SECTION 7. FLIGHTCREW QUALIFICATION CURRICULUM SEGMENTS

523. GENERAL. This section contains direction and guidance concerning qualification curriculum segments and qualification modules. A qualification curriculum segment is the final segment of each of the six categories of training defined in section 1 of this chapter. A qualification curriculum segment is composed of those testing, checking, and experience modules that a flight crewmember must successfully complete after formal training has been completed and before being qualified to serve unsupervised as a required flight crewmember in Part 121 or Part 135 operations.

A. A qualification curriculum segment has the following primary objectives:

- To ensure that each flight crewmember has reached an acceptable level of proficiency in all assigned duties before being released from training and supervision
- To provide a means for measuring the effectiveness of the training program and for identifying and correcting training deficiencies

B. The guidance in this section applies to the development and approval of qualification curriculum segments for both Parts 121 and 135 training curriculums. In general, equivalent qualification modules are required by both of these regulatory parts. Differences do exist, however, between Part 121 and Part 135 curriculum segments in both terminology and details. When the guidance in this section applies specifically to one flightcrew duty position or regulatory part, the duty position or regulatory part will be specified.

525. TYPES OF QUALIFICATION MODULES. Qualification curriculum segments are composed of qualification modules. Qualification modules are generally divided into testing, checking, and experience modules.

A. *Definitions.* The following definitions are used in this section:

- *Qualification Curriculum Segment:* That segment of a specified curriculum that begins when formal training has been completed and ends when the airman is fully qualified to perform unsupervised and without restriction in revenue service
- *Testing:* Any form of examination of knowledge or skill, whether oral, written, or practical
- *Checking:* Specifically, a practical skills test (For flight crewmembers, a check consists of physical manipulation of aircraft controls in real time.)
- *Basic Checking Module:* The proficiency or competency check listed in a qualification segment of a curriculum outline required for qualification in the basic duties of an airman position
- *Additional Checking Module:* A check conducted to qualify an airman for an additional level of responsibility or skill, beyond that of the basic crew position
- *Experience Module:* An operation conducted in revenue service that is either under supervision or under restriction, and is measured in flight hours or in the number of repetitions of an event
- *Line-Oriented Flight Training (LOFT):* Line-oriented flight training (LOFT) is a module of training conducted in a simulator after completion of a basic checking module to satisfy the requirements of Part 121, Appendix H.

B. *Experience Modules.* The FAR's require that experience modules be completed before a crewmember may perform unsupervised and without restriction in revenue service. Other experience modules are required for special authorizations or to re-establish currency. One or more of the following experience modules may be required in a qualification curriculum segment:

- Operating experience (OE)

- Pilot-in-command (PIC) experience (required to use standard turbojet minimums)
- Special operations experience (such as Class II long-range navigation)
- Currency (to re-establish landing or instrument currency)

527. FORMAT OF QUALIFICATION CURRICULUM SEGMENTS. The content of a qualification curriculum segment for Part 121 operations is almost entirely controlled by regulation. A Part 121 operator may, however, use more than one means of accomplishing these requirements. For example, an operator could conduct checks for most categories of training in a C-level simulator. In such a case, the operator would be required to conduct a LOFT training module after the completion of the basic checking module. An operator that uses an A-level simulator would be required to conduct the basic checking module in the simulator and a second module in the airplane. The requirements of a Part 135 competency check are not specified in the FAR's, but are left to the discretion of the Administrator and the check airman conducting the check. To ensure that a clear understanding exists between the operator and the FAA, the POI should require that the operator list each element or event in a qualification module along with the device to be used. The operator's format may either be a simple outline, a table such as those contained in figures 3.2.7.3. and 3.2.7.4., or any other format that the POI finds clearly establishes the methods to be used and elements and events to be checked.

529. PART 121 REQUIRED CERTIFICATES. All flight crewmembers must hold specific certificates and ratings before performing duties in Part 121 revenue service. If a flight crewmember does not hold the required certificates and/or ratings, they must be obtained when the flight crewmember completes the qualification curriculum segment.

A. A PIC in Part 121 operations must hold the following:

- Airline transport pilot (ATP) certificate
- Airplane category rating
- Appropriate class rating
- Applicable type rating
- First class medical certificate

B. A second-in-command (SIC) in Part 121 operations must hold the following:

- Commercial pilot certificate (or ATP certificate)
- Instrument rating (or ATP certificate)
- Airplane category rating
- Appropriate class rating
- At least a second class medical certificate

C. A flight engineer (FE) must hold the following:

- Flight engineer certificate
- Applicable class rating
- At least a second class medical certificate

531. PART 135 REQUIRED CERTIFICATES. All pilots must hold specific certificates and ratings before performing duties in Part 135 revenue service. If a pilot does not hold the required certificates and/or ratings, they must be obtained when the pilot completes the qualification curriculum segment.

A. *Pilot Certification Requirements - Airplanes.* The pilot certification requirements for Part 135 airplane operations depend on the kind and type of operation being conducted and the types of aircraft used.

