

Docket No. SA-509

Exhibit No. 2N

NATIONAL TRANSPORTATION SAFETY BOARD

WASHINGTON, D.C.

**FAA ORDER 8400.10
FAA AIR TRANSPORTATION INSPECTORS HANDBOOK**

Volume 3, Paragraph 545B

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541. DELETED. The material was moved to paragraph 285 C of this chapter.

543. CREDIT FOR CERTIFICATION FLIGHT CHECKS.

A. When a flight check is conducted for an ATP certificate or for an additional type rating to an ATP certificate, the certification flight check may simultaneously be credited for a Part 121 proficiency check, a Part 135 competency check, or a Part 135 instrument-proficiency check, as applicable.

B. The certification flight test for a flight engineer certificate or class rating simultaneously satisfies the Part 121 proficiency check requirement.

545. CONDUCT OF PROFICIENCY AND COMPETENCY CHECKS. Specific direction and guidance for the conduct of certification flight tests is in volume 5, chapters 1, 2, and 3. The same standards and direction and guidance are applicable to both inspectors and check airmen when conducting proficiency checks, VFR competency checks, and IFR competency checks. POI's must evaluate the operator's check airman program to ensure that check airmen are applying the same standards and are adhering to the direction and guidance for proficiency and competency checks that is applicable to certification flight checks.

A. *Waiving of Events.* Inspectors and check airmen may waive those events indicated by an asterisk in figures 3.2.7.1. through 3.2.7.4. This provision applies to all checks conducted under Part 121 and those Part 135 checks which do not involve certification. The waiver provisions of Part 61, Appendix A apply only to airmen employed by Part 121 operators (see FAR 61.157(c)).

(1) The use of waiver authority is not automatic. Check airmen are cautioned to exercise judgment in the use of this authority. When an applicant demonstrates a high level of performance, check airmen should make liberal use of the waiver authority. When an applicant's performance only approaches the minimum acceptable standards, however, none of the events of the flight test should be waived.

(2) Inspectors and check airmen are cautioned that some waiver provisions apply to portions of an event rather than to a whole event (for example, the stall series). Other events have specific conditions which must be fully

met before waiver authority may be exercised (for example, the second nonprecision approach). See the discussion of the conditions and limitations of waiver authority and the guidance on acceptable means and standards for conducting specific checking events in volume 5, paragraphs 81 through 104.

(3) Part 121, Appendix F contains certain restrictions on waiving events. For example, when a circling approach is required but cannot be accomplished due to traffic or other reasons, it may be waived. Circling approaches, however, may not be waived for two successive checks. POI's shall ensure that these same provisions are observed for Part 135 operators under the Administrator's authority to determine the content of Part 135 checks.

B. *Training to Proficiency.* When a check airman determines that an event is unsatisfactory, the check airman may conduct training and repeat the testing of that event. This provision has been made in the interest of fairness and to avoid undue hardship and expense for airmen and operators. Training may not be conducted, however, without recording the failure of these events. The quality control of a training program is accomplished, among other means, by identifying those events on checks which crewmembers fail. POI's shall ensure the following guidance is supplied to operators and check airmen concerning the practice of training to proficiency:

(1) Training and checking cannot be conducted simultaneously. When training is required, the check must be temporarily suspended, training conducted, and then the check resumed.

(2) When training to proficiency is required, the check airman must record the events which were initially failed and in which training was given.

(3) When training to proficiency is conducted and the check is subsequently completed within the original session, the overall grade for the check may be recorded as satisfactory. When the training required to reach proficiency cannot be completed in the original checking session, the check must be recorded as unsatisfactory and the crewmember entered into requalification training.

(4) When training to proficiency is required and it is practical to do so, the remaining events of the flight test phase should be completed before training in the failed

event is conducted. If it is more practical, the failed event may be repeated at the end of a logical sequence. For example, training on a stall might be conducted at altitude after all other air work has been completed, but before returning to the traffic pattern.

