



OAS-5400-205
OAS Aircraft, Equipment and Pilot Inspection Standards

Information Classification: Sensitive But Unclassified
Version: 1.1
Date of Approval: TBD
Supersedes: NA
Effective Date: Jan 1, 2016
Expiration Date: When officially rescinded or revised
Review Date: December 1, 2016
Originating Office: Technical Services Division, OAS
Point of Contact: Ralph_Getchell@ios.doi.gov, (208) 433-5077
Distribution: All OAS Inspectors

TABLE OF CONTENTS

1. PURPOSE.....	2
2. GENERAL.....	2
3. DEFINITIONS.....	3
4. INSPECTION PROCEDURES (SCHEDULE/PLAN)	5
5. INSPECTION PREPARATION.....	7
6. INSPECTION ARRIVAL AND IN-BRIEF	7
7. AIRCRAFT DATA CARDS.....	9
8. PILOT APPROVAL CARDS.....	9
9. AIRCRAFT RECORDS INSPECTION STANDARDS.....	9
10. CONTRACT AIRCRAFT VISUAL INSPECTION.....	11
11. FLEET AIRCRAFT INSPECTIONS.....	19
12. PRIVATELY OWNED AND OPERATED AIRCRAFT INSPECTIONS.....	20
13. COOPERATOR AIRCRAFT REQUIREMENTS.....	20
14. CARDING MECHANICS.....	22
15. PILOT EVALUATION POLICY.....	22
16. FLEET PILOT EVALUATION PROCEDURES	23
17. CONTRACT AIRCREW EVALUATION PROCEDURES.....	29
18. DOCUMENTING INSPECTION DEFICIENCIES	31
19. ENDING CONTRACTOR INSPECTIONS/OUT-BRIEF PROCEDURES.....	32
20. ENDING INSPECTIONS EARLY	32
21. STANDARDS OF PROFESSIONALISM	33
22. EXCEPTIONS, LIMITATIONS.....	33
23. UPDATING THIS INSTRUCTION.....	33
Attachment 1 – Version Control Record.....	43
Attachment 1 – Equipment Requirements, Fleet Air Tactical Airplanes.....	44
Attachment 2 – Equipment Requirements, Fleet Smokejumper Airplanes.....	45
Attachment 3 – Equipment Requirements, All Other Fleet Aircraft	46

1. PURPOSE. The purpose of this instruction is to provide standards and guidance for Office of Aviation Services (OAS) inspectors to apply to all U.S. Department of the Interior (DOI) aircraft and pilot inspections of both fleet and commercial assets. These instructions were developed to provide inspectors with a single document that covers procedures, processes, and best practices needed to ensure fleet and contract aircraft and pilots meet DOI standards and comply with contract requirements. Compliance with this instruction is mandatory for all OAS aircraft and pilot inspectors, as well as Bureau employees who have been qualified and approved to serve as OAS-designated inspectors.

2. GENERAL

A. Requirements and standards for inspections related to commercial aviation services are based on Departmental policy and detailed in the applicable procurement document (contract). For each contract, the Contracting Officer (CO) will appoint a COTR to inspect vendors for compliance with contract standards and resolve technical issues as they arise. Vendor inspections will be conducted objectively and in accordance with these applicable requirements and standards. Requests for inspections will usually come from the CO but may come from OAS or other Governmental agencies. OAS inspectors will not perform inspections on commercial aircraft not listed on contract award documents unless there is a request from the Contracting Officer or COTR.

B. Interagency Fire Standards. The DOI/USFS Memorandum of Understanding for Interagency Fire Helicopter Standards is the basis for all fire helicopter contracts. Similarly, other interagency standards are used to develop technical specifications for other contracts. However, the inspector must inspect for compliance with the contract standard. If the inspector discovers that a contract specification varies from the interagency standard, contact OAS Technical Services Division for guidance.

C. OAS is responsible for ensuring DOI fleet aircraft are inspected on an annual basis. Fleet aircraft inspections are primarily designed to ensure the aircraft is being operated within its type certificate and maintained in accordance with (IAW) the appropriate provisions of 14 CFR.

1) Unlike in previous years, all DOI fleet aircraft are now required to be operated in an FAA certificated status. Bureaus are not authorized to operate aircraft outside of their certification in "public use" status. Fleet pilots are not authorized to approve modifications to fleet aircraft; the authority to approve major alterations rests with the applicable national aviation manager in coordination with the appropriate OAS fleet manager. During their visual inspection of the aircraft, OAS aircraft inspectors should look for modifications to the aircraft beyond its type design and check for FAA approval documentation (STC or FAA 337) for all major modifications.

2) Fleet aircraft inspections are also necessary to evaluate the quality of maintenance provided by contract maintenance facilities. The OAS Repair Station in Anchorage annually performs only an estimated 25% of the total maintenance performed on all DOI fleet aircraft. The remainder of the maintenance is performed by contract maintenance facilities in Alaska and the Lower 48 States. Following maintenance at contract facilities, the bureau pilot is responsible for performing whatever operational/functional checks are necessary to assure aircraft is ready to be returned to service. However, as most fleet pilots do not hold A&P/IA ratings, they may miss indications of poor maintenance practices or incomplete work. The fleet aircraft inspection process described in paragraph 16 and the OAS-73 series of forms is designed to produce a standardized inspection flow for fleet airplanes and helicopters that can best be described as "a pilot's walkaround with an IA's eyes". **Completion of a fleet aircraft inspection DOES NOT constitute a certification of aircraft airworthiness by the signing OAS aircraft inspector.**

3) Lastly, fleet aircraft inspections provide OAS an opportunity to evaluate the overall condition and cleanliness of the aircraft. Often, a pilot who flies the same aircraft year after year will fail to notice the deterioration of external paint, upholstery and windows or will keep putting off fixing these items until a more convenient time. OAS inspectors can provide a valuable service to fleet managers and bureau pilots by reporting these "info squawks" so the aircraft can be scheduled for work at a later date.

D. This Instruction does not apply to Unmanned Aircraft Systems operated by or under contract to the Department of the Interior.

E. An inspector shall NOT deviate from Departmental policy or the requirements of the procurement document. Aircraft or pilot approvals will not be granted if there are any unresolved deficiencies. If a situation arises in which an inspector determines that the best interest of the DOI would be served by changing the requirements, they shall make a recommendation to the COTR, who in turn will coordinate with the contracting officer and OAS Technical Services. If a bureau representative expresses a need to use a pilot, aircraft, or equipment prior to correction of deficiencies, the representative should be advised to contact the contracting officer or appropriate OAS fleet manager. It is the contracting officer's responsibility to determine, in conjunction with the COTR and bureau management personnel, an appropriate course of action.

F. Should an inspector note a deficiency which is outside their area of expertise, they should contact an inspector with expertise on the subject or a representative of the manufacturer. If a subject matter expert cannot be contacted, the inspector who discovered the deficiency will document it in writing and forward it to the appropriate regional director's office.

G. Inspectors must identify and mitigate any unnecessary personal safety risks involved in the inspection process. Inspectors must ensure that no unacceptable hazards (aircraft on jacks, etc.) exist in the area where the inspection will be conducted and that there is an environment conducive to a safe and efficient inspection of the equipment. Inspectors may refuse to continue an inspection if they deem conditions to be unsafe.

H. Inspectors are encouraged to submit a "SAFECOM" within 5 days upon observing any condition, act, maintenance problem, or circumstance which has potential to cause an aviation-related mishap. Submission via the Internet at <https://www.safecom.gov/> is preferred. Actual mishaps must be reported via the 1-800-MISHAP reporting line.

3. DEFINITIONS

A. Conformity Inspection: Provides verification of proper installation and general condition of installed equipment via visual inspection and documentation research. May also include, at the inspector's option, a static functional check (actual use, with aircraft powered by battery/APU) of equipment.

B. Deficiency:

1. A procurement document specification, which has not been met by the vendor; or
2. A condition which is contrary to the appropriate established requirements of the Departmental Manuals (OMs), Operational Procedures Memorandums (OPMs), Federal Aviation Regulations (14 CFR), or interagency agreements; or other FAA-approved technical documents; or

3. An item which unnecessarily compromises safety, hampers or delays the accomplishment of the assigned mission, or causes an unjustified increased cost to the Government.

C. Dynamic Functional Check: Provides a check for the proper operation of required equipment with the aircraft in flight. No test equipment or removal/disconnection, etc., of vendor equipment is required.

D. Fleet Manager: Term used for OAS personnel, either the Supervisory Aircraft Fleet Services Specialist (in Alaska), or the Aircraft Maintenance Specialist-Fleet (in the lower 48 states), charged with managing the maintenance of DOI fleet aircraft.

E. Flight Evaluation: An assessment designed to evaluate the pilot's ability to safely operate a specific make and model (and series for helicopters) of aircraft. The flight evaluation will include an oral exam and/or written test of aircraft limitations, emergency procedures and aircraft systems and a flight in which the pilot's knowledge and proficiency in performing items contained in the FAA Practical Test Standard and this Instruction will be evaluated.

F. Interagency Fire Aircraft: For the purposes of this document, an interagency fire aircraft is any aircraft which has been inspected and found compliant with the standards established by the interagency fire community to promote safety, effectiveness and interoperability.

G. Performance Testing: Provides measurement of required equipment performance to determine the existence and/or nature of problems and to ensure adherence to the standards specified in the procurement document via the use of test equipment. This inspection can only be performed by an appropriate OAS/USFS- approved inspector.

H. Special Use Flight Evaluation: A flight evaluation in which the emphasis is on evaluating special use mission skills, although the pilot's ability to safely operate in the aircraft in mission conditions will also be evaluated.

I. Static Functional Check: Provides a check for proper operation of required equipment with power (electrical, hydraulic, etc.) applied. At the inspector's option, this check may require engine(s) to be running and rotors/ propellers turning. No test equipment or removal, disconnection, etc., of vendor equipment is required. If problems are suspected, Dynamic Functional Checks or Performance Testing may be performed.

J. Type of Inspections:

1. Commercial Contract Aircraft (Non-Fleet) Inspections. In general, OAS and the U.S. Forest Service contract for commercial aviation services with companies that hold FAA Part 133, 135, or 137 certifications. These companies are subject to FAA surveillance of their pilots, aircraft, and maintenance facilities. While the primary purpose of OAS contract inspections is to confirm compliance with the contract specifications and not duplicate FAA surveillance, inspectors must also be alert for questionable practices or conditions which could affect flight safety or indicate lax standards.

2. DOI Government Owned Aircraft (Fleet) Inspections. DOI fleet aircraft and pilots are subject to surveillance inspections by the FAA. However, the primary responsibility for overseeing these aircraft and pilots rests with OAS. All DOI fleet aircraft hold FAA certification and are maintained to a standard

beyond that required by 14 CFR Part 91. Inspection of the aircraft should focus on assessing the quality of maintenance being performed, the condition of the aircraft, and the confirmation that any modifications are fully documented either as supplemental type certificates (STCs) or FAA Form 337 field approvals.

3. DOI Government Pilot Flight Evaluations: While DOI pilots also hold FAA certificates, the FAA exercises little oversight over DOI pilot qualifications and proficiency. OAS is responsible for conducting flight evaluations to ensure pilots possess the requisite skills necessary to safely operate the aircraft (equipment checks) and can safely perform required special use missions.