(1) PIC’s conducting passenger-carrying operations using either a turbojet airplane or any airplane having 10 or more passenger seats (excluding any pilot seat), or PIC's conducting a commuter operation using a multiengine airplane, must hold the following:

- ATP certificate

- Airplane category rating
- Appropriate class rating
- Type rating (for all airplanes over 12,500 pounds and turbojet airplanes)
- First class medical certificate

(2) PIC's conducting Part 135 flight operations in airplanes other than those described in subparagraph 529 A(1), must hold the following:

- Commercial pilot certificate (or ATP certificate)
- Instrument rating (or ATP certificate)
- Airplane category rating
- Appropriate class ratings
- Type rating (for all airplanes over 12,500 pounds and turbojet airplanes)
- At least a second class medical certificate

(3) SIC's conducting any Part 135 airplane operations must hold the following:

- Commercial pilot certificate (or ATP certificate)
- Instrument rating (or ATP certificate)
- Airplane category rating
- Applicable class rating
- At least a second class medical certificate

(4) Pilots conducting Part 135, VFR-only operations in isolated areas with single-engine, reciprocating-powered airplanes may be relieved of the requirement to hold an instrument rating when authorized by paragraph A20 of the operations specifications (OpSpecs). (These operations are subject to the restrictions of FAR 135.243(d).)

B. *Pilot Certification Requirements - Helicopters.* The pilot certification requirements for pilots conducting Part 135 helicopter operations are as follows:

(1) All PIC's and SIC's must hold at least the following:

- Commercial pilot certificate (or ATP certificate)
- Rotorcraft category rating
- Helicopter class rating
- At least a second class medical certificate

(2) All PIC's must hold a type rating, if a type rating is required.

(3) PIC's conducting Part 135 IFR or VFR over-the-top operations in helicopters must hold a helicopter instrument rating or an ATP certificate that is not limited to VFR.

533. PART 135 MINIMUM PIC FLIGHT EXPERIENCE REQUIREMENTS. FAR 135.243(b) and (c) require that a PIC who does not hold an ATP certificate and who conducts operations that do not require an ATP certificate, must have acquired a minimum number of flight hours before serving as a PIC.

A. Before serving as a PIC in a VFR operation, the pilot must have accumulated at least the following flight hour experience:

- 500 total pilot flight hours
- 100 cross-country flight hours
- 25 night, cross-country flight hours

B. Before serving as a PIC in an IFR operation, the pilot must have accumulated at least the following flight hour experience:

- 1,200 total pilot flight hours
- 500 cross-country flight hours

- 100 night flight hours
- 75 actual or simulated instrument flight hours, 50 of which must have been in actual flight

FYI: See volume 5, chapter 2, paragraphs 55 and 59 for guidance concerning the crediting of flight time in airplanes and helicopters to meet these requirements.

535. THE BASIC CHECKING MODULE. The basic checking modules for both Parts 121 and 135 are composed of two parts. One part consists of the written or oral test elements and the other part consists of the flight check events. Although they are distinct and separate parts, when combined they make up a single checking module.

A. *Basic Checking Module Content.* The subject areas that must be addressed in the written or oral test for the Part 121 basic checking module are described in Appendix F of Part 121. The subject areas that must be addressed in the written or oral test for the Part 135 basic checking module are described in FAR 135.293(a) and, for those PIC's conducting IFR operations, in FAR 135.297(c). These regulations require a written or oral test element as a distinct part of the basic checking module. The basic checking modules required for Parts 121 and 135 are further discussed in paragraphs 537 and 539 respectively.

B. *Performance Standards.* In Part 121 and Part 135 operations, a higher standard of proficiency may be required than that required for initial pilot certification. The standard required for basic checks is at least that required for obtaining the certificate which must be held to act as PIC. For example, an SIC holding a commercial certificate with an instrument rating who is making an ILS approach in a DC-10 must perform to the same standard of proficiency as the PIC seated in the left seat who holds an ATP certificate and a DC-10 type rating. POI's should ensure that the following guidance pertaining to proficiency and competency checks in volume 5 of this handbook is brought to the operator's and check airman's attention:

PARAGRAPH NUMBER(S)	SUBPARAGRAPH NUMBER(S)
13	B through D
15, 31, and 33	All
77	A through D
109	C through H
111 - 122, 129 - 144, 147 - 170, 173, 177 - 194, 241, and 249 - 268	All

C. *Use of Simulators.* An operator may take maximum advantage of simulators and training devices in designing qualification curriculum segments. For example, an operator may evaluate a PIC and an SIC simultaneously on many normal, nonnormal, and emergency procedures when a simulator is used. POI's should encourage operators to design qualification modules accordingly.

D. *LOFT Training.* A LOFT training module is considered to be part of the qualification curriculum segment, but is an experience event, not a checking event. A pilot who qualifies for a certificate or rating in a C- or D-level simulator is issued the certificate or rating immediately after satisfactorily completing the basic check. The pilot is not qualified to either exercise the privileges of the certificate or rating, or enter revenue service until the pilot has successfully completed the LOFT training module.