(5) If, after having received training, the airman fails an event again, the failure shall be recorded and the crewmember entered into requalification training.

NOTE: If for mechanical or other reasons the check cannot be completed after the failure of an event and before training and retesting can be accomplished, the check is considered terminated; however, the crewmember may not serve in revenue operations until the check is successfully completed.

547. USE OF FLIGHT TRAINING DEVICES AND SIMULATORS FOR PROFICIENCY AND COMPETENCY CHECKS. The guidance of this paragraph applies to the use of flight training devices and simulators in conducting either Part 121 proficiency checks or Part 135 competency and instrument-proficiency checks. The level of flight training device or flight simulator that can be used for any particular flight test event in these checks depends on the crewmember's duty position and on the category of training. The maneuvers and procedures tables along with the introductory information in paragraphs 499 through 511 of this chapter specify the minimum level of flight training device or simulator that can be used for a particular training event. This minimum level is also the level that can be used to test the event during a proficiency or competency check. Before beginning a proficiency or competency check, inspectors and check airmen must determine which flight test events can be conducted in the flight training device or simulator to be used.

549. THE "OPERATING EXPERIENCE" (OE) QUALIFICATION MODULE. PIC's and SIC's in Part 121 operations who have been trained under an initial new-hire, initial equipment, transition, or upgrade category of training, must acquire OE. Part 135 specifies that before a pilot may be assigned as a PIC in a commuter passenger-carrying operation, that pilot must acquire OE in each make and basic model of aircraft in which the pilot is to serve as a PIC. The qualification curriculum segment outline that is applicable to these flight crewmember positions must list the appropriate requirements for each

duty position. Both Parts 121 and 135 specify the minimum flight hour requirements for these duty positions. An operator may elect to specify a greater flight hour requirement than the regulatory minimum. Inspectors shall not approve any qualification curriculum segment that lists a flight hour requirement that is less than that specified by the appropriate regulation. When a pilot is actually acquiring OE, however, both FAR 121.434(f) and FAR 135.244(b)(4) provide for a reduction in the minimum flight hours. These regulations specify that the minimum hours may be reduced to 50% of the total required flight hours by the substitution of 1 takeoff and landing for 1 hour of flight.

A. Part 121 Minimum OE Flight Hours.

(1) The minimum OE flight hours for pilots who have been trained under an initial new-hire or an initial equipment curriculum or a PIC transition curriculum which includes training in a flight simulator under FAR 121.409, are as follows:

- Group I reciprocating - 15 hours
- Group I turbopropeller - 20 hours
- Group II turbojet - 25 hours

(2) FAR 121.434(c)(3)(ii) specifies the minimum flight hours for pilots who have been trained under a transition curriculum which does not include an approved course of training in a flight simulator, are as follows:

- Group I reciprocating - 10 hours
- Group I turbopropeller - 12 hours
- Group II turbojet - 15 hours

(3) Although Part 121 requires OE for pilots who have been trained under an upgrade curriculum, the minimum flight hours are not specified. The following minimum flight hours are recommended, however, for an SIC upgrading to PIC, and for a FE upgrading to SIC, regardless of whether or not the upgrade curriculum includes training in a flight simulator:

- Group I reciprocating -
SIC to PIC - 8 hours

SECTION 8. PROFICIENCY AND COMPETENCY CHECK INSPECTIONS (PTRS CODE 1632)

253. GENERAL. Part 121 and certain Part 135 operators are required to establish a check airman program for conducting the proficiency and competency checks required by the Federal Aviation Regulations (FAR's). Principal operations inspectors (POI's) have the surveillance responsibility for an operator's check airman program. This function can be accomplished directly for small operators and indirectly through coordination with APM's and/or geographic units for large, complex operators. POI's or their representatives are authorized to observe these checks at any time as a check airman surveillance job function and if aircraft qualified to administer proficiency and competency checks. This section contains information, direction, and guidance to be used by POI's and inspectors when observing or conducting a proficiency or competency check inspection.

