



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

Policy Statement

Subject: Use of Remote Technology During
the Performance of Inspections and Tests

Date: 3/31/20

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PS-AIR-21-1901

Initiated By: AIR-6C0

Summary

The FAA has determined that the performance of certain inspections and tests using remote technology can be more cost effective, improve certification timeliness, and reduce FAA resource burdens. This policy provides information on the use of remote technology to perform prototype conformity inspections, engineering and ground tests, engineering compliance inspections, production conformity inspections, and inspections for the issuance of an Authorized Release Certificate, FAA Form 8130-3, Airworthiness Approval Tag.

For prototype conformity inspections, engineering and ground tests, and engineering compliance inspections, an applicant for a design approval seeking to use remote technology should submit a request to the appropriate Aircraft Certification Office (ACO) branch. For production conformity inspections, and inspections for the issuance of FAA Form 8130-3, a production approval holder (PAH) must document the process in its approved quality manual as specified in Title 14, Code of Federal Regulations (14 CFR) Part 21.

Applicability

This policy applies to FAA Aircraft Certification engineers, manufacturing aviation safety inspectors, and authorized designees. The information in this policy statement may also be used by applicants for a design approval, holders of a design or production approval, FAA designees, and holders of an Organization Designation Authorization (ODA).

This policy statement is not legally binding in its own right and will not be relied upon by the FAA as a separate basis for affirmative enforcement action or other administrative penalty. Conformity with this document is voluntary only and nonconformity will not affect rights and obligations under existing statutes and regulations.

Considerations

Remote technology may have limitations that could render it unsuitable for some applications. Accordingly, careful consideration and risk management should be applied when making a determination when to use it. The factors listed below should be considered in determining when remote technology should be used. These factors, however, are not all-inclusive and should not be treated as a checklist.

General Considerations. The following should be considered when considering the use of remote technology:

- Complexity, novelty, and safety criticality of the product, article, or system being inspected or tested;
- Level of understanding of inspection and test personnel in the use of the particular procedures and equipment that will be used to conduct the inspection or test;
- Experience of the facility conducting or supporting the inspection or test; and
- Appropriateness of the inspection and test instruments and/or equipment, especially when being used to evaluate qualitative aspects of a product, article, or system.

Equipment and Setup Considerations. The following should also be considered when determining whether remote technology should be used to perform an inspection or test, keeping in mind that the use of remote technology should enable the FAA or its designee to properly perform their duties.

- Suitability of video resolution, fidelity, and field of view for the inspection or test being conducted;
- Need for multiple cameras, imaging systems, or microphones and whether the person performing or witnessing the inspection or test can switch between them, or direct them to be switched;
- Controllability of viewing direction, zoom, and lighting;
- Appropriateness of audio fidelity for the evaluation being conducted;
- Whether real-time, uninterrupted communication between the person(s) authorized to remotely witness the activity and the personnel conducting the inspection or test exists at the location where the product, article, or system is located;
- Need for unique testing devices or equipment (for example, fast-frame cameras, special lighting conditions, or sensitive listening devices);
- Whether personnel have been adequately trained in the proper set up, validation, and use of the technology, tools and/or equipment to be used; and

- Need for the retention of the audio, video, or other information. The FAA may request that the person conducting the inspection or test record and save video, audio, or other information for a specified time to enable evaluation, or adherence to this policy. This information should not be retained by the FAA or designees.

Prototype Conformity Inspections, Engineering and Ground Tests, and Engineering Compliance Inspections

This section describes how an applicant for a design approval can request to use remote technology for prototype conformity inspections, engineering and ground tests, and engineering compliance inspections. This section also describes how an ACO branch will evaluate these requests.

This policy does not apply to video, audio, or other information collection means that are normally used to support showings of compliance, such as when video is used as a backup means to support an inspection or test, or when it is difficult to observe the results of certain tests, such as high-intensity radiated field tests, in-flight icing tests, or water ingestion tests.