537. PART 121 BASIC CHECKING MODULE. The basic checking module required in Part 121 is referred to as a proficiency check. For pilots, a proficiency check consists of the written or oral test elements and the flight test events specified in Appendix F of Part 121. The elements and events that make up a proficiency check are summarized in figure 3.2.7.1. A proficiency check qualifies pilots for both VFR and IFR Class I navigation and instrument approaches to standard minimums (CAT I, if approved for the operator). Operations such as CAT II or CAT III approaches

require additional checking modules. For a flight engineer, the proficiency check consists of the flight test events summarized in figure 3.2.7.2. Although Part 121 does not specifically require a written or oral test element as part of the flight engineer proficiency check, it is an FAA safety policy that a written or oral test be part of the flight engineer proficiency check. POI's shall ensure the test is included as an element of the basic checking module.

FIGURE 3.2.7.1.
PILOT PROFICIENCY CHECK (PART 121, APPENDIX F)

ORAL OR WRITTEN EQUIPMENT EXAM ..... Both

GROUND OPERATIONS

- Preflight inspection ..... Both
- Taxiing ..... Both 1
- Powerplant checks ..... Both 1

TAKEOFFS

- Normal ..... Both
- Instrument ..... Both
- Crosswind ..... Both
- With powerplant failure ..... Both
- Rejected takeoff Both*1

INSTRUMENT PROCEDURES

- Area departure ..... Both*
- Area arrival ..... Both*
- Holding ..... Both*
- Normal ILS approach ..... Both
- Engine-out ILS ..... Both
- Coupled ILS approach Both1
- Nonprecision approach ..... Both
- Second nonprecision approach ..... Both
- Missed approach from an ILS ..... Both
- Second missed approach ..... PIC
- Circling approach Both*2

IN-FLIGHT MANEUVERS

- Steep turns ..... PIC*
- Specific flight characteristics Both5
- Approaches to stalls ..... Both*
- Powerplant failure ..... Both
- 2-engine inoperative approach ..... Both
  (3- and 4-engine aircraft)
- Normal landing ..... Both
- Landing from an ILS ..... Both
- Crosswind landing ..... Both
- Landing with engine-out ..... Both
- Landing from circling approach Both*2

FIGURE 3.2.7.1. (Cont'd.)
PILOT PROFICIENCY CHECK (PART 121, APPENDIX F)

NORMAL AND NONNORMAL PROCEDURES Both3

- Rejected landing .....Both
- 2-engine inoperative approach ..... PIC
  (3- and 4-engine aircraft)

OTHER EVENTS ..... At Check Airman's Discretion*4

NOTES:

"Both": The term "Both" applies to PIC's and SIC's

* May be waived under certain conditions (see volume 5, paragraph 79.)

1 PIC and SIC may both simultaneously take credit for this event

2 When the operator is authorized to conduct circling approaches according to paragraph 53 of the OpSpecs (This is not required for SIC's if hte operator's manual prohibits SIC's from making this approach.)

3 See guidance contained in volume 5, paragraph 87(D) and 89(G)

4 The check airman is authorized to evaluate any event required for the ATP certificate (see volume 5, paragraph 33)

FIGURE 3.2.7.2.
FLIGHT ENGINEER (FE) PROFICIENCY CHECK (PART 121)

NORMAL PROCEDURES

- Oral or Written Examination
- Exterior preflight
- Interior preflight
- Panel set-up
- Fuel load
- Engine start procedures
- Taxi and before takeoff procedures
- Takeoff and climb
- Pressurization
- Cruise and fuel management
- Descent and approach
- After landing and securing
- Crew coordination
- Situational awareness, traffic scan, etc.
- Performance computations
- Anti-ice, deice

NONNORMAL AND EMERGENCY PROCEDURES

Sample as many nonnormal and emergency procedures as needed to evaluate performance:

- Trouble-shooting
- Knowledge of checklist
- Ability to perform procedures
- Crew coordination
- Minimum equipment list (MEL) and configuration deviation list (CDL)

539. PART 135 BASIC CHECKING MODULE. The flight test required to qualify a pilot for revenue service is termed a basic checking module when listed in a curriculum outline. Operators must design the basic checking module of a Part 135 curriculum to satisfy the requirements of FAR 135.293. In addition, operators must satisfy the requirements of FAR 135.297 for PIC's conducting IFR operations. Those operators whose PIC's are author-ized to use an autopilot in lieu of an SIC in IFR opera-tions must include a demonstration of these skills in the basic checking module. This paragraph contains guidance to be used by POI's for the review and approval of basic checking modules and for the conduct of these checks.

