VOLUME 5 AIRMAN CERTIFICATION

CHAPTER 3 AIRLINE TRANSPORT PILOT (ATP) CERTIFICATION UNDER TITLE 14 CFR PART 121, 135, OR 91 SUBPART K

Section 6 Conduct of Flight Tests in a Helicopter ATP Applicants Engaged in Operations Under Title 14 CFR Part 135 or 91 Subpart K

5-936 TRAINING REQUIRED BEFORE FLIGHT TEST. Before conducting the flight test in a helicopter, the inspector or examiner must review the applicant's training records or a statement from a company official to ensure the required training has been completed. When flight training is conducted immediately before a flight test on the same flight, it is acceptable for the instructor to make oral certification that the required training is complete and that the applicant is ready for the test. In such a case, however, the training records must be completed and the written recommendation made after the flight.

5-937 PLANNING THE FLIGHT TEST. Planning is essential to the efficient and effective conduct of a flight test. When an instructor or check airman acts as the safety pilot (and pilot in command (PIC)), the inspector must coordinate closely with him in the planning. Ideally, inspectors and examiners should plan to conduct the flight test at a location that provides for visual meteorological flight conditions, an uncontested air traffic environment, a non-noise sensitive environment, and an airport with a number of navigational aids and runways that provide flexibility. Since these ideal conditions are usually not available, the flight test may have to be conducted under less than ideal circumstances. Inspectors and examiners are encouraged to coordinate with air traffic control (ATC) at the location selected for the flight test to ensure the test can be conducted in an acceptable manner. If the flight test cannot be conducted under acceptable conditions, the inspector or examiner must reschedule the flight test at a time and location where more satisfactory conditions prevail.

5-938 EVENTS TO BE EVALUATED DURING A HELICOPTER ORAL TEST AND FLIGHT TEST. The ATP/Type Rating Oral Test—Helicopter and the ATP/Type Rating Flight Test—Helicopter job aid checklists have been prepared for inspectors and examiners to use when conducting oral and flight tests. The events that must be evaluated on each test are printed on the job aids (see figures 5-122 and 5-123). Inspectors and examiners are encouraged to use the appropriate job aid to plan the flight test. Events not required for the class of helicopter may be marked off the job aid. For example, autorotations are not required in a multiengine helicopter. These job aids are available on the district office Job Aid Disk.

5-939 PREFLIGHT BRIEFING. The inspector or examiner shall ensure everyone who participates in the flight is adequately briefed.

A. Safety Pilot. The inspector or examiner shall brief the safety pilot, if applicable, on the conduct of the flight. If an operator's instructor or check airman is the safety pilot, he must conduct the flight in accordance with the instructions given him by the inspector. The safety pilot must provide normal crew coordination support but must not be permitted to lead the applicant when the applicant is expected to take the initiative.

B. Applicant. The inspector or examiner shall brief the applicant on the use of the second-in-command (SIC) (safety pilot) and helicopter equipment, including the autopilot. The applicant must perform the functions of the PIC. The applicant must be briefed to immediately relinquish control and assume SIC duties if a hazardous condition arises and the safety pilot takes control of the helicopter.

C. Safety Briefing. The safety pilot shall conduct a briefing on the procedures to be used. The safety pilot briefing must cover, but is not limited to, the following:

- Transfer of aircraft control,
- Procedures for simulating an inoperative engine,
- Simulated abnormal and emergency procedures,
- Response to an actual emergency, and
- Use of vision restriction devices.

5-940 CREW QUALIFICATIONS. The safety pilot must be fully qualified and current. The safety pilot, if other than the inspector, must have completed the operator's approved instructor or check airman training program and be familiar with procedures used for blocking the controls against incorrect applicant responses.

5-941 VISION RESTRICTION DEVICES. For instrument flight maneuvers, a vision restriction device acceptable to the inspector must be provided by the operator or applicant. The device must not limit the vision of the safety pilot or other crewmembers, including the inspector.

5-942 CONDUCT OF THE FLIGHT TEST. The standard procedures specified in the operator's aircraft operating manual must be followed in the performance of all maneuvers. All emergencies and abnormalities conducted shall be simulated. Before a problem is introduced, the safety pilot shall announce to the crew that a simulated problem is being introduced.

A. Procedures for introducing simulated, abnormal, and emergency problems must be in accordance with the operator's aircraft operating manual, training manual, and other appropriate operator directives. Safety pilots may introduce problems by sounding a warning horn, a fire bell, or by illuminating a warning light, provided the warning can be produced with a test switch which does not activate a system. Circuit breakers will not be opened to introduce problems. When the emergency or abnormal checklist procedure specifies that a circuit breaker be opened, the circuit breaker will only be opened if the action cannot be simulated and if the effect of opening the circuit breaker enhances the safety of the operation.

B. The inspector or examiner shall not limit the problems given to the applicant to only the required engine failures. Problems should be realistic. Problems such as a simulated instrument failure which leads to the selection of alternate switching, a simulated hydraulic failure leading to a diversion to a takeoff alternate, or a simulated electrical fault requiring an approach with the stability augmentation system inoperative, may all be practically and safely conducted on a flight test.

