

Air Carrier Training Aviation Rulemaking Committee (ACT ARC)

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**Recommendation 17-4:  
Guidance for 142.53(b)(1) Deviation Requests**

**I. Submission**

The recommendations below were submitted by the Air Carrier & Contract Training Workgroup (AC&CT WG)<sup>1</sup> for consideration by the Air Carrier Training Aviation Rulemaking Committee (ACT ARC) Steering Committee at F2F-12. The ACT ARC Steering Committee adopted the recommendations with unanimous consent, and they are submitted to the Associate Administrator for Aviation Safety (AVS-1) as ACT ARC Recommendation 17-4.

**II. Statement of the Issue**

Pursuant to Title 14 of the Code of Regulations (14 CFR) 142.53(b), a 142 certificate holder must ensure that each instructor who instructs in a flight simulator that the Administrator has approved for all training and all testing for the airline transport pilot (ATP) certification test, aircraft type rating test, or both, has met at least one of three flight experience requirements as summarized below:

1. "Each instructor must have performed 2 hours in flight, including 3 take-offs and 3 landings as the sole manipulator of the controls..."
2. "Each instructor must have participated in an approved line-observation program under part 121 or part 135".
3. "Each instructor must have participated in an approved in-flight observation training course".

Industry and agency subject matter experts concur that simulators (certified under 14 CFR Part 60) effectively replicate the inflight experience with significantly less risk than in-airplane operations, especially in technologically advanced turbojet aircraft. Yet, 142.53(b)(3) has not been amended and still requires actual in-flight experience. The practical difficulties associated with the conduct of flight experience in an aircraft make compliance with the reference virtually impossible for simulator based training centers.

This difficulty is particularly highlighted in the case of highly qualified simulator instructors who do not hold FAA Medical Certificates. These individuals are left with only options 2 or 3 (above) to meet this requirement. Option 2 requires the cooperation of an air carrier partner (which may not always be available), and Option 3 requires actual in-flight observation (which in turn relies on aircraft jump seat availability). Both options 2 and 3 are outside the direct control of the simulator based training center and require cooperation of an air carrier, which in many cases cannot accommodate such requests due to practical liability and scheduling concerns. Even a simulator instructor who holds a valid FAA Medical Certificate may encounter insurance limitations and individual company training/operating requirements that limit flight opportunities, especially with air carriers.

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<sup>1</sup> The AC&CT WG is comprised of ACT ARC Steering Committee Members including 135 operators, 142 training centers, and membership organizations/industry associations. Proposed Recommendation AC&CT-16 was originally developed by the 142 Action Team, comprised of representatives from 142 training centers.

Virtually every Part 142 training center requires a deviation to 142.53(b)(1) in order to qualify their simulator instructors. In practice, a deviation to 142.53(b)(1) is now the 142 industry norm for instructor qualification. These deviation requests and approvals tax FAA and Industry resources, and enhancements to this process will serve to focus FAA and industry resources on safety concerns, rather than administrative issues.

### **III. Recommendations**

The ACT ARC proposes the following recommendations on guidance related to 142 instructor/evaluator training requirements for FAA consideration:

The ACT ARC recommends the FAA publish/revise guidance that allows deviation approvals to mirror the validity period of the training center's 142 certificate until such time as 14 CFR 142.53(b)(2)&(3) can be amended through the rulemaking process.

The ACT ARC further recommends that ARC Recommendation 15-5 be supplemented to add amendment of 14 CFR 142.53(b)(2) to include Part 142, remove 142.53(b)(3), and consolidate guidance for Line-Experience Module (LEM)/Line-Operational Simulation (LOS) requirements within an approved Line Observation Program.

### **IV. Rationale**

The ARC has previously considered and adopted recommendations from the AC&CT WG related to aligning differences between regulatory terminology used in 14 CFR Part 135 and Part 142 to address administrative inefficiencies associated with the qualification of instructors and examiners by a 142 training center. These recommendations further build on these concepts. In support of the recommendations above the 142 Action Team specifically recommends the following revisions/enhancements to current inspector handbook guidance:

1. Ensure that 142.53(b)(1) Deviation Request Checklist and Job Aid is aligned with Order 8900.1, Volume 3, Chapter 54, Section 4, Paragraph 3-4391.
2. Establish a user friendly tracking process available to both industry and the FAA to easily follow progress of deviation requests.
3. Align LOS requirements with the operational capabilities of the specific aircraft. (As an example, mission requirements of a 747 differ significantly from those of a helicopter or single-pilot airplane so a one size fits all set of LOS requirements does not meet safety objectives.)
4. Clarify guidance for LOS Script approval, including but not limited to, flexibility for variations in crew decision making, to accommodate minor modifications as needed for realism, and to allow a rolling review/approval schedule.
5. Remove the requirement for an additional 1 hour of line-oriented flight training in a simulator when the 142.53(b)(2) line observation program is originally conducted with the instructor as sole manipulator of the controls of a flight simulator

Every member of the 142 Action Team has experienced long lead times for deviation approvals, both initial and renewals. In many cases an initial request for a deviation takes up to 2 years, and up to 1 year for renewals. The current process results in administrative inefficiencies for both the 142 training center and the FAA. Current guidance states in part that the FAA's goal is to review an initial request within 90 days of receipt and 30 days for renewal, but response time is not addressed and the reality of current workloads makes it difficult for both 142 training centers and FAA inspectors to work through the process.

While developing these recommendations, the 142 Action Team shares best practices used by some FAA offices to facilitate a transparent approval process. At some FAA facilities, a SharePoint site is set up to track TCE observation requests and to clearly see at what stage each request currently resides. A similar system for deviation requests would enable the affected certificate holder to check on the deviation request status and prevent unnecessary requests for update as the deadline approaches.

There is precedent in current FAA guidance and practice, whereby extensions or other types of concession are incorporated into the context of approvals.

- Under Part 142, the training center program manager (TCPM) can provide "initial" and/or "final" approval for courseware.
- Flight instructors are initially assigned a base month for the purpose of maintaining currency and yet, the guidelines allow for variations on exceeding the base month and/or completing their flight currency training prior to the base month.

For 142 training centers that rely on simulator-based training, the only recourse for extended deviation review times and lack of communication with the oversight office is to conduct these simulator instructor training requirements in an actual aircraft. Without access to a deviation, 142 training centers can be placed in a situation whereby the lack of qualified instructor resources impacts its ability to conduct simulator training effectively.

Challenges associated with the initial deviation request include:

- lack of a standardized application form or guidance on the application package;
- lack of a transparent process (e.g., SharePoint site) for tracking the status of the application; and
- current timeframe from application to approval (often as long as 24 months).

Additional issues identified by the workgroup include:

- The 142.53(b)(1) Deviation Request Checklist and Job Aid used by TCPMs as the single, prescriptive tool to manage both new applications and renewals and LOS scenario approvals.
  - The Job Aid does not address renewals per se, and this results in a renewal request being handled as if it were an ab initio application for a deviation. There is a streamlined process outlined in Order 8900.1, Volume 3, Chapter 54, Section 4, Paragraph 3-4391F, and clarification in the guidance that this process should be used to facilitate renewal requests would make the process much more efficient.
  - LOS scenarios are included within the Job Aid when they are really just courseware options and should be evaluated separately from the deviation request.

- Current FAA guidance for development and maintenance of LOS scenarios does not support realism for all aircraft and simulators. For instance, large transport aircraft spend considerable time in ground operations and taxi, and typically fly long sectors; therefore, the two-landings as pilot in command (PIC) requirement creates an abnormal operational profile. Likewise, the 4-hour total flight profile is unrealistic for helicopter or single-pilot airplane operations.
- LOS scripts supporting the granted deviation are often treated as part of the deviation application. If such LOS scripts are independently approved by the TCPM, the scenarios remain fresher and focused on more timely operational issues.

Until the applicable rules can be amended, clarification in the current inspector handbook guidance would support a streamlined approval/renewal process for deviation requests and allow 142 training centers and FAA personnel more effectively address this administrative process.

## V. Background Information

### AC&CT WG Scope of Work:

These recommendations partially address the following component of the AC&CT WG Scope of Work:

Consider current guidance documents for 142 training centers to assess the requirements for curriculum/program and instructor/training center evaluator (TCE) approval

### ACT ARC Initiatives:

These recommendations partially address the following Steering Committee Initiative assigned to the AC&CT WG:

- Initiative #41: Review 14 CFR 142, Subpart C and current guidance documents to assess the requirements for instructors and training center evaluators (TCE) and suggest improvements/changes to current guidance, if required.