A. *FAR 135.293 Requirements.* All pilots who are qualifying in an aircraft type are required by FAR 135.293 to complete a check in that type of aircraft before entering revenue service and annually thereafter. FAR 135.293(b) allows the Administrator to define airplanes with similar characteristics as a single type for purposes of this rule (see paragraph 285 for aircraft of the equivalent series which are defined as a single type). The rule refers to this check as a competency check. The requirements of FAR 135.293 are aircraft specific; that is, each pilot must satisfactorily complete a competency check in each type of aircraft (as defined in paragraph 285) prior to operating that aircraft in revenue service. FAR 135.293 does not specify the maneuvers (events) which must be accomplished on a competency check. The rule authorizes the Administrator or check airman to make this determination. To ensure standardization and an adequate level of safety, the minimum acceptable content of competency checks for a Part 135 curriculum is established by this paragraph and is listed in figures 3.2.7.3. and 3.2.7.4. Since operators may be authorized to conduct VFR-only operations or a combination of VFR and IFR operations, separate requirements have been established for VFR-only competency checks and for combined VFR and IFR operations competency checks. These requirements are indicated in columns marked "VFR COMP" and "IFR COMP" on each figure. As a matter of national safety policy, however, some demonstration of competency of the pilot's ability to maneuver the aircraft solely by reference to instruments will be included on each competency check. For VFR competency checks, this demonstration will be appropriate to the aircraft's installed equipment and the operating environment (see note 7 to figure 3.2.7.3. and note 4 to figure 3.2.7.4.).

B. *FAR 135.297 Requirements.* FAR 135.297 requires that PIC's complete an instrument-proficiency check prior to conducting IFR revenue operations. Thereafter, the PIC must have completed an instrument-proficiency check within the preceding 6 months to continue IFR revenue operations. The requirements of FAR 135.297 are not aircraft specific; that is, a single check fulfilling the requirements of FAR 135.297 is sufficient to qualify a PIC to conduct IFR operations in all types of aircraft in which the PIC is qualified according to FAR 135.293. FAR 135.293(c) specifies that the check conducted to satisfy FAR 135.297 simultaneously satisfies the requirements of FAR 135.293 for the type of aircraft in which the check is accomplished.

NOTE: The oral or written test requirements of 135.293(a) must be completed.

(1) *Operations Requiring ATP Certificates.* FAR 135.297(c)(1) requires that for operations requiring an ATP certificate, the instrument-proficiency check must consist of the maneuvers required for original issuance of that certificate and any applicable type rating.

(2) *Operations Requiring Commercial Certificates.* FAR 135.297(c)(1) also requires that for operations requiring a commercial certificate and an instrument rating, the instrument-proficiency check must consist of the maneuvers required for the original issuance of a commercial certificate, an instrument rating, and any applicable type rating.

C. *Basic Checking Modules for FAR 135.293 VFR Competency Check*. The minimum events for a FAR 135.293 VFR competency check are listed in the columns marked "VFR COMP" in figure 3.2.7.3. for airplanes and in figure 3.2.7.4. for helicopters.

D. *Basic Checking Modules for FAR 135.293 IFR Competency Check*. The minimum events for a FAR 135.293 IFR competency check are listed in the column marked "IFR COMP" in figure 3.2.7.3. for airplanes and in figure 3.2.7.4. for helicopters.

(1) *PIC Requirements*. PIC's being trained in Initial Equipment and Transition Curriculums for IFR operations have normally completed the requirements of FAR 135.297 within the preceding 6 months. If this is the case, the qualification module for these categories of training need only satisfy the requirements of FAR 135.293. The columns

marked "IFR COMP" in Figures 3.2.7.3. and 3.2.7.4. reflect this assumption. When this assumption is not true, the operator must ensure that PIC's meet the requirements of FAR 135.297.

(2) *Multiengine, General Purpose Family.* Paragraph 285 C of this chapter lists airplanes of the multiengine general purpose family that the Administrator has determined to be of the same type for purposes of training and checking. Table 3.2.7.3. has been constructed on the assumption that pilots in the transition category are qualifying in airplanes which are not of the same series. The basic qualification module of a transition training course for airplanes of the same series of the multiengine general purpose family of airplanes consists of the oral or written test required by FAR 135.293(a)(2).

(3) *Single Engine, General Purpose Family.* All single engine general purpose airplanes are considered to be a single type for the purpose of training and checking. The qualification module of the transition category of training is the written or oral test required by FAR 135.293(a)(2).

E. *Requalification Category.* The minimum events of the requalification checking module are dependent upon whether the pilot is requalifying for VFR or IFR operations and the duty position. PIC's who conduct IFR operations and have completed a FAR 135.297 check in the past 6 months but are overdue for a check required by FAR 135.293 may regain qualification by completing the items listed in the columns marked "IFR COMP" in figures 3.2.7.3. for airplanes and 3.2.7.4. for helicopters. PIC's overdue in respect to the requirements of FAR 135.297 must complete the items listed in the columns marked "INST PROF" in figures 3.2.7.3. for airplanes and 3.2.7.4. for helicopters.