4. Cooperator Inspections. The term "cooperator" applies to entities not under direct contract to DOI nor part of the DOI fleet of government owned aircraft. Cooperators may include Federal, State and local agencies, the U.S. military, Canadian registered aircraft, and operators under contract to other commercial entities. Specific inspection and approval requirements vary, depending on the category of cooperator, as follows:

a. Affiliate Operations (on which DOI personnel are non-revenue passengers/aircrew members). Special use activity flying requires an onsite inspection of records, maintenance, aircraft and a flight evaluation of the pilot for the intended activity. Letters of authorization are issued in lieu of pilot/aircraft cards.

b. Military Flights. Aircraft and flight crewmembers shall not be inspected or issued DOI cards. Exception: National Guard helicopters and crews tasked for fire suppression will be issued letters of authorization by OAS (or USFS).

c. Other Government Aircraft of U.S. Registry. Special use activity flying requires an on-site inspection of records, maintenance, aircraft and a flight evaluation of the pilot for the intended activity. Letters of authorization are issued in lieu of pilot/aircraft cards. Uncertificated aircraft must be evaluated by a process in which the engineering documentation for any modifications, Instructions for Continued Airworthiness, etc. are reviewed to determine if the aircraft offers a level of safety equivalent to a certificated aircraft. Uncertificated cooperator aircraft must be approved/accepted by the OAS Director before they can be approved to transport DOI personnel. The Technical Services Division can provide information on the status of uncertificated aircraft programs.

d. Canadian Cooperators. Aircraft of Canadian registry and operated or under contract to the Canadian provinces may deploy under the National Interagency Fire Center (NIFC)/ Canadian Interagency Fire Fighting Center (CIFFC) agreement. OAS Technical Services usually receives completed OAS-36s (Interagency Data Card) in advance of the fire season. Aircraft that may be transporting DOI personnel must be inspected annually. Special use flight evaluations are required for Birddog pilots and air operations officers only. OAS Technical Services will issue letters of authorization in lieu of pilot/aircraft cards. This paragraph does not apply to Canadian registered aircraft under contract to the State of Alaska and approved by the AK Regional Office for cooperator status in Alaska.

4. INSPECTION PROCEDURES (SCHEDULE/PLAN)

A. Develop Annual Plans.

1. OAS, in coordination and consultation with the Forest Service Regional Aviation personnel where applicable, will develop annual plans for conducting inspection visits as economically as possible.

By mutual agreement, OAS and FS will normally recognize inspections performed by the other's inspectors for on-call contracts and cooperators, provided there are not significant differences in contract inspection requirements. Both OAS and FS reserve the right to conduct their own inspections if they determine it is in the best interests of their agency to do so. As a courtesy, OAS regions should advise the appropriate FS regional office of their intention to exercise this right as far in advance as possible.

2. The plan should include the number of aircraft and pilots, and equipment (e.g., fuel service vehicles) involved in each visit. OAS Regional Directors should periodically review inspection plans to ensure that adequate time is allotted for the number and type of inspections to be performed at each site. The following estimated times should be used for trip planning.

- a. Contract aircraft- 4 hours
- b. Uncertificated cooperator aircraft - 5 hours
- c. Certificated cooperator aircraft- 4 hours
- d. Fleet aircraft - 2 hours
- e. Fuel service vehicle, SEAT support vehicle - .5 hours

3 OAS Regional Offices will notify the parties to be inspected as soon as possible of the proposed date and time of the inspection visit. The region may contact the inspected party by phone to arrange the visit but must follow up with a confirmation e-mail or letter. Inspected aircraft may have discrepancies deferred in accordance with an approved MEL providing the equipment is not contractually required. Inspectors may view contract aircraft undergoing maintenance (e.g. periodic inspections, overhauls, etc.), or are missing equipment items but the aircraft will not be carded or approved until the aircraft in compliance with the contract.

4. Because fleet aircraft are often flown year-round, regional offices may find it preferable to schedule fleet inspections for periods during which the aircraft are undergoing annual or 100-hour inspections. Conducting the fleet inspection while the aircraft is in scheduled maintenance greatly reduces the potential inconvenience to the fleet operator if grounding discrepancies are found. By contrast, if a fleet aircraft inspection is scheduled in conjunction with an annual checkride at a field location, the inspectors run the risk of having to postpone a flight evaluation while a maintenance team is summoned to repair a discrepancy discovered during the aircraft inspection.

5. Fleet aircraft do not have to be discrepancy-free and ready to fly to be inspected; however, the aircraft inspector must ensure that the approval card is not issued until any previously noted discrepancies, plus any noted during the inspection, are corrected/deferred and signed off by an authorized mechanic. OAS Technical Services will manage a shared spreadsheet to allow regional inspectors and OAS fleet managers to track completion of inspections, outstanding discrepancies and issuance of cards. Fleet managers may also use the shared spreadsheet to post comments on aircraft status which could be useful to aircraft inspectors.

6. Pre-inspection worksheets or forms that request general information, such as company addresses, aircraft registration data, and FAA certifications needed, should normally be forwarded to the organization 30 calendar days in advance of the visit along with the confirmation letter/email. For exclusive use contracts which require on-site mechanics, request the vendor designate personnel who will be filling those requirements to complete an OAS Form 41 for each mechanic. These forms must be signed by the contractor Director of Maintenance or higher.

B. Resolving Scheduling Issues: In the event the OAS Regional Office is unable to coordinate a contractor inspection date acceptable to both parties, the OAS Regional Director or Inspector for that contract will advise the Contracting Officer (CO) in writing. The CO will contact the contractor and, if unsuccessful in negotiating a new inspection date, will take the action deemed necessary to fulfill the Government's obligation under the contract.

C. Inspection Cancellations

1. OAS Regional Office Cancellations. If it becomes necessary for an OAS Regional Office to initiate a cancellation/reschedule of an inspection, the inspector or their designated representative will notify the contractor as soon as possible with an e-mail or letter confirmation and copies to the COTR and CO.

2. Contractor Cancellations. Inspections require the OAS Regions and the operator to obligate resources in advance. When a contractor cancels a scheduled inspection, the Inspector shall document the circumstances in writing and submit to the Regional Director/ (COTR), with a copy to the canceling organization and the Contracting Officer. Should it be determined that a rescheduled inspection is in the DOI's best interest, the Inspector may be asked to provide the CO with an estimate of the marginal/added costs to accomplish a rescheduled inspection. It will be the CO's responsibility to negotiate payment of marginal/added costs with the vendor.

5. INSPECTION PREPARATION. Pre-trip preparation is an important part of the inspection process. Before the actual inspection takes place, time should be allotted so that the inspector can:

A. Prepare all required forms and documents.

B. Ensure they have the current version of all required inspection forms by checking the OAS index on the ALL OAS drive (O:\Permanent\Forms&Templates\OAS).

C. Bring a digital or paper copy of the contract or agreements between agencies.

D. Pack backup copies of commonly used forms in either electronic or hard-copy format.

E. Bring all equipment required for the inspection.

F. Pre-fill inspection forms by entering as much data as possible.

G. (Fleet Aircraft Inspections only) Prior to departing for an inspection, it is a good practice for fleet aircraft inspectors to contact the appropriate OAS fleet manager and inquire if there are any issues with the aircraft that the inspector should look for. The fleet manager can also provide copies of the latest maintenance plan, which shows the due dates and times on all inspections and a print out of all Airworthiness Directives and applicable Manufacturer's Service Bulletins.

6. INSPECTION ARRIVAL AND IN-BRIEF

A. Arrival Time and Attire. Arrive on time and ready to go with the proper identification available. Inspectors should be appropriately dressed for the tasks on hand. OAS inspectors will not wear attire bearing logos from companies with which OAS has contractual relationships.

B. In Brief. A short but effective in-brief with the operator's point of contact (POC) is essential for communicating the inspection team's expectations and requirements to those who will be inspected. Items to be briefed and discussed should include the following:

1. Introduction of the inspection team and the introduction of key personnel.
2. Purpose and intended duration of the inspection.
3. Basis for the inspection (contract, fleet agreement, co-op agreement) and standards to be used.
4. Confirmation of personnel, aircraft, and equipment to be inspected. De-conflict required evaluation flights with aircraft inspections.
5. Discussion of any circumstances which might limit the extent of the inspection (e.g., sick pilot, aircraft not on station, etc.) and mitigation strategy.
6. Records and documents required. (See para 9)
7. Assistance required for the inspection such as opening and closing aircraft cowling, ladders, ground creepers, and aircraft stands. Note: Do not assume you can use items owned by the other party. Always ask first!
8. Assistance required for any lifting or moving of aircraft support equipment such as water buckets, remote hooks, and longlines.
9. Local airport security requirements. Determine if inspectors must be escorted on the flight line.
10. Establishment of estimated timeframes for a successful completion.
11. Asking questions to ensure all parties have a complete understanding of the inspection plan including the expectations.
12. Possible outcomes. The inspected party should be briefed that an OAS inspection can have five possible outcomes:
 - a. Standards Met. If the inspected personnel and/or equipment meet the appropriate standards, OAS cards or authorization letters may be issued.
 - b. Standards Not Met/Re-inspection Not Required. If the personnel and/or equipment do not meet the standards and corrective action is required, the OAS Inspector will advise the inspected point of contact verbally and in writing, with a copy to the COTR and CO, of the deficiencies found and the corrective action that must be completed in order for the person or equipment to be carded or approved. Documentation of the corrective action(s) must be provided before cards/approval will be issued. For fleet aircraft, discrepancies are identified, corrected and documented in coordination with the applicable fleet manager.

c. Standards Not Met/Re-inspection Required. If the personnel and/or equipment do not meet the standards and it appears that a re-inspection (rather than submission of documentation) may be required, the Inspector will advise the inspected party of the deficiencies noted thus far and relate that a plan for follow-up actions must be determined in consultation with the Regional Director and the CO. Once the Inspector, Regional Director and CO have agreed on a plan of action, the Inspector will notify the vendor in writing of any deficiencies noted to date and any actions required on the vendor's part prior to re-inspection.

d. Compliance in Question/Research Required. If the compliance is in question, further research is required. Rather than argue a decision in front of the inspected party, the Inspector will take the issue for action and resolve it later.

e. Inspection Suspended or Incomplete. See Section 20, Endings Inspections Early.

7. AIRCRAFT DATA CARDS

A. All Fleet aircraft approval data cards/approvals shall be issued with a valid period of not more than 12 calendar months. Fleet inspections can be extended to a maximum time of 18 calendar months. However; all extensions must first be approved in advance of expiration and documented in writing by the appropriate OAS Fleet Manager (Alaska or Boise). Extensions will be documented in writing (usually an email from fleet manager).

B. Point-to-point-only aircraft approvals shall be valid for not more than 36 months. OAS Regional Directors may approve an additional six month extension.

C. Contractor special use approval aircraft data cards/approvals shall be valid for not more than 18 months from the date of inspection. In no case will the aircraft approval expiration date for an Exclusive-Use contract be set for a date more than one year beyond the end of the month of the last option year's start date.

D. The expiration dates should be noted in MM/DD/YYYY format and are valid through the last day of the expiring month.

8. PILOT APPROVAL CARDS

A. Vendor pilot approvals issued for point to point only shall be valid for up to 24 calendar months (not to exceed 26 calendar months with extensions).