255. OBJECTIVES OF PROFICIENCY AND COMPETENCY CHECK INSPECTIONS. The surveillance of an operator's proficiency and competency checks provides the FAA with information about the effectiveness of the operator's training and qualification programs. The objectives of a POI or an inspector conducting a proficiency or competency check inspection are as follows:

- To evaluate individual airmen performing their duties and responsibilities
- To evaluate individual check airmen performing their duties and responsibilities
- To assess the effectiveness of the operator's training program
- To identify operational procedures, manuals, or checklists which are deficient
- To assess the effectiveness of the operator's simulators and equipment
- To evaluate the effectiveness of the operator's trend analysis, standardization, and quality control program

257. PROFICIENCY AND COMPETENCY CHECK INSPECTION PROCEDURES AND GUIDANCE. Before conducting a proficiency and competency check inspection, inspectors must become thoroughly familiar with the operator's manuals. Inspectors may also be required to qualify in the operation of the aircraft, simulators, or training devices. While conducting proficiency and competency checks, inspectors and check airmen should also use the direction and guidance in chapters 1 through 3 of volume 5 of this handbook that pertain to the conduct of certification checks. Inspectors should use the following guidance when conducting proficiency and competency check inspections:

A. Areas of Familiarization. Inspectors must be familiar with the following areas before conducting proficiency and competency check inspections:

- Inspector, safety pilot, and crew qualification for simulators, flight training devices, and aircraft
- Acceptable methods for presenting the maneuvers and events of the check in simulators, flight training devices, and aircraft
- Acceptable standards of performance for proficiency and competency checks

B. Inspection Areas. Inspectors should use the following guidance pertaining to specific inspection areas during a proficiency or competency inspection:

(1) *Airman Competency.* This inspection area applies to the knowledge, ability, and proficiency of the airman receiving the check. An airman must perform specific events in an aircraft, an aircraft simulator, a flight training device, or a combination thereof, during a proficiency or competency check. Through observation of the check ride, the inspector can determine if the airman has an acceptable level of aircraft systems knowledge and is competent in the performance of normal, abnormal, and emergency flight procedures. In addition, the inspector can observe whether the airman complies with company policy, possesses current

manuals, and possesses appropriate certificates and ratings.

(2) *Check Airman Competency.* The POI or a qualified representative must periodically observe company check airmen conducting proficiency or competency checks. These observations enable the POI to evaluate both the individual check airman performing check airman duties and the company's entire check airman program. This inspection area applies to the manner in which a check airman conducts the check, the accuracy and completeness of the check airman's observations, and the validity of the outcome. Inspectors should evaluate the following areas when determining a check airman's competency:

(a) *Responsibilities.* The check airman is responsible for: ensuring that all required flight test events are completed in a realistic flight scenario; providing adequate preflight and postflight briefings for the airman being checked; and objectively evaluating the airman's performance. An evaluation of the check airman's ability to actually perform the flight events of the proficiency or competency check is not normally part of a check airman inspection. POI's and APM's must place emphasis on the competence of each check airman as an evaluator.

(b) *Qualification.* A check airman must maintain basic qualification in the duty position in accordance with Part 121 or Part 135, as applicable. Should a question concerning the check airman's basic qualifications arise, a separate inspection under Section 609 of the Federal Aviation Act must be conducted to evaluate the airman's basic skills.

NOTE: Whenever a question concerning a check airman's competency arises, the matter must be brought to the attention of the POI or APM. The most direct means (telephone) should be used to apprise the POI or APM of the problem. Once the supervising FAA inspector has been notified, the observing inspector shall use the PTRS system to document the problem. If required, a check airman inspection shall be scheduled as soon as possible.