F. *Recurrent Category.* The minimum events of the Recurrent checking module are dependent upon whether the pilot is maintaining currency for VFR or IFR operations and the duty position. PIC's who conduct IFR operations and have completed a FAR 135.297 check in the past 6 months must complete a FAR 135.293 competency check to remain current. This would be accomplished by completing those items listed in the columns marked "IFR COMP" in figure 3.2.7.3. for airplanes and 3.2.7.4. for helicopters. PIC's due both a competency check and an instrument-proficiency check must complete the items listed in the columns marked "INST PROF" in figures 3.2.7.3. for airplanes and 3.2.7.4. for helicopters. FAR 135.297 requires PIC's to complete instrument-proficiency checks by rotating aircraft types. When one airplane is a multiengine airplane and the other a single engine airplane, FAR 135.297(f) requires that this rotation begin with the multiengine airplane.

NOTE: FAR 135.301 allows airmen and operators to consider a check conducted in the month before due or the month after due to have been accomplished in the month due.

G. *SIC Qualification in Aircraft Not Requiring an SIC.* The basic qualification module for an SIC in any operation (VFR or IFR) for which no SIC is required by regulation is either an instrument-proficiency or VFR competency check in any aircraft of the same category and class and the written or oral test required by FAR 135.293(a)(2) for the type of aircraft involved.

H. *Listing Module Events*. To ensure that the content of the basic checking module is adequate and appropriate, the operator may choose (or the POI may require) that the minimum required events of each basic checking module be listed on the curriculum outline.

I. *Recording Checks*. The checks for those operators whose flightcrew members get all their checks from FAA inspectors (single pilot, single PIC, and basic operators) may be recorded on FAA FORM 8410-3. POI's should encourage all other operators to create specifically tailored forms to record these checks which reflect the requirements listed in the operator's curriculum outline.

FIGURE 3.2.7.3.
PART 135 CHECKING MODULES
AIRPLANES

EVENTS	VFR COMP.	IFR COMP.	INST. PROF.	NOTES
WRITTEN OR ORAL TEST				
FAR 135.297			P	
FAR 135.293	B	B		
GROUND OPERATIONS				
Preflight Inspection	B	B	P	#
Start Procedures	B	B	P	#
Taxiing	B	B	P	#
Pretakeoff checks	B	B	P	#
TAKEOFF AND DEPARTURES				
Normal	B	B	P	
Crosswind	B	B	P	1
Instrument		P	P	2
With powerplant failure	B	B	P	ME Only
Rejected takeoff	P	P	P	3, ME Only
Short field	P	P	P **	SE Only
Area departure			P *	
IN-FLIGHT MANEUVERS				
Steep turns	P **	P **	P **	
Approaches to stalls	B	B	P	10
Powerplant failure	P	P	P	
2-engine inop. approach	P	P	P	3 & 4 Eng. Aircraft
INSTRUMENT PROCEDURES				
Area arrival			P *	
Holding			P **	
Normal ILS approach		L	P	4, 8
Engine-out ILS		P	P	8, ME Only
Coupled approach		P	P	4, 8
Nonprecision approach		B	P	11
Second nonprecision appraoch			P	11
Missed approach from an ILS			P	
Second missed approach			P	
Circling approach			P	13

FIGURE 3.2.7.3. (Cont'd.)
PART 135 CHECKING MODULES
AIRPLANES

EVENTS	VFR COMP.	IFR COMP.	INST. PROF.	NOTES
LANDINGS AND APPROACHES TO LANDINGS				
Normal	B	B	P	12
Crosswind	B	B	P	5
Landing from an ILS			P	
Landing with engine-out	B	B	P	ME Only
Circling approach			P	13
Rejected landing			P	
2-engine inop. landing	P	P	P	3 & 4 Eng. Aircraft
Short Field landing	P	P	P	SE Only
No Flap approach	P	P	P	6, 14
SEA & SKI OPERATIONS (If applicable)				
Normal TO & Landing	B	B	P	
Step Turns	P **	P **	P **	
Glassy & Rough Water	P **	P **	P **	
Sailing	P **	P **	P **	
Docking	P **	P **	P **	
NONNORMAL AND EMERGENCY PROCEDURES				
System Malfunction	B	B	P	#
Maneuver by Partial Panel	B	B	P	9
Unusual attitude Rec.	B	B	P	
Emergency Landing	B	B	P	SE Only
Instrument Approach	B			7

NOTES TO FIGURE 3.2.7.3.:

P PIC

B Both the PIC and SIC

Both PIC and SIC may be evaluaged performing their assigned duties in these events simultaneously when the check pilot is not seated at the contorls.

***** May be waved at the discretion of the POI and the check airman when the check is not simultaneously conducted for certification (see volume 5, paragraphs 79 through 93).

****** May be waived at the discretion of the POI and the check airman when the check is not conducted in conjunction with initial new-hire or initial equipment training.

1 See volume 5, paragraph 83 E.

2 See volume 5, paragraph 83 B.

3 See volume 5, paragraph 83 D.

4 The applicant must demonstrate the ability to use all installed equipment including autopilots and flight directors. In multiengine airplanes, an engine out ILS may be substituted for the normal ILS at the option of the inspector or check airman administering the check.