B. Vendor pilot approvals issued with any special use activities approved shall be valid for up to 12 calendar months (not to exceed 14 calendar months with extensions). Note: While certain special use mission evaluations may be valid for longer than one year, the pilot authorization card itself is only valid for 12 calendar months.

C. Fleet pilot approvals are valid for 12 calendar months. See OPM-16 for details.

9. AIRCRAFT RECORDS INSPECTION STANDARDS

A. Records Request and Preparation

1. During the planning stage for the visit, the Inspector should request the operator provide at the inspection site all required documents needed for the review, including logbooks, status sheets, Airworthiness Directives, service bulletin compliance lists, modification data (337s and STCs), weight and balance records, equipment lists, flight manuals, and registration/certification documents. Documentation in electronic form may be accepted at the inspector's discretion.

2. Inspectors should display patience during the review as this may be the most difficult part of the inspection depending on how organized the operator is for the presentation. New operators may need clarification on document requirements.

B. Aircraft Flight Manual (AFM) /Pilot Operating Handbook (POH) (if available for the aircraft).

1. Review the AFM or POH for the current revision number and organization. If the aircraft type certificate requires the AFM/POH to be carried on the aircraft, it must be accessible to the pilot. If an AFM/POH is required, but none is available, the aircraft shall not be carded.

2. Flight manuals will contain the aircraft's markings, placards, performance charts, checklists, and current applicable supplements.

3. Most flight manuals have current weight and balance data, but sometimes this is in a different manual due to the size.

C. Logbook.

1. Review a sampling of records to see if repetitive inspections (e.g., 100 hour, annuals) are being completed in the required time frames. If the operator's aircraft is on a progressive maintenance program, confirm that recurring inspections are following the progressive program intervals.

2. Verify that removed and installed items have been entered into the appropriate logbook.

3. Compare the component hard card and status sheet component entries to the logbook entries. Inspect a sample of the component status sheets by comparing times and serial numbers to the actual component hard cards. If the status sheets match the hard cards, record a few component serial numbers and verify these items are actually installed on the aircraft. Not every component needs verification; sample a few and move on.

4. Review the airworthiness directives and applicable service bulletins list for proper sign-offs and repetitive actions. An Airworthiness Directive will not be considered as being complied with unless it has been signed off by an A&P. An entry of "not applicable" or an equivalent statement without an A&P signature is not sufficient.

5. Review how the operator documents aircraft discrepancies and corrective actions/deferrals.

D. Contractor Operations Specifications.

1. Ask the operator to show you the current copy of the company FAA-approved operations

specifications (OpSpecs).

2. During the technical proposal evaluation committee (TPEC) process, the committee will check to ensure that each offered aircraft is on the vendor's operating specifications. If the aircraft inspector has information or suspicions that an aircraft to be inspected has been recently acquired by the vendor, confirm that the aircraft is listed in Part D-085 of the vendors OpSpecs as required by the contract.

10. CONTRACT AIRCRAFT VISUAL INSPECTION

A. Consistency in Procedure.

1. Be consistent among operators to eliminate any claims of favoritism. In addition to inspecting for general aircraft condition, the inspector must check for compliance on every contract item on every inspection.

2. Be aware that visual inspections differ greatly among aircraft models and types. When in doubt, review the recommended pre-flight checklist contained in the AFM/POH.

B. Access to Contractor Aircraft.

1. Request the operator remove/open and reinstall/close cowlings, panels, and doors, as required.

2. Request access only to areas to be inspected.

3. Request further access if needed to follow up on items noted during inspection as required.

C. Airframe General Condition.

1. Inspect for damage on the aircraft skin such as signs of buckling, delaminating, or voids on bonded structures and seams. If aircraft damage is detected and the aircraft is currently on contract, inquire of the vendor if a SAFECOM was submitted.

2. Visually inspect rivets and rivet patterns for inconsistencies in standard patterns and size.

3. Investigate oversize rivets or large repairs found on wing spars and caps and any other structural

4. Inspect for corrosion and cracks on or near structural assemblies such as wing spars, caps, and control surface mounts.

5. Inspect airframe windows, cowlings, fairings, and doors for proper attaching hardware, cracks, and function.

6. Ask the operator to apply electrical power to the aircraft and assist with the test as required.

D. Inside the Aircraft.

1. Check the registration and airworthiness certificates for the proper make, model, serial number, and expiration date. Inspectors will also check that the information on the two documents matches. Note: some aircraft may have, and some contracts may require, multiple airworthiness certificates (e.g. standard and restricted category).
2. Check that the operator has an approved minimum equipment list (MEL), if required under 14 CFR 135.179. Check to confirm that deferred discrepancies are corrected within the allotted time.
3. Check that the operator handles inoperative equipment under 14 CFR 91.213.
4. Check the seats for general condition, appearance, and proper function. If the seats do not function properly during the inspection, they will only get worse with time.
5. Check the seat tracks and seat mounts for cracks and excessive wear.
6. Check the safety restraints (seat belts/shoulder harnesses) to ensure that they meet the contract requirements.

E. Aircraft Fire Extinguishers.

1. Check the fire extinguisher(s) for proper charge, current inspection status, and maintained as required by NFPA 10.
2. Check placement and quantity for accessibility in accordance with 14 CFR 91.513 and contracts as applicable.

F. First Aid and Survival Kits.

1. For contracted aircraft, check that all kits contain the items specified in the First Aid and Survival Kit exhibit of the contract.
2. Check for expired items in each kit in each aircraft. For aircraft used for extended overwater flights, refer to 14 CFR 135.167.

G. Engines. Engine covers/cowlings must be removed/opened by the vendor. The inspector shall inspect the engine for general condition such as: evidence of fluid leaks, control linkages for proper hardware and safeties, engine mounts for signs of wear, firewalls and pans for evidence of leaks, debris and damage, fluid lines for age, clamping and proper fire protection. Similarly, inspectors shall check the general condition of the exhaust system, wiring harnesses and accessory mounting hardware.

H. Propellers and Rotors. If available and needed, secure from the vendor adequate ladders or scaffolding to properly inspect propeller or rotor assemblies. The inspector shall inspect all fixed wing propeller and all rotor wing main and tail rotor assemblies for general condition such as: dents, voids, separations, corrosion, worn bearings, evidence of cracks or deterioration in elastomeric bearings, pitch change mechanisms including propeller governor linkages for excessive play both radial and axial, constant speed propeller blades for radial and axial play or evidence of oil or grease leakage. Particular attention is to be paid to visible areas of repair or damage for limitation compliance.

1. Check all propellers and rotors for general condition including dents, voids, separations, corrosion, and cracks.
2. Check the tail rotors for worn bearings on the tail rotor blades, yokes, and trunnion.
3. Check the elastomeric bearings for excessive separation and deterioration.
4. Check the pitch change bearings and control linkage for excessive play.
5. Check the constant speed propellers for excessive tip play and excessive leakage of grease or oil seeping from the blade root and mounting crankshaft split line.
6. Check the propeller de-ice boots for general condition.
7. Check large areas removed or filed down on any propeller blades. These are cause for concern and further investigation.

I. Aircraft Weight and Balance for All Aircraft.

1. The requirement for the actual weighing frequency is determined by the contract (see Figure 1 below) and/or Departmental policy (in the case of fleet aircraft).
2. The aircraft's required weight and balance data must be determined by an actual weighing of the aircraft. Scale readings must be documented on the weight and balance forms provided.
3. Weight and balance forms without the scale reading will be considered unacceptable.
4. An equipment list of items installed on the aircraft at the date of the actual weighing must be furnished.
5. Longitudinal and lateral center of gravity and weight calculations must be verified on all aircraft, as applicable.
6. All aircraft must be weighed on scales that have been certified as accurate within the preceding 24 calendar months. Any accredited weights and measures laboratory may serve as the certifying agency.

Weighing Frequency on All Aircraft	
<i>Aircraft</i>	<i>Frequency (Calendar Months)</i>
Single engine airplanes	60
Multiengine airplanes	36
Helicopters	24

J. Aircraft Ground Runs.

1. Ground runs may be requested at the inspector's discretion. A ground run is not normally required during the inspection process. Ground runs shall only be conducted by the operator and observed by the OAS inspector. If the aircraft being inspected has not flown recently, ground runs can be requested by the inspector. A good rule of thumb: If the aircraft hasn't flown in two months, it is most likely overdue for the manufacturer's recommendations for most power plants. In some coastal salt-laden environments, manufacturer's recommended weekly engine runs. In dry desert conditions, frequent engine runs are not such a problem.

2. Wear adequate ear protection, preferably a headset that can be plugged into the audio system for proper communication during the requested ground run.

3. Note that it is a good practice to run the aircraft until normal operating pressures and temperatures are achieved. This may not be practicable all the time, but it is highly recommended.

4. Due the increased risks of damage to persons or property by prop or rotor wash, engine runs above idle should only be conducted if the idle run revealed abnormal operation and then only in areas away from people and facilities.

5. Scan the instrument panel, while engines are running, for any failed systems and record any discrepancies found.

6. Look for any pulled or popped circuit breakers that should be explained or investigated further.

7. Once the engine run is completed, check the exterior of the aircraft and the ramp beneath the aircraft for evidence of fresh oil or fuel leaks.

K. Avionics Inspections.

1. General. The goal of OAS avionics inspections of contract aircraft is to ensure that non-FAA required equipment meets contract requirements. Refer to the definitions of each type of avionics inspection on pages 4 and 5. The Inspector will:

a. Perform, as a minimum, either a Conformity Inspection or a Static Functional Check on each aircraft inspected. A conformity inspection may be performed by any OAS approved inspector.

b. Ascertain that all avionics equipment is in compliance with contract requirements. The inspection form (OAS-36, OAS-39) is annotated with listings of installed equipment and inspection results.

c. In addition to the requirements of paragraph 1a above, perform a Performance (ground) Test on any aircraft inspected for interagency fire missions and those which have a contract requirement for VHF-FM radios. Also perform static functional tests of satphones and AFF.

d. Ensure test equipment is maintained and calibrated in accordance with the paragraph K6 below.

2. Performance Test.

a. Interagency fire aircraft and other aircraft identified by OAS must have either a performance (ground) test or a dynamic functional check (in flight) performed by an OAS approved or accepted avionics inspector. The performance test is the preferred method of inspection.

b. Test for specifications given within the procurement document using test equipment provided (see paragraph K5 below).

3. Dynamic Functional Check.

a. Inspectors will conduct dynamic functional checks of required avionics equipment only if equipment for a ground-based performance test is not available. Inspectors must comply with applicable ALSE requirements for personal protective equipment (PPE).

b. If the aircraft is not currently carded, Regional Director approval for the flight is required. During the flight, an avionics inspector shall check the performance of all required avionics equipment in a manner which reasonably simulates the anticipated mission's requirements and conditions.

