



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

# Memorandum

Subject: INFORMATION: Policy Statement on the Certification  
of In-seat Video Systems (IVS)

Date: Proposed

From: Manager, Transport Airplane Directorate,  
Aircraft Certification Service, ANM-100

Reply to  
Attn. of: ANM-113-04-032

To: See Distribution

Regulatory §§ 25.601, 25.785(k),  
Reference: 25.789, and 25.813

## Summary

The purpose of this memorandum is to provide Federal Aviation Administration (FAA) certification policy on In-seat Video Systems (IVS). This policy will provide a means to reduce the regulatory burden for IVS certification by recognizing the non-hazardous and reliable nature of the existing systems. This includes IVS that are mounted on seats or are on other related components delivered to the seat installer by the seat supplier as part of the seat 'system' but which are not manufactured or designed by the Technical Standard Order (TSO) holder.

Based on the data industry presented to the FAA, IVS designs have matured to the point that dedicated testing would not be required per 14 CFR § 25.601. Industry may use design review as a method of compliance to show that the system is non-hazardous. This policy also recommends analysis as an added method of compliance, in lieu of test, and should clarify questions that have arisen regarding previously released policy on this subject.

## Current Regulatory and Advisory Material

The applicable regulations are 14 CFR §§ 25.601, 25.785(k), 25.789 and 25.813. Current policy statements 01-115-32, 01-115-38, and 02-115-21 address the abuse load, stowage, retention, and breakaway criteria used to substantiate these systems.

Approval standards for seats are covered in TSO's C-39 and C-127. However, it should be noted that although a seat manufacturer who holds a TSO-C39 or TSO-C127 approval may integrate the IVS into the seat (as a supplier to the seat installer), approval of the IVS is not covered by the seat TSO and must not be included in the TSO data package or be referenced in the approval letter.

## **Policy**

This policy documents means for Abuse Load and for Retention, Stowage and Breakaway. It also describes past practices accepted by the FAA for IVS. To reduce the impact to industry and streamline the approval process, the FAA suggests that this policy is used to demonstrate (applicant) and find (FAA or designee) compliance. The applicant is the seat installer. This document refers to previously issued policy as needed and therefore, may be used as a single source reference for IVS certification.

### Abuse Load

Based on satisfactory service history for IVS, the FAA has determined that the suitability of the design details should no longer be “questionable” in the context of § 25.601 and therefore does not need to be assessed by abuse load tests. Consequently, for designs that have been previously certified or do not have any features which are shown to be hazardous, no further assessment as to the abuse load capability is needed.

To determine if an IVS has been certified, a design review of the type design data or a similarity report provided by the applicant demonstrating that any changes would have no effect on or are covered by a previous test or analysis should be sufficient for demonstrating that an IVS has been previously certified. Although these methods are not new and may currently be in use, they were not provided as generally applicable to all parties in previous policy. The determination that a design is not hazardous should be based on a design review provided by the applicant showing that no action has been mandated or recommended as a result of an in-service incident and that no failure of a design feature from previous testing resulted in a hazardous condition.

If the IVS has features that are hazardous or the design is not similar to previously approved designs, testing in accordance with Aerospace Recommended Practice (ARP) 5475, is an acceptable means of compliance. This approach is covered in previous policy memoranda as discussed in relevant past practice.

### Retention, Stowage, and Breakaway

When an IVS is placarded to be stowed for taxi, takeoff, and landing, an operational verification should be made by the applicant that the unit performs its intended function and can be stored without undue force. The emergency egress requirements (§ 25.813) are met by complying with the retention requirements of § 25.789 (see below). Additionally, compliance with § 25.785(k) could be demonstrated by utilization of systems that are padded or have been shown to be non-hazardous, and which are evaluated to have no sharp edges or other features that would otherwise be injurious to each seated occupant.

Current policy memo 02-115-21 provides one means of compliance with §§ 25.789, 25.785(k), and 25.813. Although the criteria therein are valid, an analysis,

e.g., design review, performed by the applicant would also be an acceptable method of compliance to demonstrate that IVS will be retained or break away as required.

The showing of compliance for the above conditions is principally the responsibility of the applicant, but a seat supplier holding a TSO Authorization may perform the review or assessment. This is based on the experience with these systems, the type of review required, and existing delegation. Unless the local authority (i.e., FCAA or local ACO) finds that this review is outside the capability of a particular seat manufacturer, then a letter from the supplier or local authority as is done with other findings outside of the TSO, verifying the above should be accepted as noted in previous policy memos. The delegation of items outside the TSO is typically addressed by a Partnership for Safety Plan.

### Relevant Past Practice

As noted in policy memo 01-115-32, when IVS were first installed on seats, the FAA expected the applicant to show that these systems did not introduce injurious features, reduce occupant safety, or reduce the occupant's ability to egress during an emergency. At that time there were a variety of designs and the potential for injury needed to be addressed.

When these systems were new, the nature and behavior under an abuse load in flight was unknown. Tests were conducted in accordance with § 25.601, which requires questionable design details to be substantiated by test. Industry developed the abuse load criteria which standardized the designs of these systems and then developed Airspace Recommended Practice (ARP) 5475, Abuse Load Testing for In-Seat Deployable Video Systems, to document best practices for meeting the IVS requirements. With the issuance of policy memorandum 01-115-32, the FAA recognized the industry standard for IVS testing, ARP 5475. The memorandum found a valid method of compliance when such a statement from the seat supplier to the installer stated that the criteria of ARP 5475 had been met. Memorandum 01-115-38 was issued to specify that a statement from the seat supplier alone would be sufficient and no further review would be required by the FAA or its designee.

This policy was reasonable because seat suppliers held Technical Standard Order Authorization, regularly performed similar tests, and utilized other industry standards. It was not the intent to allow suppliers without FAA delegation to perform these tests. Similar testing outside of the ARP was included in policy memorandum 02-115-21 and was also considered to be within the capabilities of the seat supplier. This approach relieved the seat supplier from preparing test plans/reports for submittal to the installer for review by the FAA or its designee providing oversight for the applicant .

These tests were not considered to be certification tests but tests conducted by the seat supplier as a way to assess the design capability of the IVS components installed on the seats. However, the method for including this assessment was not addressed, nor should it be addressed, by policy. It is the applicant's responsibility to establish agreements or

ensure by other means that the capability of their supplier to perform such work which is outside of the scope of the TSO.

### **Effect of Policy**

The general policy stated in this document does not constitute a new regulation or create what the courts refer to as a "binding norm". This policy should be followed if it applies to the specific project and be agreed to up front in the certification process by the office and the applicant. Whenever an applicant's proposed method of compliance is outside the established policy, it must be coordinated with the policy issuing office, e.g., through the issue paper process or equivalent. Similarly, if the implementing office becomes aware of reasons that an applicant's proposal that meets this policy should not be approved, the office must coordinate its response with the policy issuing office.

Applicants should expect that the certificating officials will consider this information when making findings of compliance relevant to new certificate actions. Also, as with all advisory material, this policy statement identifies one means, but not the only means, of compliance.

### **Conclusion**

The FAA has concluded that it is unnecessary to continue to require abuse load testing on systems for which extensive data demonstrate the non-hazardous nature of IVS. If other data were to be presented which demonstrated otherwise, the intent and content of this policy would be reconsidered.

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