5 See volume 5, paragraph 89 B.

6 See volume 5, paragraph 87 E and paragraph 89 H.

7 POI's shall ensure applicants accomplish this event in an aircraft the operator uses in revenue operations (or in an appropirately equipped simulator or training device.) The event should reflect a realistic course of action the pilot might take to escape from an inadvertent encounter with IFR conditions. POI's should approve methods appropriate to the aircraft, equipment, and facilities available. When the pilot is authorized to operate an appropriately equipped aircraft and the check is conducted at a location where an ILS is operational, an ILS approach should be demonstrated. POI's may also approve a letdown on partial panel when this would be an appropriate course of action.

8 See volume 5, paragraph 87 A.

9 Airplanes not having standby instrumentation.

10 See volume 5, paragraph 85 D.

11 See volume 5, paragraph 87. Any two nonprecision approaches authorized by the OpSpecs may be accomplished at the discretion of the inspector or check airman conducting the check.

12 See volume 5, paragraph 89.

13 SIC's need not be evaluated in circling approaches when the operators procedures restrict SIC's from conducting this event in revenue service.

14 Required only for transport, commuter, turboprop, and SFAR aircraft families as described in volume 3, paragraph 285.

FIGURE 3.2.7.4.
PART 135 CHECKING MODULES
HELICOPTERS

EVENTS	VFR COMP.	IFR COMP.	INST. PROF.	NOTES
WRITTEN OR ORAL TEST				
FAR 135.297			P	
FAR 135.293	B	B		
GROUND OPERATIONS				
Preflight Inspection	B	B	P	#
Start Procedures	B	B	P	#
Taxiing and Ground Hover	B	B	P	#
Pretakeoff checks	B	B	P	#
TAKEOFF AND DEPARTURES				
Normal	B	B	P	
Instrument		P	P	1
With powerplant failure	B	B	P	ME Only
Emergency Deceleration	P	P	P	2
Area departure			P **	
IN-FLIGHT MANEUVERS				
Steep turns			P **	
Settling with power	B	B	P	
Unusual Attitude Recovery	B	B	P	
INSTRUMENT PROCEDURES				
Area arrival			P **	
Holding			P **	
Normal ILS approach		B	P	3,5
Engine-out ILS		P	P	5, ME Only
Coupled approach		P	P	3, 5
Nonprecision approach		B	P	7
Second nonprecision approach			P	7
Missed approach from an ILS			P	
Second missed approach			P	
Circling approach			P	9

FIGURE 3.2.7.4. (Cont'd.)
PART 135 CHECKING MODULES
HELICOPTERS

EVENTS	VFR COMP.	IFR COMP.	INST. PROF.	NOTES
LANDINGS AND APPROACHES TO LANDINGS Normal	B	B	P	8
Landing from an ILS			P	
Landing with engine-out	B	B	P	ME Only
Circling approach			P	9
SEA & SKI OPERATIONS (If applicable) Normal TO & Landing	B	B	P	
NONNORMAL AND EMERGENCY PROCEDURES System Malfunction	B	B	P	#
Maneuver by Partial Panel	B	B	P	6
Instrument Approach	B	B	P	
Power failure and Autorotation to a power recovery	B	B	P	SE Only
Hovering Autorotations	B	B	P	4
Tail Rotor Failure	B	B	P	Oral Only
Dynamic Rollover	B	B	P	Oral Only
Low Rotor RPM	B	B	P	Oral Only
Anti-Torque System Failure	B	B	P	Oral Only
Confined Area/Pinnacle Operations	P		P	
Slope Operations	P		P	

NOTES TO FIGURE 3.2.7.4.:

\# Both PIC and SIC may be evaluated performing their assigned duties in these events simultaneously when the check pilot is not seated at the controls.

****** May be waived at the discretion of the POI and the check airman when the check is not conducted in conjunction with initial new-hire or initial equipment training.

1 See volume 5, paragraph 151 B.

2 See volume 5, paragraph 151 D.

3 The applicant must demonstrate the ability to use all installed equipment including autopilots and flight directors. In multiengine helicopters, an engine out ILS may be substituted for the normal ILS at the option of the inspector or check airman administering the check.

4 POI's shall ensure applicants accomplish this event in an aircraft the operator uses in revenue operations (or in an appropriately equipped simulator or training device.) The event should reflect a realistic course of action the pilot might take to escape from an inadvertent encounter with IFR conditions. POI's should approve methods appropriate to the aircraft, equipment, and facilities available. When the pilot is authorized to operate an appropriately equipped aircraft and the check is conducted at a location where an ILS is operational, an ILS approach should be demonstrated. POI's may also approve a letdown on partial panel when this would be an appropriate course of action.

5 See volume 5, paragraph 155 A.

6 Helicopters not having standby instrumentation.

7 See volume 5, paragraph 155 B. Any two nonprecision approaches authorized by the OpSpecs may be accomplished at the discretion of the inspector or check airman conducting the check.

8 See volume 5, paragraph 157.

9 SIC's need not be evaluated in circling approaches when the operators procedures restrict SIC's from conducting this event in revenue service.