4. Fleet Aircraft. Refer to the OAS-73 form to check for instructions on fleet avionics inspections.

5. Test Equipment Requirements. Each avionics inspector shall be furnished with a kit containing spare batteries and charging equipment. The following minimum test equipment, or equivalent, shall be available for use in the performance of avionics inspections:

- a. Bird AT 400 antenna tester
- b. King VHF-FM handheld radio (2 each) (BK DPH or equal)
- c. Aux - FM interface adapter for above
- d. VHF AM handheld radio/portable radio (King KX-99 or equal)
- e. Assorted cables, adapters, drop cords, antennas, etc., as required
- f. Two high-impedance aviation headsets
- g. Protective travel case

6. Test Equipment Calibration. Avionics inspectors are responsible for scheduling and completing calibration for all test equipment assigned to them, subject to the following:

- a. Calibrations should be scheduled to not interfere with the normal inspection cycles.
- b. Calibrations shall be scheduled for all equipment, where applicable, on an annual basis or per the manufacturer's recommendations, whichever is more frequent.
- c. Arrangements for shipping of equipment and provision of information for payment should be performed well in advance of calibration due dates.

L. Equipment Inspection Standards

NOTE: If the inspector is unfamiliar with a particular piece of equipment, they should request assistance from the equipment manufacturer, the vendor or another inspector as appropriate.

1. Cargo Hooks.

- a. Perform a visual inspection and a functional test of all cargo hooks.
- b. Conduct the functional test with the assistance of the operator or a second inspector providing the power and control inputs from inside the aircraft
- c. Physically test all release systems from underneath the helicopter while calling out the sequence.
- d. All cargo hooks should be inspected in accordance with the manufacturer's or contract requirements. Inspectors must be familiar with the OEM's overhaul and inspection criteria. Review maintenance documentation to ensure the operator is inspecting cargo hooks and performing preventative maintenance as required by the hook manufacturer.
- e. Conduct a visual inspection of the cargo hook assembly for cracks, corrosion, damaged parts and proper placards. Major modifications must have FAA-approved data.
- f. If installed, conduct operational check of loads cells on the ground using inspector weight to see if a reading registers in the cockpit.

2. Buckets and Longlines.

- a. Check water buckets and longlines in accordance with the manufacturer's specifications and confirm the buckets can be configured to meet the contract or agreement specifications.
- b. Verify the manufacturer's make and model numbers.
- c. Inspectors should reference OEM's equipment manuals, which are available on-line for the specific inspection procedures and criteria.

3. Remote Hooks.

- a. Check the remote hooks in accordance with the manufacturer's data.
- b. Verify the remote hook is adequate for mission.
- c. Be familiar with the proper inspection criteria.
- d. Check for proper mounting clevises, hardware, data plates, placards, and load limits.
- e. Request assistance from the manufacturer on equipment that is unfamiliar.
- f. Check manufacturer data for required maintenance and/or inspection intervals. Verify that such maintenance is being properly documented.

4. Rappel Mounts and Brackets.

*Property of the United States Government
This Document Contains Sensitive But Unclassified Information
Do not remove this notice
Properly destroy when no longer needed*

- a. Ask for all approved data on each installation.
- b. Compare the above data to the actual aircraft installation.
- c. Check the proper mounting, placards, and procedures for the complete approval process.
- d. Check all rappel brackets in accordance with their proper approved certification data and the instructions for continued airworthiness (ICAs) when applicable.
- e. Check the aircraft mounting points for wear, voids, separations, corrosion, and proper hardware placement.

5. Short-Haul.

- a. Prior to inspecting aircraft contracted for short haul operations, review the most current *DO/ Helicopter Short-Haul Handbook* ([http://www.doi.gov/aviation/library/upload/Short Haul Handbook 2010.pdf](http://www.doi.gov/aviation/library/upload/Short_Haul_Handbook_2010.pdf)) for the latest approved configurations.
- b. Government provided short haul equipment/rigging is typically not available at the initial annual inspection of contract aircraft. Aircraft inspectors will ensure contractor provided short haul equipment is available and installed at the initial inspection. Any aircraft alterations to support short haul equipment must be FAA-approved.

6 Aerial Ignition Equipment.

- a. Verify that the helicopter is equipped per contract specifications for plug and circuit protection.
- b. Verify that the plugs are mounted in the proper location and placarded appropriately.
- c. Test the electrical plug connections for proper pin placement and polarity.
- d. Verify required circuit breakers for proper rating and operation.
- e. Plastic sphere dispensers may be secured by tie downs/belly straps. Any alteration to the aircraft itself, including brackets for securing PSDs to the helicopter, must be FAA approved.
- f. Inspectors are not required to inspect or card heli-torches; that is a bureau responsibility. Notify the bureau regional aviation safety manager/RAM if you observe potentially unsafe ignition devices.

7. Telemetry.

- a. Check aircraft that have telemetry equipment requirements for approved installations.
- b. Check airworthiness certificates. Some equipment installations require the aircraft be placed in Restricted category. Others do not.

c. Be aware that older installations will sometimes not have all the ICAs as part of the approved data and that proper approval must be present for each installation. This approval will most likely be in the form of an FAA supplemental type certificate (STC) and/or an FAA Form 337.

8. Fuel Service Vehicles (FSV). SEAT Support Vehicle (SSV)

a. Check all fuel service vehicles (FSV) and trailers for current license plates. Document this inspection on the OAS-39B, Fuel Service Vehicle or OAS-39D SEAT Support Vehicle inspection forms. Note that fuel tanks used to transport jet fuel (e.g., Jet-A) do not have to meet the same certification standard as Avgas tanks.

b. The contractor is responsible for compliance with 49 CFR Part 172, including emergency response plans and Spill Prevention Control and Countermeasure (SPCC) plans (referenced in 40 CFR Part 112). OAS Inspectors are not required to inspect these documents; just ensure the vehicle has them.

c. Check the fuel servicing vehicles (FSV) and SEAT support vehicles (SSV) for two fire extinguishers. (SSV only require one fire extinguisher if there is no fuel tank on the vehicle). Extinguishers located in enclosed compartments shall be readily accessible and their location shall be marked in letters at least 50 mm (2 inch) high. Extinguishers must comply with the National Fire Protection Association (NFPA) 10: Standards for Portable Fire Extinguishers.

- d. Check fuel servicing vehicle dispensing system filter(s) for type and currency.
- e. Check fuel nozzles for screens, dust covers, and static bonding wires.
- f. Check filter vessel sump drains and differential pressure gauges.
- g. Check cargo tank sump drains
- h. Check cargo tank decals (No Smoking and Fuel Type/Grade (e.g., JET A or 100 LL AVGAS))
- i. Check fuel dispensing hose (API/EI 1529 Type C) or bears manufacturer's mark "Aviation Fuel" on the hose or metal fittings.
- j. A deadman control (a device that requires a positive continuing action of a person to allow the flow of fuel) is required for refueling operations.

9. Drum Fueling.

- a. Some ACETA operations and most Alaska operations require drum refueling.
- b. Look at these operations the same as any other fueling operation. Ensure each aircraft has the contract required equipment to perform drum refueling.
- c. OPM-20, Drum Fuel Management, contains procedures for procurement, storage, dispensing and drum reutilization.

d. The portable system shall provide consistent filtration meeting one of the following qualifications: Institute of Petroleum (IP), API 1581, or Mil-F-8901E.

e. If a contract aircraft is dispatched to Alaska, the vendor will need to provide a fuel dispensing kit containing the following components: one (approved UL, FM, etc.) portable fuel pump with barrel stem, and hoses for servicing aircraft from a holding tank or 55-gallon barrels (Government supplied in Alaska). The system shall also include a bonding cable with clips, aviation fuel qualified filters and a fuel servicing nozzle. The fuel servicing nozzle shall require a dust cap, screen, and bonding wire. A service station nozzle can be modified to meet this requirement. A source for a service station nozzle modification kit having a screen, dust cap, and bonding wire is Gammon Technical Products, Inc. (see Bulletin 152). The kit shall have two spare filters and other spare components needed for in field repairs. When not in use, the portable system shall be packaged for protection from the weather and stored in a secure area to prevent tampering.

f. When in doubt, contact the OAS Fuels Expert for technical advice.

10. Rapid Refueling of Aircraft.

a. This type of fueling is sometimes called "hot refueling" and may NOT be used on aircraft which use Avgas. Rapid refueling of Part 135 aircraft can only be done if it is authorized in the Contractor's Operation Specifications, and it must be done in accordance with the procedures listed in their operator's Operations Manual. If the contract requires rapid refueling, check to make sure that the vendor has OpSpec approval.

b. Rapid refueling must not be performed on fixed wing aircraft while an onboard engine is operating unless the service vehicle is equipped with a dry-break refueling system and deadman control device. A manually operated valve, with a hold open latch does not meet the definition of a deadman control. The fueling system port must be located behind the wing and of a different size and/or type than any other port used for the loading or unloading of any material (1-inch buckeye or equal). This port must be clearly marked as to the type and quantity of fuel. Both over the wing and closed circuit fuel nozzle must include a 100-mesh or finer screen, a dust protective device.

11. FLEET AIRCRAFT INSPECTIONS

A. OAS inspectors have the responsibility for inspecting fleet aircraft a minimum of once every 12 calendar months with options up to a 6 month extension with approval by the appropriate OAS Fleet Manager.

B. The AK or L48 OAS Fleet Manager will provide the inspector, upon request, status sheets to review current maintenance requirements and additional records.

C. All fleet aircraft have maintenance programs which comply with the 100-hour/annual or an Approved Aircraft Inspection Program (AAIP) as designed by the manufacturer. All scheduled inspections must follow the inspection requirements under 14 CFR 91.409. All 10-hour inspection extensions and ferry flights must be approved in advance by the appropriate OAS Fleet Manager.

D. All fleet aircraft inspection programs must follow the manufacturer's required inspection program including time life and overhaul recommendations/ requirements normally listed in Chapters 4 and 5 of

the maintenance manuals. Any other inspection program must be approved by the fleet manager and the FAA.

E. Compliance with all applicable airworthiness directives (AD) is required. While contract maintenance facilities are tasked with conducting AD searches during scheduled maintenance events, do not assume their search was complete. The respective fleet manager can provide inspectors with an updated AD list from their database. Alaska fleet inspectors can audit AD compliance from their regional office since the hard logs for Alaska fleet aircraft are maintained there by OAS personnel. However, because the hard logs for L48 fleet aircraft are either kept with the aircraft or at their usual contract maintenance facility, inspectors will have to conduct the audit on site.

F. Compare the contents of the first aid and survival kits to the requirements of the Interagency Aviation Life Support Equipment Handbook. Kits must be carried aboard DOI fleet aircraft on all flights.

G. Turbine powered fleet aircraft must have FAA approved Minimum Equipment Lists (MELs).

H. All fleet inspections will be conducted using and documented on the form OAS-73A and H (Fleet Carding- Conformity Checklist, Airplane and Helicopter), and OAS-73FA and 73FH DOI Fleet Aircraft Data Card. Completed OAS-73 forms and copies of the data cards shall be forwarded to the appropriate Fleet Manager for inclusion in the aircraft records.

I. Inspectors will document discrepancies which may impact the safe operation of the aircraft on the OAS-2 forms and provide a copy to the appropriate OAS Fleet Manager. These deficiencies must be cleared prior to issuing the card. If the inspector discovers discrepancies in required aircraft systems, they will advise the bureau agency operating the aircraft or the assigned fleet pilot that the aircraft is grounded until the deficiencies can be corrected.