(c) *Tracking.* Through the PTRS system, POI's and APM's must track and manage check airman inspec-

tions. Before designation, each check airman must be observed performing those duties which will be authorized after designation. After approval, and when resources permit, each check airman shall be observed annually. When resources do not permit annual observations, observations shall be conducted as frequently as possible. Priority should be placed on observing those check airmen who have not been observed for the longest period of time. POI's and APM's should work closely with the geographic units at the district offices to ensure the VIS contains current information. It is the POI's and/or APM's responsibility to ensure that the check airman's VIS file is current.

(d) *Evaluation of the Operator's Training Program.* The analysis of proficiency or competency check inspection results is an excellent means for a POI to ensure the continued effectiveness of an operator's training program. The PTRS system provides a standardized way for POI's to collect and retrieve inspection results. When deficient areas are identified through the PTRS system, the areas should be rectified by changes in the operator's training program. For example, if inspection comments repeatedly indicate deficiencies in the area of nonprecision approaches, the POI should require the operator to emphasize that event in the operator's flight training curriculum segments.

(e) *Manuals, Procedures, and Checklists.* Inspectors can use the data from proficiency or competency checks, combined with data from other inspections (such as cockpit, en route, and ramp inspections), to identify deficiencies in manuals, procedures, or checklists previously approved or accepted by the FAA. Checklist procedures, MEL/CDL procedures, and specific flight maneuvers and procedures are operational areas that may require change to ensure compliance with the FAR's or safe operating practices.

(f) *Equipment.* This inspection area refers to the condition of the aircraft, simulators, or training devices used during the check. When evaluating the equipment, inspectors should determine the following:

- Whether the required inspections have been conducted
- Whether the observed discrepancies were recorded on maintenance logs

- Whether the equipment is in an adequate state of repair
- Whether the equipment operates properly

NOTE: Equipment malfunctions that have an affect on the outcome of the check should be recorded in the comment section on the same PTRS. The inspection of simulators and/or training devices, however, is a separate surveillance activity (activity code 1630) from a check airman observation. If a comment on the equipment is required as the result of a check airman surveillance, inspectors should not generate another PTRS entry.

(g) *Effectiveness of an Operator's Trend Analysis, Standardization, and Quality Control Program.* Operators should collect, record, and analyze the results from proficiency and competency checks to detect and correct deficiencies in training programs, procedures, and check-lists. POI's shall encourage operators with more than 10 crewmembers in any duty position to establish trend analysis. POI's shall evaluate the effectiveness of these programs. Inspectors conducting a series of proficiency and competency checks will, over time, observe changes being made by the operator. Through the PTRS system, the POI has a direct measure of the effectiveness of these changes and the operator's quality control program.

259. INSPECTOR RESPONSIBILITIES DURING CHECK AIRMAN OBSERVATIONS. When a proficiency check or competency check is conducted by a company check airman and observed by an inspector, the inspector should evaluate both the airman being checked and the competency of the check airman administering the check. The check airman is responsible for completing all required checking events, for providing suitable briefings before and after the session, and for fairly and objectively evaluating the airman being checked. After the check is completed, the inspector is responsible for debriefing the check airman and the airman being checked (should the check airman's debriefing be inadequate).

A. The inspector's primary responsibility is to observe and evaluate the overall conduct of the check. The inspector must refrain from: asking questions of the

airman being checked, attempting to control the type or sequence of checking events, and from interfering in any way with the manner in which the check airman conducts the check.

B. It is the check airman's responsibility to conduct a complete and proper check. The inspector's responsibility is to evaluate the performance of both the airman being checked and the check airman and to properly record the inspection results. Should the check airman's performance be unsatisfactory, the inspector shall inform the POI using the most expeditious means available. Should the check airman fail to complete all required items on a check (which has been satisfactory to that point), the inspector shall bring this fact to the attention of the check airman and ensure that all events are completed.

261. DEFICIENCIES. While certain training benefits are gained during proficiency or competency checks, the purpose of a check is to have the airman's state of proficiency evaluated and to ensure that the last training conducted was sufficient to ensure the airman's proficiency throughout the interim period. If the check airman conducting the check observes minor deficiencies (and believes that minor instruction may correct the situation) the check airman may suspend the check temporarily, conduct remedial training, and then resume the check.