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

FE to SIC - 15 hours

- Group I turbopropeller -
  SIC to PIC - 8 hours
  FE to SIC - 15 hours

- Group II turbojet -
  SIC to PIC - 10 hours
  FE to SIC - 25 hours

(4) In accordance with FAR 121.434(d), the minimum OE flight hours for FE's who have been trained under an initial new-hire, initial equipment, or transition curriculum are as follows:

- Group I reciprocating - 8 hours
- Group I turbopropeller - 10 hours
- Group II turbojet - 12 hours

B. *Part 135 Minimum Flight Hours.*

(1) The Part 135 flight hour requirement applies only to pilots who will be assigned to serve as PIC in a commuter passenger-carrying operation. In addition, the minimum OE must be acquired for each make and basic model of aircraft in which the pilot is to serve as PIC. FAR 135.244 specifies that the type of engine powering the aircraft determines the minimum flight hours for commuter PIC's, which are as follows:

- Single-engine airplanes and helicopters - 10 hours
- Multiengine, reciprocating-powered, airplanes and helicopters - 15 hours
- Multiengine, turbine-powered airplanes and helicopters - 20 hours
- Turbojet-powered airplanes - 25 hours

(2) Part 135 does not require that SIC's who are to serve in commuter operations acquire OE. POI's should, however, encourage Part 135 commuter operators to include an OE module in their qualification curriculum segments for SIC's. For example, the SIC qualification module could require the pairing of a newly trained SIC with only a highly experienced PIC for a specified number of hours or until an experienced PIC has certified that the SIC is proficient in assigned duties.

C. *Conduct of OE.* All flight crewmembers must have successfully completed a flight check before starting OE, and are therefore considered to be qualified to serve in revenue operations, under the appropriate supervision. OE must be acquired while conducting revenue operations, except when the aircraft has not been previously used by the operator. In this case, the flight hours acquired while conducting proving flights, ferry flights, or training flights may be credited towards the OE requirement.

(1) A pilot in the process of acquiring OE as a PIC under the provisions of Parts 121 and 135 must occupy the appropriate pilot position and perform PIC duties under the supervision of a check airman. The check airman must also occupy a pilot position. In the case of a PIC trained under a transition curriculum, however, the check airman may occupy a jumpseat after the qualifying PIC has made at least two takeoffs and landings and the check airman is satisfied that the pilot candidate is competent to perform the duties of PIC. During the time that a qualifying PIC is acquiring OE, the supervising check airman should give instruction as needed and help to refine the pilot's proficiency as a PIC. The check airman must determine when the PIC is fully proficient and ready to be administered an initial line check. If the qualifying PIC is not ready for an initial line check after the minimum flight hours have been completed, the supervision must be continued until the PIC is proficient. The check airman should not recommend an initial line check until the check airman is satisfied that the qualifying PIC is proficient. If the check airman recommends the PIC for an initial line check before the minimum flight hours are acquired, the time spent conducting the line check may be credited toward the required flight hours. In all cases, however, the qualifying PIC must acquire the minimum flight hours under the supervision of a check airman before the PIC can be released to operate unsupervised in revenue flights.

(2) A pilot in the process of acquiring OE as an SIC under the provisions of Part 121 must perform the duties of an SIC in a pilot seat under the supervision of a check airman, or must observe the performance of those duties from the jumpseat. The preferred method is for the qualifying SIC to occupy the appropriate pilot position and perform the duties of an SIC. It is important that operators

use the preferred method for an SIC when the SIC has received all flight training and flight testing solely in a simulator or when the aircraft involved has advanced instrument displays and computer-based systems. In either case, the qualifying SIC must acquire the minimum flight hours before being assigned as the required SIC in revenue operations. When an operator schedules an SIC to acquire OE by occupying the jumpseat (not under the supervision of a check airman) the POI should consider special en route surveillance of that SIC after the SIC is assigned as the required SIC in revenue operations. The purpose of this special surveillance is to determine whether the operator's training and flight testing program sufficiently prepares SIC's for line operations.

(3) A flight engineer in the process of acquiring OE must perform the duties of a flight engineer at the flight engineer station under the supervision of a flight engineer check airman or a qualified flight engineer. In either case, the qualifying flight engineer must acquire the minimum flight hours before being assigned as the required flight engineer in revenue operations. When an operator schedules FE's to acquire OE under the supervision of a qualified flight engineer who has not been trained as a check airman, the POI should consider special en route surveillance of those FE's after they are assigned as required FE's in revenue operations. The purpose of this special surveillance is to determine whether the operator's training, flight testing, and OE programs sufficiently prepare the FE's for line operations.