J. Inspectors will inform the Fleet Manager of other findings (e.g., worn upholstery, glazed windows, deteriorating paint) either by email or write-up on an OAS-73. These conditions do not need to be cleared prior to issuing the card.

NOTE: It is the Fleet Manager's responsibility to ensure fleet aircraft are configured to meet bureau operational requirements and DOI standards. Fleet aircraft should not be inspected against the Aircraft Rental Agreement or any other DOI contract. If the aircraft requires carding for interagency fire or any special use mission, refer to the appendices to this instruction for specific requirements.

12. PRIVATELY OWNED AND OPERATED AIRCRAFT INSPECTIONS

A. Employee-owned aircraft are to be inspected only if the pilot is approved to use their own aircraft for Government business and intends to transport other Government personnel; otherwise, no inspection is required.

B. If the aircraft is intended to transport other Government personnel, the maintenance requirements shall include additional 100-hour inspections and compliance with the manufacturer's (OEM or TC holder) time/cycle life requirements for overhaul and replacement: All aircraft, aircraft engines, propellers, or appliances for which the manufacturer has recommended an overhaul or replacement time shall be overhauled or replaced in accordance with those recommendations or other FAA-approved overhaul intervals.

C. All applicable airworthiness directives (AD) must be complied with, including all applicable manufacturers' service bulletins referenced in the applicable AD.

13. COOPERATOR AIRCRAFT REQUIREMENTS.

A. Cooperator aircraft approval is administered on an OAS Regional level by the Regional Director. In the case of foreign cooperators (except specific Canadian Cooperators in the State of Alaska) or cooperators that span multiple OAS Regions, OAS Tech Services shall administer approval. Use of uncertificated aircraft must be approved by the OAS Director on a case by case basis. This is usually done in a separate letter in which the Director "accepts" a program rather than individual aircraft.

B. OAS inspector responsibility, once tasked, is to research, and if necessary, inspect cooperator aircraft and equipment and report findings and/or recommendations to the Regional Director, OAS Tech Services, or OAS Director as applicable.

C. Affiliate, and Other Government Aircraft of US Registry with intended use of point to point transportation only do not require physical inspection, however they are:

1. Required to be have a FAA airworthiness certificate (Normal, Utility, or Transport), and be maintained in accordance with 14 CFR 91 Subpart E, FAA approved maintenance program (i.e., AAIP) or in accordance with manufacturer's inspection and maintenance program, and are

2. Required to have, at minimum, the equipment listed in 351 DM 2.2 (paragraphs a-g, and i) as appropriate. The approving authority may require documentation of above requirements prior to approval.

D. Affiliate, Other Government Aircraft of US Registry, and Canadian cooperators intended for Special Use Missions must meet paragraph C above and shall be physically inspected for equipment and general condition:

1. For airtanker, fire helicopter, smokejumper and other air to ground delivery aircraft, refer to the appropriate commercial contract, which should reflect current interagency standards. Any deviation from those standards should be reported; waivers may be granted by the Regional Director in coordination with the using bureau. Other special use aircraft, refer to the equivalent fleet aircraft requirements in Appendices 1 -3.

2. Review of maintenance documentation to extent necessary to assure compliance with 14 CFR 91 subpart E, FAA approved maintenance program or approved manufacturer's maintenance program as applicable.

3. Meet the minimum standards set forth in FAA AC 39-7D for Airworthiness Directive compliance.

4. Compliance with Manufacturer's recommended TBO guidelines for all time in service life or calendar life limited components.

5. Aircraft with a current DOI or USFS contract approval card may be accepted without inspection if the approved special uses listed match those of the intended uses of the cooperator agreement.

E. Department of Defense aircraft shall not be inspected.

F. Minimum installed equipment standards and maintenance guidelines for uncertificated aircraft such as FEPP Aircraft shall be provided by OAS Tech Services.

G. Inspectors may use either the OAS 36 or OAS 73 A/H forms to document results of physical inspections.

H. Deficiencies in equipment requirements or aircraft maintenance shall be recorded on OAS 68, 68A, or 68D deficiency form.

I. Upon successful completion of any required inspection, OAS Regional Director, OAS Director of Tech Services, or Director of OAS as appropriate will issue a Letter of Authorization.

14. CARDING MECHANICS

A. Mechanic approval or documentation is only required if the DOI/OAS procurement document requires a mechanic on site, however mechanics may be carded by OAS inspectors in other situations when warranted.

B. When mechanic carding/approval is required/requested:

1. The contractor will require deployable maintenance personnel to complete and sign an OAS-41/USFS Aircraft Maintenance Personnel form. A contractor representative (DOM or higher) must review and sign the form to confirm the data.

2. The Inspector will review the form. If mechanic meets contract requirements, the mechanic is issued an OAS-38 Mechanic Qualification Card. The card may remain valid as long as the mechanic is employed by the vendor listed on the OAS-41 (write "indefinite" in the space for expiration date on the card). If the mechanic changes employers, the new director of maintenance must sign an updated OAS-41.

3. If the procurement document requires an on-site mechanic, the mechanic's name will be indicated on OAS-68 form so it can be included in the contracting officer's record.

15. PILOT EVALUATION POLICY

A. All pilots flying aircraft (either government or contract) for the DOI or transporting DOI employees and/or cargo on official business (see 353 DM 1 for exceptions) must be approved by DOI OAS. Pilot qualification requirements are based on Department Manuals (DM), Operational Procedure Memoranda (OPM), and procurement document criteria. Initial or recurring pilot evaluations will be administered in accordance with DM policy and this instruction. See paragraph 17 for contract pilot flight evaluation policy and procedures.

B. The four basic types of flight evaluations are:

1. Special use. Applicable to both vendor and fleet pilots.

2. VFR flight evaluation "VFR FE" (fleet pilot only). This is the basic aircraft equipment check for a pilot that is limited to VFR only, or an evaluation conducted in a VFR only aircraft.

3. IFR/VFR flight evaluation "IFR/VFR FE" (fleet pilot only). This is the basic aircraft equipment check for a pilot that operates IFR in addition to VFR.

4. IFR only flight evaluation (fleet pilot only). This is the 6 month IFR flight evaluation conducted between annual IFR/VFR flight evaluations. It may also satisfy 14 CFR 61 requirements for an Instrument Proficiency Check when required. Unless administered by an OAS approved part 142 training facility, an IPC conducted by anyone other than a DOI pilot inspector does not meet DOI flight evaluation requirements.

C. Pilots Inspectors will use the evaluation standards contained in the FAA Commercial and Instrument Practical Test Standards (PTS) and the Interagency Airplane and Helicopter PTS's.

D. Prior to conducting a flight evaluation, the inspector will review the pilot's documented experience and currency in mission, other agency (i.e., FAA, State, USFS, NOAA) current approvals, and documented completion of appropriate formal training, as well as the inspector's personal knowledge of pilot's ability. Based on that assessment, the pilot inspector will determine which specific tasks will be evaluated during the flight. Specific tasks to be performed during fleet pilot flight evaluations are listed in the tables in paragraphs 16B and C. The legend for each table indicates the events that may be waived at the discretion of the inspector. For special use missions, pilot inspectors are granted more leeway in determining which events must be demonstrated. As a minimum, the inspector must evaluate the pilot in a flight profile representative of the mission to be flown. In no case may an evaluation flight itself be waived by the pilot inspector.

E. The use of waiver authority in paragraphs 16B and C is not automatic. Inspectors are cautioned to exercise professional judgment in the use of this authority. When an applicant demonstrates a high level of performance, inspectors should make more liberal use of the waiver authority. When an applicant's performance approaches minimum acceptable standards, however, none of the events of the flight evaluation should be waived.

F. In reviewing the tables in paragraphs 16B and C, inspectors are cautioned that some waiver provisions apply to portions of a series of events rather than to the whole event (e.g., stall prevention). Other events have specific conditions that must be fully met before waiver authority may be exercised (e.g., the second non-precision approach (NPA)). A discussion of the conditions and limitations of waiver authority is included with the discussion of the specific events in the following paragraphs.

G. Pilots performing special use activities for DOI as defined by OPM-29 must be evaluated and approved for each specific special use activity to be flown. Special use flight evaluations will be conducted by DOI OAS approved or designated pilot inspectors and will normally be flown in the like make and model aircraft that pilot will typically fly on these missions. The like-make-and-model list is found in OPM-23. Successful completion of a special use flight evaluation will be documented on the pilot's interagency pilot qualification card (OAS 30-A or B) to indicate the activity and approval duration. Recurrent special use flight evaluations will be conducted at the intervals specified in OPM-29.

H. Pilots may be authorized to conduct VFR only operations or a combination of VFR and IFR operations. Separate requirements have been established for VFR only flight evaluations and for combined VFR and IFR flight evaluations. For VFR only flight evaluations, some demonstration of the pilot's ability to maneuver the aircraft solely by reference to instruments will be included on each flight evaluation. This demonstration will be appropriate to the aircraft's installed equipment and the operating environment. (See note 7 to Airplane events table and note 4 to Helicopter events table.)

I. The required six month "IFR only" flight evaluation is not aircraft specific; that is, a single flight evaluation fulfilling the requirements 351 DM 3.5C(5)(c) is sufficient to qualify a DOI pilot in command (PIC) to conduct IFR operations in all types of IFR aircraft in which the PIC is qualified. An "IFR/VFR FE" simultaneously satisfies the requirements of an "IFR only" flight evaluation. An instrument proficiency check (IPC) administered by a non-government CFI, unless conducted at an OAS-approved Part 142 training facility, does not satisfy the requirement for an IFR flight evaluation.

16. FLEET PILOT EVALUATION PROCEDURES.

A. Pilot Inspectors Shall:

1. Confirm the specific type(s) of flight evaluation required. Review each pilot information form, OAS-64 or equivalent, for completeness and required experience and currency. Do not accept "on file" over the blanks in the flight time fields that are relevant to the flight evaluation to be performed (e.g. initial turbine aircraft qualification, special use mission evaluation). In all cases, pilots must indicate the total PIC time in category flown in the previous 12 months. Pilot experience should be verified by reviewing pilot's logbooks and military records as appropriate.

2. Confirm the pilot has their FAA pilot and medical certificates in their possession as well as a valid Photo ID. Confirm the medical examination was completed within the previous 12 months.

3. Conduct a thorough preflight briefing on all aspects of the flight including the roles and responsibilities of the inspector pilot and the pilot examinee. Ensure the pilot understands who the PIC is for the flight evaluation and that an OAS-69 is signed, by the pilot, before the flight portion of the evaluation.

NOTE: Fleet pilot flight evaluations are conducted under the operational control of examinee's bureau.

4. Review and explain safe operating practices with the pilot. This includes discussions concerning pressures to fly when conditions are less than adequate. If the pilot's bureau uses a risk management form, review the pilot's completed form and discuss the benefits of identifying and mitigating risks before the flight. If the pilot does not have a risk mitigation form completed, the Aviation Operations Checklist should be used to help identify factors which might negatively impact the flight.