NOTE: The setup and use of remote technology to perform engineering compliance inspections of complex interiors has previously proven to be challenging and often unacceptable to the FAA. ACO branches should take extra precautions when making a determination that the use of remote technology is appropriate for the conduct of these inspections.

Requesting to Use Remote Technology

An applicant requesting to use remote technology should determine if using remote technology is viable for the considered use and make a request to the appropriate ACO branch. The applicant should specify how it plans to use remote technology in its Project Specific Certification Plan (PSCP), engineering test plan, or conformity inspection plan. The request should include:

1. A description of how the product, article(s), or system(s) will be inspected or tested, including –
 - a. Identification of the product, article(s) or system(s) that will be inspected or tested using remote technology (e.g., citing the specific sections of the inspection or test plan to which the request pertains); and
 - b. The proposed date and location of each inspection and test.
2. If a designee or ODA is used –
 - a. The name of the designee or ODA Unit Member (UM) performing the FAA function that will rely on the use of remote technology; and
 - b. Evidence of the designee or ODA UM's concurrence that the use of remote technology will allow for that person to adequately perform the inspection or test function.

Evaluating a Request

The appropriate FAA office responsible for oversight of the activity will-

1. Determine if the requested use of remote technology will ensure that the FAA or designee can properly perform their duties.
2. Discuss the request with all FAA authorized test witnesses, manufacturing inspectors, or designees, as appropriate.
3. Make a determination whether the remote technology can be used to conduct the inspection or test and inform the applicant of its determination.

Documenting an Inspection or Test

An applicant that has used remote technology to conduct an inspection or test should document the equipment used for performing the inspection or test and identify those personnel at the facility that assisted in the inspection or test. The applicant should, as appropriate, provide a chronological description of the test or inspection and any adjustments to the remote technology equipment (cameras, microphones, etc.) made over the course of the inspection or test and the reasons for the adjustments. The signature of an FAA authorized test witness on that record constitutes that person's assertion that the results were obtained by properly following the inspection or test plan.

Production Conformity Inspections and Issuance of FAA Form 8130-3

Documenting the Use of Remote Technology in a PAH's Quality Manual

To use remote technology to perform a production conformity inspection or issue an FAA Form 8130-3, a PAH must include the procedures in its quality system, and submit documentation describing those procedures to its managing office in accordance with established procedures for making changes to its quality system as specified in 14 CFR Part 21. The managing office will review the submitted changes for the remote inspection methods and accept or approve the changes, as applicable.

The procedures should describe—

1. How remote technology will be used in real time (not pre-recorded) so that the inspector may direct the inspection as if conducted in-person, on-premises, with the aid of the equipment or the personnel supporting the inspection at the remote location.
2. Procedures for conducting a re-inspection if the equipment malfunctions or the process fails to yield acceptable results. A re-inspection using remote technology may be accomplished after correcting the malfunction or process, or by an actual on-site inspection.
3. How the inspector should record and communicate any difficulties or concerns regarding the process so that the PAH can improve its program.
4. How use of remote technology will be documented on required records.

5. How the remote technology procedures should be audited.
6. For production conformity inspections, the use of remote technology should be agreed to in the Partnership for Safety Plan (PSP), Project Specific Certification Plan (PSCP), or Conformity Plan, or be contained in a prescribed process, or manual, as applicable.

Adding the Use of Remote Technology to an ODA Procedures Manual

Repeated use of remote technology may be authorized for an ODA in its procedures manual. An ODA holder seeking to use remote technology shall propose to its Organizational Management Team (OMT) how it plans to use that technology. The ODA must document the procedures in its procedures manual as specified in 14 CFR § 183.53, and submit the revised manual to its OMT in accordance with established procedures for making changes to the manual. The OMT will review the submitted changes for the use of remote technology methods in accordance with applicable regulations, guidance, and this policy.

Effect of Policy

This policy statement does not constitute a new regulation and its use is optional for applicants for a design approval, and PAHs. FAA employees and authorized designees, however, should not depart from this policy without concurrence from the manager of the Certification Procedures Branch, AIR-6C0.

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