D. *OE Qualification Guides.* POI's should encourage operators to develop an OE qualification guide to be used by supervisors and check airman. The purpose of the qualification guide is to ensure that a crewmember systematically gains experience in all required duties the crewmember will later be required to perform without supervision. Some of the typical experience events that might be incorporated in a qualification guide are as follows:

- Terminal security procedures
- Aircraft security and anti-hijacking procedures
- Weather forecasts and information sources
- Flight planning
- Dispatch procedures
- Cockpit set-up, initialization of computers, entering present position and way-points, confirming navigation set-up
- Weight and balance computation (including last minute changes)
- Air traffic control (ATC) flow control procedures
- MEL and CDL procedures
- Pushback and powerback procedures and limitations
- Procedures for fueling and confirming fuel loads
- Familiarity with major terminal areas
- Terminal and en route communications
- Flight progress and fuel monitoring procedures
- In-flight weather watch
- Diversion procedures

551. THE LINE CHECK QUALIFICATION MODULE. Both Parts 121 and 135 specify that before a pilot can serve as an unsupervised PIC in revenue operations, that pilot must have satisfactorily completed a line check. Except for requalification training, the qualification curriculum segment for PIC's should include a line check module as a require-ment for all other categories of training. Requalification training curriculums that are used to requalify PIC's who have been unqualified for 12 months or more should include a required PIC line check module. Both Parts 121 and 135 specify that all PIC's must satisfactorily complete a line check once every 12 calendar months in at least one of the aircraft types in which the PIC is to serve. Therefore, the qualification curriculum segment for recurrent training should include a line check module for the PIC.

A. *General Direction and Guidance.* Part 121 specifies that the line check is to be given by a check airman who is properly qualified in the particular airplane being used. In

certain unique situations, such as when an operator is qualifying an initial cadre of check airmen, the only practical way of completing the line check requirement may be for an FAA inspector to conduct the line check and to certify to the PIC's performance. Part 135 specifies that the line check may be given by an approved check airman or an FAA inspector. For both Parts 121 and 135, the amount of time flown during a line check may be credited to the OE flight hour requirement. The line check, however, should not be conducted until the OE flight hour requirement has been substantially completed. When a PIC serves in both Part 121 and Part 135 operations, a line check conducted in a Part 121 aircraft satisfies the Part 135 line check requirement. POI's should encourage operators to place emphasis on their line check programs. A well run line check program can provide detection of deficiencies and adverse trends and establish the need for a revision of old procedures or an initiation of new procedures. POI's should encourage operators to design and use line check forms to facilitate the collection of such information.

B. *Part 121 Line Checks.* For Part 121 operations, the line check must be conducted over at least one typical route in which the PIC may be assigned. If the typical route the PIC will be flying includes Class II navigation, the line check must be conducted on a route where Class II navigation is used. The line check may be conducted during either revenue or nonrevenue operations.

C. *Part 135 Line Checks.* For Part 135 operations, the line check must consist of at least one route segment over a civil airway, an approved off-airway route, or a portion of either, including takeoffs and landings at one or more airports that are representative of the operator's type of operation. In certain Part 135 operations, it may not be practical to conduct a line check during revenue operations. In these cases the POI may authorize that the line check be conducted during the same flight period that the competency check is conducted. If the line check is conducted in this manner, the line check portion of this flight period must include the requirements previously discussed in this paragraph.

553. ADDITIONAL CHECKING MODULES. Additional checking modules include flight test events that must be conducted to qualify flight crewmembers for special operations, such as CAT II or CAT III instrument ap-proach procedures. Another example of an additional checking module is the requirement that a PIC be initially qualified over a route or area requiring a special type of navigation such as INS, OMEGA, or LORAN C (see FAR 121.445(d)(2)).

A. Additional checking modules are frequently conducted concurrently with a proficiency check, competency check, or line check.

(1) The regulations and advisory circulars (AC's) require additional checks, but usually do not specify the content of these checks. Since there are often several acceptable means of conducting these checks, the additional checking module outline must specify the content of these checks (see examples in paragraph 525).

(2) When a Part 121 or 135 operator chooses to conduct an additional checking module in conjunction with a basic checking module, the requirements of both modules must be accomplished. A single event may, however, be credited for both modules simultaneously. For example, an operator who conducts basic checking modules and CAT II additional checking modules at the same time, may combine the ILS approach requirements. The basic checking module requires a normal ILS; a manually flown, engine-out ILS; a coupled ILS; a landing from an ILS; and a missed approach from an ILS. The normal ILS and the coupled ILS may be combined in the basic checking module for a minimum of two ILS approaches. In this case, one approach must terminate in a landing and one in a missed approach. For an operator who conducts only coupled CAT II approaches, the CAT II additional checking module requires a minimum of two approaches to CAT II minimums; one approach must be to a landing and one to a missed approach. A POI may approve combining the compatible events of these two modules. In this case, the combined requirement is one engine-out, manually flown ILS to CAT I minimums; one coupled, CAT II ILS to a landing, and one coupled, CAT II ILS approach to a missed approach. POI's who have concerns over what combinations are permissible should consult the regional flight standards division (RFSD). The RFSD should coordinate with AFS-210 when necessary.

B. Operators may choose to conduct additional checking modules separately from a proficiency check, a competency check, or a line check. It may be more practical to accomplish an additional flight test separately because of high-minimum PIC requirements or because of pilot bidding practices for international routes. When an operator

conducts separate checking modules, the operator must limit the use of flight crewmembers to those operations that do not involve the special operations until the flight crewmembers have satisfactorily completed the additional testing.

554. - 566. RESERVED.

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