5. All flight evaluations consist of two parts: An oral portion and/or written test of the evaluation and a checkride. The oral evaluation should normally be completed prior to the checkride, so the inspector can assess the pilot's ability to correctly respond to emergency situations inflight. Subject matter for a special use oral evaluation is found in the appropriate Interagency Practical Test Standard. The oral test should normally take a minimum of 60 minutes to accomplish. Examinees who do not demonstrate an adequate knowledge will not be permitted to proceed to the flight portion of the evaluation. Fleet pilot "VFR FE" and "IFR/VFR FE" oral tests must include at least the following subject matter:

- a. Appropriate provisions of 14 CFR 61, 91, and 135; the DM and applicable OPM's.
- b. Aircraft power plant, major components and systems, performance and operating limitations, standard and emergency operating procedures and the contents of the approved aircraft flight manual.
- c. Weight and balance.

- d. Airworthiness requirements.
- e. National Airspace System.
- f. Navigation and use of navigation aids, to include appropriate instrument approach facilities and procedures.
- g. Air traffic control procedures.
- h. Meteorology.
- i. Aeromedical factors.

NOTE: An "IFR only" oral test must at least cover areas a, e, f, g, and h.

6. Fleet pilots flying turbine aircraft are encouraged to receive emergency procedures and/or instrument training in an appropriately equipped Flight Simulator Training Device or in an actual aircraft under the supervision of a formal course instructor highly experienced in that make and model of aircraft. Pilot Inspectors may waive flight evaluation tasks (e.g., autorotation, emergency procedures, instrument approaches to minimums) which can more safely and realistically practiced in the FSTD or under the supervision of a formal course instructor provided these tasks were performed as part of an OAS Tech Services approved training program within the six month period preceding the flight evaluation.

- 7. Review and comply with any applicable Special Emphasis Items (SEI).

B. Fleet Airplane Pilot Flight Evaluations. The following tables outline the minimum maneuvers required to be evaluated in the flight evaluation portion of a fleet pilot airplane flight evaluation.

Legend:

- P Pilot in Command (PIC)
- B Both the PIC and Second in Command (SIC)
- # Both PIC and SIC may be waived at the discretion of the pilot inspector.
- ** May be waived at the discretion of the pilot inspector if evaluation is not conducted in conjunction with initial new-hire or initial equipment training.

AIRPLANE EVENTS	VFR FE	IFR/VFR FE	IFR only	NOTES
WRITTEN OR ORAL TEST	B	B	P	
GROUND OPERATIONS				
Preflight inspection	B	B	P	#
Start procedures	B	B		#
Taxiing/runway operations	B	B		#
Pre-takeoff checks	B	B	P	#
TAKEOFF AND DEPARTURES				
Normal	B	B		
Crosswind	B	B		1
Instrument		P	P	2
With power plant failure	B	B		3, ME ONLY
Rejected takeoff	P	P		4, ME ONLY

Short/soft field	P	P		
Area departure		P*	P*	
IN-FLIGHT MANEUVERS				
Steep turns	P**	P**	P**	
Stall prevention (approaches to stalls)	B	P	P	10
Power plant failure	P	P	P	

AIRPLANE EVENTS	VFR FE	IFR/VFR FE	IFR only	NOTES
INSTRUMENT PROCEDURES				
Area arrival		P*	P*	
Holding		P	P	
Normal precision approach (PA)		P	P	7
Engine-out approach		P	P	7, ME ONLY
Coupled approach		P	P*	8
Non-precision approach (NPA)		B	P	11
Second NPA		P	P*	11
Missed approach from a PA		P**	P*	
Missed approach		P	P	
Circling approach		P	P	17
LANDINGS AND APPROACHES TO LANDINGS				12
Normal	B	B		13
Crosswind	B	B		5
Landing from an PA		P**	P*	14
Landing with engine out	B	B		16, ME Only
Landing from circling or straight-in approach		P	P	17
Rejected landing		P		15
Short/Soft Field landing	P	P		
No flap approach & landing	P	P		6
SEA OPERATIONS				
Normal takeoff & landing	B	B		
Step turns	P **	P **		
Glassy & rough water	P **	P **		
Sailing	P **	P **		
Docking	P **	P **		
Ramping/Beaching	P **	P **		
NON-NORMAL AND EMERGENCY PROCEDURES				
System malfunction	B	B	P	#
Maneuver by partial panel	B	B	P	9
Unusual attitude recovery	B	B	P	
Emergency landing	B	B		SE Only
Inadvertent IMC	B			18
USE OF CHECKLISTS	B	B	B	

NOTES TO THE AIRPLANE EVENTS TABLE

1. **Crosswind Takeoffs.** A crosswind takeoff from a standing or rolling start (not a touch-and-go) must be evaluated to the extent practical on all flight evaluations. When appropriate, a crosswind takeoff may be evaluated simultaneously with other types of takeoffs. Inspectors will usually have very little control over existing meteorological, airport, and traffic conditions. Inspectors are expected to make a reasonable attempt to evaluate a takeoff on a runway not favorably aligned with the prevailing wind. It will frequently be necessary, however, to evaluate this event with the crosswind component that exists on the active runway.

2. **Instrument Takeoff.** An instrument takeoff is defined as one in which instrument conditions (standard departure visibility is 1 mile or less if approved) are encountered or simulated at or before reaching an altitude of 100 feet above airport elevation. An applicant must be evaluated on the ability to control the airplane, including making the transition to instruments as visual cues deteriorate. An applicant must also be evaluated on the planning of the transition to an instrument navigation environment. This event may be conveniently combined with an area departure.

3. **Engine Failure on Takeoff** (For Multi-Engine Airplanes). An applicant must demonstrate the ability to maintain control of the airplane and to continue a takeoff with the failure of the most critical power plant. The failure must be simulated. The takeoff configuration, airspeeds, and operational procedures must be in accordance with the aircraft operating manual.

This event is to be simulated at an altitude greater than 3000 feet AGL, with the aircraft slowed to V1 or Vsse (as appropriate), configured for takeoff and climbing at a rate sustainable with takeoff power in both engines. The engine failure must be introduced at a speed greater than takeoff decision speed (V1) or Vsse and appropriate to the airplane and the prevailing conditions.

4. **Rejected Takeoff.** A rejected takeoff is a potentially hazardous situation that flight crews must be trained to handle correctly. As a testing event, it must be presented in a realistic and meaningful manner. The event is a test of an applicant's ability to correctly respond to a critical situation and to correctly manage the actions necessary for safeguarding the airplane and passengers once the airplane is brought to a stop.

Inspectors are expected to use caution when inducing a rejected takeoff in an airplane for flight evaluation purposes. In all DOI multi-engine airplanes, the rejected takeoff must be performed at a speed of less than 50 percent of minimum controllable airspeed (VMC) with the critical engine inoperative.

An applicant must be able to recognize the need to initiate a rejected takeoff, perform the correct procedures in a timely manner, and to bring the airplane to a stop on the runway. Once the airplane is brought to a stop, appropriate procedures must be initiated. Consideration must be given to the possibility of overheated brakes and fire.

5. **Crosswind Landings.** A manually controlled landing with a crosswind must be evaluated on all flight evaluations. The crosswind landing may be combined with any other landing event. Inspectors usually have little control over existing meteorological, airport, and traffic conditions. As such, an inspector is

expected to make a reasonable attempt to evaluate a landing on a runway not favorably aligned with the prevailing wind. It will frequently be necessary, however, to evaluate this event with the crosswind component currently existing on the active runway.

6. **No-Flap or Partial-Flap Landings.** No-flap or partial-flap landings are not required for transport category aircraft when landing data is not provided or when prohibited by the manufacturer.

7. **Precision Approach.** Inspectors must require examinees to fly a minimum of one PA. In a multi-engine airplane, one manually controlled PA with a powerplant failure is required. The engine-out PA may be substituted for the normal PA and combined into one event at the option of the inspector administering the check.

When the aircraft operating manual prohibits raw data approaches, the flight director (FD) must be used during the manually controlled precision approach. In this case, a raw data approach is not required to complete the flight evaluation.

If the aircraft operating manual permits raw data precision approaches to be conducted, the inspector should evaluate the pilot in the use of raw data for controlling an airplane during a precision approach. If the airplanes are equipped with a FD system, the FD should be used on at least one manually controlled precision approach. While a raw data approach is not required to complete a flight evaluation, inspectors should occasionally require a raw data approach to determine whether the pilot's training program is adequately preparing them for this event.

8. **Coupled Approach.** When the airplane is equipped with autopilot couplers, at least one coupled autopilot precision approach must be flown. The autopilot coupled approach may be combined with the normal precision (all-engines-operative) approach. This combination is permitted because the applicant's ability to manually control a PA is evaluated on the PA with an engine out.

9. **Partial Panel.** To be evaluated on airplanes not having standby instrumentation. In Technically Advanced Aircraft, simulate an AHRS, ADC (single installations) or display failure.

10. **Stall Prevention (Approaches to Stalls).** Inspectors must evaluate the applicant's ability to recognize and recover from an impending stall in three separate airplane configurations: clean configuration, takeoff configuration (except where the airplane uses only a zero-flap takeoff configuration), and landing configuration. At least one impending stall recovery must be performed while in a turn with a bank angle between 15 and 30 degrees. One impending stall should be initiated by commands to the autopilot (if installed).

The inspector is responsible for establishing the flight conditions associated with the configuration being evaluated. While the pilot may fly the entry profile, the pilot will not be evaluated on the entry. The satisfactory completion of the event is based on the pilot's initiating recovery at the first indication of an impending stall (e.g., buffet, stick shaker, or aural warning) and the accomplishment of the proper recovery procedure.

When evaluation of stall prevention is performed in an airplane, a minimum entry and recovery altitude of 1500' AGL (single engine aircraft) and 3000' AGL (multi-engine) must be observed. The entry parameters, including weight and balance, should be within airplane limitations to ensure adequate performance for recovery from first indication of an impending stall.

When the flight evaluation is conducted in an FSTD, inspectors should occasionally require an applicant to recover from an impending stall at high altitude. Evaluation of stall prevention in various flight regimes should be accomplished to determine whether the pilot's training program has adequately prepared pilots for flight in those regimes.

Evaluation of stall prevention must not be based on altitude loss. Pilots must be evaluated on recovering at the first indication of an impending stall, even if it is based on an aural or visual indication that occurs before the stick shaker or stick pusher (if installed), and their timely and effective use of available energy (i.e., altitude and speed) during recovery. The inspector must consider the variables that are present at the time of the indication of an impending stall and their effect on the recovery. Evaluation criteria are:

- Prompt recognition of impending stall
- Correct application of the stall recovery procedure
- Recovery without exceeding the airplane's limitations

Stall recovery procedures must be in accordance with the aircraft operating manual (if applicable). Inspectors may waive all but one of the impending stall recoveries. This waiver authority should be used when an applicant's performance in other events indicates a high degree of proficiency. For light airplanes, where it is appropriate to slow past the warning signs of imminent stall, the maneuver may be taken to a full stall at the inspector's discretion.

11. Non-Precision Approaches (NPAs). Inspectors must require pilots to demonstrate two non-precision instrument approaches. The second approach must be based on a different type of Navigational Aid (NAVAID) than the first approach. The second approach may be waived if an applicant demonstrates a high degree of proficiency on the first approach and the applicant's training records or instructor certification show that the applicant has satisfactorily completed the NPA training requirements.

Inspectors must allow the applicant to use any aid normally available in the cockpit, such as the FD and drift and groundspeed readouts. Many pilots train to perform NPAs using the autopilot. At least one NPA must be manually flown on the flight evaluation.