C. Should an actual malfunction occur while an emergency is being simulated, the flight test shall be immediately suspended, all systems restored to normal, and the problem resolved before the flight test is reconvened. If a throttle is retarded when an actual malfunction occurs, the safety pilot shall immediately restore engine thrust to normal on all engines.

5-943 SAFETY. Safety is the specific responsibility of the safety pilot. The safety pilot must ensure that a testing event is not allowed to deteriorate to the point where flying safety is compromised. The safety pilot must take early and positive measures to prevent hazardous situations from arising. If the safety pilot takes control of the helicopter due to no fault of the applicant or before it is clear whether the applicant could or could not have recovered successfully, the event shall be repeated. If, however, the safety pilot feels a need to instruct, give directions, or take control of the helicopter due to a lack of proficiency by the applicant, the event and the entire flight test must be considered unsatisfactory.

5-944 DEBRIEFING. Inspectors and examiners shall inform the applicant of the results of the flight test and conduct a debriefing. See volume 5, chapter 1, section 3.

RESERVED. Paragraphs 5-945 through 5-960.

Figure 5-122. ATP/Type Rating Oral Test Job Aid—Helicopter

I. APPLICATION PHASE. The applicant must present:

[ ] FAA Form 8410-2 (application) completed and signed
[ ] Current medical certificate:

1. For original ATP: First class
2. For additional class or type rating: Third class

[ ] Pilot Certificate:

1. For original ATP: Commercial or equivalent
2. For additional class or type rating: ATP

[ ] Current or validated AC Form 8080-2, "Airman Written Test Report," for ATP or additional class rating. If validity date of oral extended, add the following comment to AC Form 8080-2: "The period of validity of this form has been extended in accordance with the applicable provisions of FAR § 61.39(b)," and date, and sign.
[ ] FAA Form 8060-5, "Notice of Disapproval of Application" (if applicable)
[ ] Training records showing applicant has successfully completed all ground training events including integration training

II. THE ORAL TEST

[ ] A. Knowledge of Aircraft Systems

[ ] Hydraulic
[ ] Pneumatic
[ ] Flight instruments
[ ] Landing gear, wheel
[ ] FMS, EFIS
[ ] Fuel
[ ] Electrical
[ ] Powerplants
[ ] Flight controls
[ ] Autopilot, F/D
[ ] Navigation systems
[ ] Rotor system

[ ] B. Knowledge of and ability to compute performance data, takeoff, landing, and cruise performance
[ ] C. Weight and balance
[ ] D. Ability to perform or state "Immediate Action" items
[ ] E. Knowledge of and ability to state operating limitations
[ ] F. Knowledge of related items (such as MEL)

Figure 5-123. ATP/Type Rating Flight Test Job Aid—Helicopter

GROUND OPERATIONS		
Preflight Inspection	[ ]	
Taxiing and Ground Hover	[ ]	
Powerplant Checks, Rotor Engagement	[ ]	
TAKEOFFS		
Normal	[ ]	
Instrument	[ ]	
Crosswind	[ ]	
With Powerplant Failure	[ ]	
Rejected Takeoff	[ ]	
INSTRUMENT PROCEDURES		
Area Departure	[ ]	
Area Arrival	[ ]	
Holding	[ ]	
Normal ILS Approach	[ ]	With F/D
Autopilot-Coupled ILS	[ ]	If equipped
Engine-Out ILS	[ ]	
Nonprecision Approach	[ ]	
Second Nonprecision Approach	[ ]	
Circling Approach	[ ]	
Missed Approach from an ILS	[ ]	
Engine-Out Missed Approach	[ ]	
IN-FLIGHT MANEUVERS		
Steep Turns	[ ]	
Settling with Power	[ ]	
Specific Flight Characteristics	[ ]	
Powerplant Failure	[ ]	
LANDINGS		
Normal Landing	[ ]	
Landing from an ILS	[ ]	
Crosswind Landing	[ ]	
Autorotation (Single-Engine)	[ ]	
From Circling Approach	[ ]	

NORMAL, ABNORMAL, AND EMERGENCY PROCEDURES—SAMPLE

[ ] Anti-Icing and Deicing; Hydraulic, Electrical, Pneumatic, and Other System Failures; Gear, Flaps, Control Systems; Navigation and Communications Equipment; Fire in Flight, Smoke Control; Decompression, Emergency Descent, Emergency Landing, and Evacuation

NOTE: Inspectors should refer to the appropriate section of "Airline Transport Pilot and Type Rating Practical Test Standards" (FAA-S-8081-5), as amended, for maneuver tolerances.

BRIEFINGS

[ ] A. Brief Applicant:
1. Departure point, destination, route, weather
2. Aircraft weight and fuel load
3. Role of inspector
4. Use of crewmembers and autopilot (Applicant is in command and must perform command duties successfully.)
5. Review minimums to be used on test

[ ] B. Brief Supporting Crewmembers:
1. Crew will perform normal duties of their positions
2. Will act in support role and not initiate. May be asked to delete calls, altitude alerts, etc.
3. Duties of safety pilot

[ ] C. Safety Pilot Briefing:
1. Use of hood
2. Transfer of controls
3. Simulated emergencies
4. Response to an actual emergency
5. Autorotations
6. Other specific events