



**U.S. Department  
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Federal Aviation  
Administration**

# InFO

Information for Operators

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Flight Standards Service  
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**[http://www.faa.gov/other\\_visit/aviation\\_industry/airline\\_operators/airline\\_safety/info](http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/info)**

*An InFO contains valuable information for operators that should help them meet certain administrative, regulatory, or operational requirements with relatively low urgency or impact on safety.*

**Subject:** Agricultural Aircraft Inspection and Maintenance Quality Assurance Programs

**Purpose:** This InFO serves to provide best practices in agricultural operations by providing guidance on awareness and training for maintenance quality assurance and inspection programs.

**Background:** The National Transportation Safety Board (NTSB) issued Safety Recommendation A-14-026 on May 7, 2014, following a special investigation of 78 accidents involving agricultural operations, agricultural pilot training, and other crop protection activities. Safety Recommendation A-14-026 directed the Federal Aviation Administration (FAA) to work in conjunction with the National Agricultural Aviation Research & Education Foundation (NAAREF) to develop and distribute guidance for agricultural aircraft operators to assist them in implementing effective aircraft inspection and maintenance quality assurance programs, including but not limited to best practices for performing, recording, and tracking mandatory and recommended maintenance items for each aircraft.

In response, the FAA and the NAAREF developed guidance for agricultural aircraft operators and maintenance personnel to help implement effective programs for aircraft inspection and maintenance quality-assurance programs. This guidance includes best practices for performing, recording, and tracking mandatory and recommended maintenance items for agricultural operations aircraft.

**Discussion:** The NTSB Special Investigation Report identified maintenance issues as a contributing factor to accidents in the agricultural aircraft industry. The FAA and the NAAREF believe the most effective way to reduce maintenance problems is through education and outreach on the importance of performing maintenance tasks accurately and consistently.

The National Agricultural Aviation Association (NAAA) has organized the below committees, processes, and guidance to aid in accomplishing this task:

1. The Program Development Committee (PDC) is a workgroup formed by the NAAA and made up of industry and FAA personnel. The PDC holds regular meetings to discuss effectiveness of ideas, including real-life issues and potential areas of failure to reduce accidents in agricultural aviation. These meetings serve as a method of sharing information and help address issues associated with Title 14 of the Code of Federal Regulations (14 CFR) Part 137 operations. All operators are encouraged to share information with the NAAA for dissemination to other operators experiencing similar issues. Topics of concern for review may be added at [www.agaviation.org](http://www.agaviation.org).

2. A new NAAA Accident Classification committee comprised of industry and FAA personnel was created to review accidents occurring from 2010 to 2016. The committee categorized events leading to the cause of accidents to help identify not only the accident's cause, but the phase of operation, in order to correlate any human factors leading to accidents and associated preventative maintenance.
3. Some accidents reviewed indicated complacency among mechanics performing maintenance of aircraft. The part 137 operation is an ever-changing environment in terms of conditions, work hours, and agricultural chemicals involved. All maintenance personnel should utilize checklists and proper instructions when performing maintenance. Inspection and maintenance best practices can be viewed at <https://www.faasafety.gov>, specifically two PowerPoint presentations, Risk Management and the Risk/Hazard Identifier Wheel, and a short course titled the Dirty Dozen, Human Error in Aircraft Maintenance.
4. All mechanics need to be aware of requirements of FAA Form 337 field approvals for modifications performed on aircraft. Instructions for continued airworthiness must, per 14 CFR part 21 § 21.50, become part of the maintenance program for the aircraft modified, whether the modification is a supplemental type certificate (STC) or an alteration by owner or operator. These modification or alteration actions may require additional maintenance actions based on changes the original aircraft manufacturers did not consider when designing a maintenance program for the aircraft. Please review 14 CFR part 21.50 and the latest version of FAA Order 8110.54, Instructions for Continued Airworthiness Responsibilities, Requirements, and Contents.
5. NAAA programs such as the Professional Aerial Applicators Support System (PAASS - [www.agaviation.org/paassprogram](http://www.agaviation.org/paassprogram)) have proven to be instrumental in reducing accidents by raising awareness of human factors, inherent stresses in the aerial application process, and proficiency of operating agricultural aircraft. It also raises the awareness of the pilot's role in making sure an aircraft is airworthy. Pilots should educate themselves in maintenance tasks and become familiar with every aspect of the aircraft they fly.
6. Ensuring compliance to mandatory airworthiness directives is critical to ensure aircraft airworthiness and safety. Creating and using a list of airworthiness directives (AD) helps keep track of these items. This list should include (1) the AD number, (2) effective date, (3) compliance date, (4) method of compliance, and (5) the signature of the mechanic completing the AD instructions. This list serves as a record of compliance and a reference to show compliance.
7. Utilizing the aircraft manufacturer's inspection and maintenance programs is more specific than 14 CFR part 43, Appendix D. The manufacturer's program encompasses specific items of the aircraft and not the generic listing in Appendix D.
8. Although service bulletins (SB) are not mandatory, they contain useful and vital information. Aircraft manufacturers issue SBs to keep owners informed of hazards existing in the manufacturer's aircraft.
9. Documenting maintenance creates data that may aid in identifying risks associated with an operation. No matter how minor, documented maintenance helps alert other operators to a

potential problem. Take the time to write down all maintenance activities accomplished, and develop your own record to identify trends and areas of concern for future planning.

**Recommended Action:** Implementation of a risk identification program is vital to have all employees working toward a common goal to reduce accidents. A thorough explanation of a Safety Management System and risk identification program can be found at <https://www.faa.gov/about/initiatives/sms/>. Agricultural aircraft operators and maintainers should familiarize themselves with the information in this InFO, and also current maintenance requirements. In addition, operators are encouraged to share information with fellow operators about maintenance issues encountered and methods of improving maintenance operations. Operators may also contact their airworthiness representative on the local FAA Safety Team (FAASTeam) to get a briefing at their facility or visit the [www.faasafety.gov](http://www.faasafety.gov) website to educate themselves on responsibilities and hazards.

**Contact:** Questions or comments regarding this InFO should be directed to the General Aviation Branch, AFS-350, at (202) 267-1675.