A. *Repeating Events.* FAR 121.441(e) and FAR 135.301(b) authorize check airmen to give additional training to an airman who fails to satisfactorily complete an event on a check. The additional training must be given prior to repeating the event. Problems have occurred in instances where check airmen have merely repeated events until the airman performed those events within tolerances. This practice is not acceptable and is an abuse of training to proficiency. In one case, FAA inspectors discovered that an operator's check airman routinely continued checks for several sessions without a record being made of the airman's unsatisfactory performance. As a result, important data about the effectiveness of the training program and the need for additional training was lost. When a proficiency or competency check is interrupted to conduct training, that check must still be completed within the timeframe the operator originally scheduled for the check. If training is so extensive that the check cannot be completed in the allotted

timeframe, the check airman must consider the check to be unsatisfactory and place the airman in requalification pending.

B. *Unsatisfactory Performance.* Inspectors shall not conduct airman training during proficiency or competency checks. If an event is unsuccessful, the inspector should complete as much of the remaining flight events as possible or terminate the check. The check must be recorded as unsatisfactory.

C. *Recording Remedial Training Time on the PTRS.* Inspectors shall record the time required to complete checks in the activity time field on the PTRS Data Sheet. The amount and type of remedial training conducted while the check was suspended should be recorded in section IV on the PTRS report form.

263. RECORDING PROFICIENCY AND COMPETENCY CHECK SURVEILLANCE ON THE PTRS SYSTEM. The intent of this section is to eliminate any manual tracking of the check airman surveillance by field offices and to provide offices with the capacity for analyzing an operator's check airman program. The inspector must enter the data into the computer and may either retain or discard the PTRS Data Sheet as desired. The following italicized titles correspond to the data fields on the PTRS Data Sheet as applicable to check airmen. This information parallels the information found in the PTRS Procedures Manual. Inspectors should record the check airman surveillance using the guidance that follows:

A. *SECTION I. Activity Elements.*

(1) *"Inspector Name Code."* A valid inspector name code must be entered on each sheet before the data is entered into the computer.

(2) *"Record ID."* The "P" or "R" Record ID number should be entered. If the surveillance was not a programmed activity, an ID number can be obtained when making the data entry.

(3) *"Activity Number."* The "1632" activity code should be entered.

(4) *"FAR."* Either 121 or 135 should be entered, as applicable.

(5) *"NPG."* This element only has to be filled in if it is applicable.

(6) *"Status (COP)."* Inspectors shall enter "C" in this field.

(7) *"Call-up Date."* This element only has to be filled in if appropriate. It is usually left blank.

(8) *"Start Date."* This element only has to be filled in if appropriate. It is usually left blank.

(9) *"Results (ACEFISTX)."* An "S" shall be entered in this field if the test phase has been completed, regardless of whether the applicant has been successful or not. If the test phase has been terminated with a failure, the test phase is complete and an "S" or "I" shall be entered in this field. When a test phase is terminated before completion and the applicant's performance is satisfactory up to the point of termination, a "T" shall be entered in the results field. In this case, the inspector should enter a short explanation in the "Comment Text" field in Section IV such as: "Flight test terminated due to malfunction of simulator visual system."

(10) *"Pass/Fail (P/F)."* Inspectors must always make an entry in this field. The inspector shall enter an "F" in this field when the test phase is unsatisfactory, or a "P" in all other cases, whether or not the phase is complete.

(11) *"Completion Date."* The date of the event must always be entered in this field.

(12) *"Designator."* The airline or operator code must be entered in this field.

(13) *"Airman Cert #."* The check airman's core certificate number (not the applicant's name) without any prefix or suffix should be entered in this field.

(14) *"Airman Name/Other."* The check airman's name should be entered when the observation is of a check airman, otherwise, the entry should be of the airman