When NPAs are conducted in an FSTD, a crosswind component of 10 to 15 knots must be used on at least one of the NPAs. The purpose of the crosswind component is to test an applicant's ability to track the approach course, not to evaluate crosswind landings. Crosswind landings, however, may be combined with a NPA.

In an airplane, the vision restriction device must remain in use until the airplane arrives at the minimum descent altitude (MDA) and a distance from the runway approximating the required visibility for the approach. In an FSTD, inspectors must enter a ceiling of approximately 50 feet higher than the published MDA. A visibility value of approximately $\frac{1}{4}$ mile greater than the published minimums value must be used, depending on the characteristics of the particular FSTD.

NOTE: If the approach to be conducted is a lateral navigation (LNAV)/vertical navigation (VNAV) with a published decision altitude (DA), the FSTD visibility should be set to the HAT at the DA, divided by 300 feet (a constant), then add mile. For example:

- To set FSTD visibility where DA = 1000 feet and HAT at DA = 600 feet
- Divide 600 feet by 300 feet= 2 (miles visibility)
- Add ¼ mile visibility and set FSTD visibility at 2 ¼ miles

This setting permits the flight crew to acquire the approach lights visually before reaching the published DA, and precludes an unnecessary missed approach when the approach is otherwise satisfactory.

When tracking is accomplished by means of an Automatic Direction Finder (ADF) bearing pointer, the tolerance is ± 5 degrees of the final approach course. When tracking a localizer signal, the tolerance is a 1/4-scale deviation (1/2-dot). When tracking a Very high frequency Omni-directional Range station (VOR) signal, the tolerance is a ¼ -scale deviation of the Course Deviation Indicator (CDI). The reason for these tolerances is to ensure terrain clearance. Also, at the Visual Descent Point (VDP) or its equivalent, the airplane must be in a position that it can be aligned with the runway without excessive maneuvering. Turbo-jet airplanes must be stabilized before descending below the MDA or 500 feet, whichever is lower.

Any non-precision approach for which the aircraft is equipped may be accomplished at the discretion of the inspector.

12. Landing Events. A total of three manually controlled landings must be accomplished on all flight evaluations. When a two-segment FSTD and airplane flight evaluation is conducted, a minimum of three manually controlled landings must be performed in the airplane. If the flight evaluation is conducted in an amphibious airplane, one landing must be on water.

The required events are as follows:

13. Normal Landings. A normal landing is defined as a manually controlled landing in the normal landing configuration (as specified in the operator's aircraft operating manual), with normal power available, and without reference to an electronic glide slope. A normal landing can be accomplished from either a visual pattern or from an NPA.

14. Landing in Sequence from a Precision Approach. On the landing from a precision approach, the runway environment should become visible to the applicant as close as possible to the DH being used for the flight evaluation. The applicant must complete the landing without excessive maneuvering and within the TDZ. The approach angle must not be erratic, excessively steep, or shallow in the visual segment.

15. Rejected Landing. The rejected landing must be initiated from a point approximately 50 feet above the runway. This event may be combined with an instrument missed approach.

16. Engine-Out Landing. One landing with the most critical powerplant inoperative must be evaluated. When a two-segment flight evaluation is conducted, this event may be performed in the FSTD. When conducted in an airplane, the engine failure must be simulated.

17. Circling Approach Maneuver. To qualify as a circling approach for flight evaluation purposes, the procedure to be flown must require a change in heading from the final approach course to the runway heading of at least 90 degrees. This event may be waived if local conditions, beyond the control of the

applicant (traffic or available approaches), prevent it from being conducted in a realistic manner. SICs need not be evaluated in circling approaches when the bureau's procedures restrict SICs from conducting this event.

18. Inadvertent IMC. Inspectors must ensure pilots accomplish this event in an aircraft typical of the aircraft used in normal operations (or in an appropriately equipped FSTD.) The event should reflect a realistic course of action the pilot might take to escape from an inadvertent encounter with instrument meteorological conditions (IMC). When the pilot is authorized to operate an appropriately equipped aircraft and the check is conducted at a location where an ILS is operational, demonstrate an ILS approach. Inspectors may also evaluate a letdown on partial panel when this would be an appropriate course of action. In airplanes that do not have instrumentation or navigation aids appropriate for demonstrating an instrument approach, the inspector must test the applicant's knowledge of avoiding inadvertent IMC.

(end of airplane flight evaluation notes)

C. Fleet Helicopter Pilot Flight Evaluations. The following tables outline the minimum maneuvers required to be evaluated in the flight evaluation portion of a fleet pilot helicopter flight evaluation. Requirements are indicated in columns marked "VFR FE", "IFR/VFR FE", "IFR only", and "NVED/NVG" on each table.

Legend:

P - Pilot in Command (PIC)

B - Both the PIC and Second in Command (SIC)

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

* - This will include a simulated night vision goggle (NVG) failure with appropriate recovery procedures.

** - May be waived at the discretion of the inspector when the check is not conducted in conjunction with initial new-hire or initial equipment training. Inspectors should not waive an event for convenience, but must not hesitate to use the waiver authority for the purpose of safety.

*** - This maneuver may be waived at the discretion of the inspector when the check is not conducted in conjunction with initial new-hire or initial equipment training. Initial night vision enhancement device (NVED)/NVG training does not require this maneuver to be demonstrated or performed.

HELICOPTER EVENTS	VFR FE	IFR/VFR FE	IFR only	NVED/NVG	NOTES,14
WRITTEN OR ORAL TEST	B	B	P	B	
GROUND OPERATIONS					
Preflight inspection	B	B	P	B	#
Start procedures	B	B		B	#
Taxiing and ground hover	B	B		B	#
Pre-takeoff checks	B	B	P	B	#

*Property of the United States Government
This Document Contains Sensitive But Unclassified Information
Do not remove this notice
Properly destroy when no longer needed*

HELICOPTER EVENTS	VFR FE	IFR/VFR FE	IFR ONLY	NVED/NVG	NOTES,14
TAKEOFF AND DEPARTURES					
Normal	B	B		B	
Instrument		P	P		1
With power plant failure	B	B		B	ME Only
Rapid deceleration	P	P		B	2
Area departure		P**			
IN-FLIGHT MANEUVERS					
Steep turns		P**			
Settling with power	B	B	P	B***	
INSTRUMENT PROCEDURES					
Area arrival		P**			
Holding		P**	P**		
Normal precision approach (PA)		B	P		3
Engine-out approach		P	P		4, ME Only
Coupled approach		P	P		5
Non-precision approach (NPA)		B	P		6
Second NPA		P**	P**		6
Missed approach from a PA		P**			
Missed approach		P	P		
Circling approach		P	P		7
LANDINGS AND APPROACHES TO LANDINGS					8
Normal	B	B	P	B	9
Landing from a PA		P			10
With engine out (simulated)	B	B	P	B	13 ME Only
From circling or straight-in approach		P			7
SEA & SKI OPERATIONS (If applicable)					
Normal takeoff & landing	B	B	P	B	
ABNORMAL AND EMERGENCY PROCEDURES					
System malfunction	B	B	P	B*	#
Inadvertent IMC	B	B	B	B	11
Maneuver by partial panel	B	B	P		12
Unusual attitude recovery	B	B	P	B	

HELICOPTER EVENTS	VFR FE	IFR/VFR FE	IFR only	NVED/NVG	NOTES,14
Unusual attitude recovery	B	B	P	B	
Power failure and autorotation to a power recovery	B	B	P	B	SE Only 15
Hovering autorotations	B	B	P	B	SE Only 15
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		B	
Slope operations	P	P		B	
Ground hazard recognition				B	
Brownout/whiteout/flat light operations				B	
Use of external lighting				B	
USE OF CHECKLISTS	B	B	B		

NOTES TO THE HELICOPTER EVENTS TABLE

1. **Instrument Takeoff.** An instrument takeoff is defined as one in which instrument conditions are encountered or simulated at or before reaching an altitude of 100 feet above the airport elevation. The applicant must be evaluated on control of the helicopter including transition to instruments as visual cues deteriorate. The applicant must also be evaluated on planning for the transition to an instrument navigation environment. This event may be conveniently combined with an area departure.

2. **Rejected Takeoff.** A rejected takeoff is a potentially hazardous event, it should be presented in a realistic manner; however, it must be consistent with safety.

In single-engine helicopters, inspectors must introduce a simulated problem so that a quick stop is required. Inspectors must not introduce a simulated powerplant failure when testing this event in a single-engine helicopter. Instead, this event might be introduced by requesting the applicant to climb over a simulated obstacle on takeoff. Once the takeoff is in progress, the inspector can then inform the applicant that the climb will not clear the simulated obstacle.

In multi-engine helicopters, inspectors must introduce a problem requiring an abort before the helicopter reaches a speed at which the helicopter is committed to takeoff.

Inspectors must take precautions to introduce the simulated failure at a reasonable airspeed and altitude, giving due consideration to the helicopter's characteristics, length of landing area, surface conditions, wind direction and velocity, and any other pertinent factors that may adversely affect safety.

NOTE: The performance characteristics of some non-transport helicopters may make the introduction of a simulated engine failure on takeoff a potential hazardous situation. When conducting a flight evaluation in such helicopters, inspectors should use their authority to waive or modify the event.

3. **Precision Approaches.** Inspectors must require pilots to fly a minimum of one normal, all engines operative, PA. In addition, when multiengine helicopters are used, one manually controlled PA with an accompanying power plant failure is also required.

When the aircraft operating manual requires the use of a flight director, the flight director must be used during the manual controlled precision approaches. If the manually controlled PA is flown using a flight director, a raw data approach is not required to complete the flight evaluation. When the flight director is used on a PA, the applicant must be required to use a decision height (DH) of 100 feet above the touchdown zone (TDZ). The DH must be determined by the barometric altimeter. Inspectors must ensure that the applicant is aware that this DH is for flight evaluation purposes only and does not correlate to any minimums used in actual operations.

If the aircraft operating manual permits the performance of raw data precision approaches, the bureau must train pilots on the use of raw data for controlling the aircraft during the approach. In this case, the flight director must be used on at least one manually controlled PA. While a raw data approach is not required to complete the flight evaluation, inspectors should occasionally require a raw data approach to determine whether the pilot's training program is adequately preparing pilots. For raw data precision approaches, the inspector must require the applicant to use a DH of 200 feet above the TDZ. The inspector must ensure that the applicant is aware that this DH is for flight evaluation purposes only and does not correlate to any minimums used in actual operations.

When helicopters are equipped with autopilot couplers, at least one coupled autopilot PA must be flown. If the autopilot has the capability and the pilot is authorized to conduct automatic landings, the coupled approach must terminate in either an autoland or a coupled-missed approach. When the flight evaluation is conducted in a multiengine helicopter, the autopilot-coupled approach may be combined with the normal precision (all engines operative) approach. This combination is permitted because the applicant's ability to manually control a PA is evaluated on the PA with an engine out.

The vision restriction device must remain in use until just before the helicopter arrives at the DH used for the flight evaluation.

During each phase of the approach, the airspeed must not deviate from the target speed by more than the tolerances specified in the Practical Test Standards (PTS). The inspector must ensure that the applicant is aware that this DH is for flight evaluation purposes only and does not correlate to any minimums used in actual operations. If the flight evaluation is being conducted in actual weather conditions, the DH must be the published DH.

