice into FAA Order 8900.1. Direct questions concerning the information in this notice to the Aircraft Maintenance Division, General Aviation Branch (AFS-350) at 202-385-6429. Contact the Rotorcraft Directorate Standards staff at 817-222-5110 or the Rotorcraft Certification Office (ASW-170) at 817-222-5170 with questions regarding the performance of day/night readability evaluations specified in the Ahlers Aerospace, Inc. NVIS Response Plan.

for



**John M. Allen**  
Director, Flight Standards Service



# NIGHT VISION IMAGING (NVIS)

## Requirements, Approvals, Maintenance

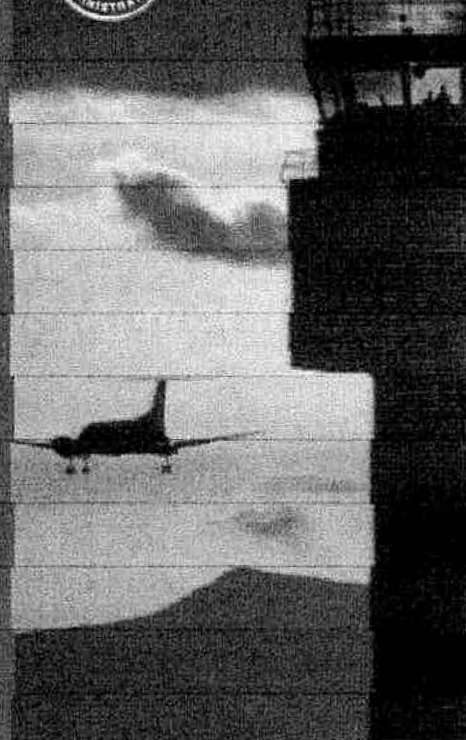
Presented to: Helicopter Air Medical Service

By: Kevin Morgan

Date: 25 June 2009



Federal Aviation  
Administration



## Minimum Requirements

- New models of aviation night vision goggles identified and manufactured on or after the *effective date of TSO-C164* must meet the minimum performance standards (MPS) set forth in Section 2 of RTCA Document No. (RTCA/DO)-275, Minimum Operational Performance Standards for Integrated Night Vision Imaging System Equipment, dated October 12, 2001.





# Approvals

- FAA Order 8900.1, Vol. 4, Ch. 9, Sec. 1, Fig. 4-68, Major Alterations Job Aid, states: Flight deck lighting changes to support night vision goggle use, or any approvals related to night vision goggles require a supplemental type certificate (STC).
- **STC Regulation: 14 CFR § 21.113**



# Maintenance

- Maintenance of the NVG appliance should be performed in accordance with the manufacturer's *maintenance manual or other instructions* acceptable to the administrator as required by the STC. (see §§ 43.13 and 43.16)
- Additionally OpSpec A050 and D093 states the night vision device shall be maintained.
- *Maintenance records are required to be kept on each NVG to ensure its conformity, airworthiness and meets the OpSec requirements.*



## 14 CFR § 43.16 Airworthiness limitations

- Each person performing an inspection or other maintenance specified in an Airworthiness *Limitations section of a manufacturer's* maintenance manual or Instructions for Continued Airworthiness shall perform the inspection or other maintenance in accordance with that section, or in accordance with operations specifications approved by the Administrator under part 121 or 135, or an inspection program approved under §91.409(e).



- Table 5-1 in RTCA DO-275 contains a list of persons authorized to perform aviation NVIS maintenance, preventive maintenance, rebuilding, and alterations.
- Persons authorized to approve NVIS appliances or *component parts for return to service after* maintenance, preventive maintenance, rebuilding, or alteration is contained in Table 5-2 of the above document.
- Flight operations may still be conducted with aircraft that do not meet airworthiness standards for NVIS operations.





## Reference

- TSO-C164 Night Vision Goggles, dated September 30, 2004
- RTCA Document No. (RTCA/DO)-275 Minimum Operational Performance Standards for Integrated Night Vision Imaging System Equipment, dated October 12, 2001
- RTCA/DO-268, Concept of Operations – Night Vision Imaging System for Civil Operators, dated March 27, 2001
- AC 27-1B, Certification of Normal Category Rotorcraft
- AC 29-2C, Certification of Transport Category Rotorcraft



## Questions / Issues

### Contact

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