4. **Engine-out approach.** In multi-engine helicopters, an engine-out instrument landing system (ILS) may be substituted for the normal ILS at the option of the inspector administering the check.

5. **Coupled Approach.** The pilot must demonstrate the ability to use all installed equipment including autopilots and flight directors (FD).

6. **Non-Precision Approaches.** The inspector must require the applicant to demonstrate two different types of manual-controlled non-precision instrument approaches.

The inspector must allow the applicant to use any aid usually available in the cockpit, such as flight director, drift, and ground speed readouts. Some pilots train to perform non-precision approaches using the autopilot. While this training should be encouraged, at least one non-precision approach must be manually flown on the flight evaluation.

The vision restriction device must remain in place until the helicopter arrives at minimum descent altitude (MDA) and a distance from the runway approximating the required visibility for the approach. Pilots must remain within the tolerance established for terrain clearance. Also, at the visual descent point or its equivalent, the aircraft must be in a position that it can be aligned with the runway without excessive maneuvering.

Any two non-precision approaches may be accomplished at the discretion of the inspector conducting the check.

7. **Circling Approach Maneuver.** To qualify as a circling approach for flight evaluation purposes, the procedure to be flown must require a change in heading from the final approach course to the runway heading of at least 90 degrees. This event may be waived if local conditions, beyond the control of the applicant (traffic or available approaches), prevent it from being conducted in a realistic manner. SICs need not be evaluated in circling approaches.

8. **Landing Events.** The following landings are required but may be combined when appropriate:

9. **Normal Landing.** A normal landing is defined as an approach to a stabilized hover or a touchdown, with normal power available. A normal landing can be accomplished from either a visual pattern or from a non-precision approach.

10. **Landing in Sequence from a PA.** On the landing from a PA, the runway environment should become visible to the applicant as close as possible to the DH being used for flight evaluation purposes. An applicant must complete the approach to a landing or stabilized hover without excessive maneuvering and within the runway TDZ. The approach angle must not be erratic, excessively steep, or shallow in the visual segment.

11. **Inadvertent IMC.** The event should reflect a realistic course of action the pilot might take to escape from an encounter with inadvertent instrument meteorological conditions (IMC). Training and checking must provide emphasis on avoidance of inadvertent IMC, including the discipline and decision making required to divert, make a precautionary landing, or make an emergency transition to IFR, as appropriate to the circumstances. When appropriate, this event must include attitude instrument flying, recovery from unusual attitudes, navigation, air traffic control (ATC) communications, and at least one instrument approach. If the aircraft is appropriately equipped and the evaluation is conducted where a PA available, then a PA is required. If unable to conduct a PA, then require a NPA. If the aircraft is not equipped with any IFR equipment then test the applicant's knowledge and procedures for inadvertent IMC avoidance.

NOTE: Non-instrument rated pilots need not demonstrate instrument approach proficiency.

12. **Partial Panel.** To be evaluated in helicopters not having standby instrumentation. In Technically

Advanced Aircraft, simulate an AHRS, ADC (single installations) or display failure.

13. **Maneuver and Landing with a Power plant Inoperative.** Multi-Engine Helicopters. Inspectors should introduce this event in a realistic manner. Consideration should be given to the helicopter weight, atmospheric conditions, and helicopter position. The helicopter position at the onset of the engine failure should allow enough room for the applicant to maneuver the helicopter and to exercise judgment.

14. **NVG Check.** The accomplishment of the NVG check does not meet the requirements of a VFR FE or IFR/VFR FE, unless all requirements for a VFR FE or IFR/VFR FE, if required, are completed.

15. **Autorotations.** (Single Engine Helicopters only). May be waived provided the inspector was able to personally observe or review documentation of proficiency in this event performed during factory or other OAS-approved training within a 6 month period preceding the flight evaluation. The intent is that DOI helicopter pilots demonstrate proficiency in autorotations at least once every 12 months. Pilot inspectors should not waive autorotations if the pilot's ability to regularly receive factory or other OAS approved autorotation training is in doubt. All autorotations during OAS administered flight evaluations must terminate in a power on recovery.

(end of notes to helicopter event table)

D. Special Use Flight Evaluations. Special use pilots will be evaluated against criteria listed in the Interagency Practical Test Standards. Special use flight evaluations shall check the performance of the pilots in a manner which accurately simulates the anticipated mission requirements and conditions.

E. Administrative Procedures.

1. If the aircrew member meets all specified requirements, the inspector will complete the inspector's portion of the pilot information form and issue a pilot card (OAS-36 series). The card will indicate (where appropriate) the type of aircraft and special use mission the pilot is authorized to fly. The expiration date of each qualification may be for no more than that allowed by OPMs and DM. Expiration dates should be noted by MM/YY and are valid through the last day of the expiration month.

2. Recording of flight evaluations. Form OAS-69, Interagency Pilot Evaluation/Qualification Check, will be used to record all flight evaluations. If any deficiencies are identified during the evaluation, a written statement describing the deficiencies will be made in the remarks section of the form. For fleet pilots, the completed OAS-69 will be attached to OAS-64 and forwarded to OAS Technical Services for retention in the official record.

F. Restrictions and limitations. (Fleet)

1. As a matter of policy, if a situation develops which requires the inspector to take control of the aircraft in the interest of safety, the pilot will be considered to have failed the evaluation and shall not be issued a pilot qualification card regardless of how good the pilot's performance was in all other aspects of the operation. Any decision on when to attempt a re-evaluation will be coordinated by the Pilot Inspector with their respective Regional Director.

2. A thorough preflight briefing with the pilot shall be held to clearly define how the inspector may simulate engine failures. In multi-engine airplanes, before complete shutdown of any power plant, determine that the aircraft can maintain flight under the most adverse conditions with only the remaining

power.

3. In no case will an engine be shut down in flight in single engine airplanes or any helicopter. Shutdown of engines on multi-engine aircraft may only be performed if there is no training device available with which to evaluate engine failure and restart procedures. OAS Technical Services must approve engine shutdown operations for training/evaluation purposes in advance.

4. In multiengine airplanes below 3000 feet AGL, only the throttle/power lever will be used to reduce power in a simulated engine failure. Below 3,000 feet AGL, free turbine engines will be set to zero thrust, not feathered.

5. Inspectors will adhere to the minimum safe altitudes as described in the appropriate FAA Practical Test Standards or Interagency PTS for the maneuver demonstrated.

6. The use of an aircraft without fully functioning dual controls is at the discretion of the inspector.

7. Pilots will not be given multiple, simultaneous emergencies.

8. Inspectors will adhere to the limitations as described in the aircraft's flight manual or operating handbook.

9. Helicopter only- Low-level autorotations, simulated stuck pedal landings, tail rotor failure landings, and low-level power recoveries will be evaluated during pilot evaluations only in very controlled situations approved by the Regional Directors or the Technical Services Division Chief upon recommendation from the appropriate national standardization pilot. Inspectors must be endorsed annually to perform these maneuvers.

10. Touchdown autorotations in fleet helicopters are prohibited, except when required for FAA airman certification with approval from the Technical Services Division Chief.

17. CONTRACT AIRCREW EVALUATION PROCEDURES.

A. Pilot Inspectors shall:

1. Confirm the specific type(s) of flight evaluation required. Review each pilot information form, OAS-64 or the equivalent, for required experience and currency. Do not accept "on file" in the flight time fields that are relevant to the flight evaluation to be performed (e.g. initial turbine aircraft qualification, special use mission evaluation). In all cases, pilots must indicate the total PIC time in category flown in the previous 12 months. Pilot experience should be verified by reviewing pilot's logbooks, company records, and military records as appropriate. For a pilot that has not been previously inspected and approved by OAS or the Forest Service, the Contractor is required to provide a signed statement that they have verified the pilot's flight time qualifications and experience. Review this statement prior to conducting the flight evaluation.

2. Review all airmen and medical certificates required by the specifications including date of last medical and ensure the pilot has a photo ID in their possession.

3. Verify that vendor pilots from 135 operators have complied with Part 135 Aircrew

Qualification Checkride Requirements within the last 12 months for VFR operations and the last 6 months for IFR operations. A copy of Form FAA 8410-3 must be attached verifying completion of the required FAR 135 flight evaluations. The Part 135 flight evaluation must be appropriate for the operation (IFR, VFR) intended. For contracts requiring multi-engine IFR flight, the pilot's FAA Form 8410-3 must be endorsed for "single pilot with autopilot" unless a copilot crew position is specified.

4. Review and explain safe operating practices with the pilot. This includes discussions concerning pressures to fly when conditions are less than adequate. If the pilot's company uses a risk mitigation form, review the pilot's completed form and discuss the benefits of identifying and mitigating risks before the flight. If the pilot does not have a risk mitigation form completed, the Aviation Operations Checklist should be used to help identify factors which might negatively impact the flight.

5. Conduct a thorough preflight briefing on all aspects of the flight including the roles and responsibilities of the inspector pilot and the pilot being evaluated. Ensure the pilot understands who the PIC is for the flight evaluation and that an OAS-69 is signed by the pilot before the flight portion of the evaluation.

6. If rapid refueling is specified in the contract, query a vendor pilot if they are aware of the following basic contract restrictions.

- a. DOI requires the pilot to be on board and at the controls when the engine is running.
- b. Since hot refueling requires close coordination between the pilot and the refueler, it should only be used if operational requirements demand fast turnaround times of the aircraft.
- c. DOI does not allow passengers on board the aircraft during any refueling operation.

7. Flight evaluations consist of two parts: An oral test and a flight evaluation. The oral test must be completed prior to the flight evaluation. Subject matter for a special use oral test is found in the appropriate Interagency Practical Test Standard. The oral test for contract pilots should normally take a minimum of 30 minutes to accomplish. Examinees who do not demonstrate an adequate knowledge will not be permitted to proceed to the flight portion of the evaluation.

8. Review and comply with any applicable Special Emphasis Items (SEI).

B. Special Use Flight Evaluations. Special use pilots will be evaluated against criteria listed in the appropriate Interagency Practical Test Standards. Special use flight evaluations shall check the performance of the pilots in a manner which accurately simulates the anticipated mission requirements and conditions. Special use flight evaluations of vendors NOT currently on a DOI task order are flown under the vendor's operational control. Special use mission flight evaluations for vendors under flying under current task orders with DOI will be considered under the operational control of the tasking bureau since the contracted aircraft are considered government aircraft. This should only be an issue on rappel and short haul flight evaluations which must be flown as public aircraft operations.

C. Administrative Procedures.

1. If the aircrew member meets all specified requirements, the inspector will complete the inspector's portion of the pilot information form and issue a pilot card (OAS-30 series). The card will

indicate (where appropriate) the type of aircraft and special use mission the pilot is authorized to fly. The card may also be annotated to indicate the pilot has met any unique contract qualifications (e.g., wild horse and burro experience, Navy operations, completion of volcano gas sensing briefing, etc.) that do not require a specific special use flight evaluation. The expiration date of each qualification may be for no more than that allowed by OPMs and DM. Expiration dates should be noted by MM/YY and are valid through the last day of the expiration month.

2. Recording of flight evaluations. Form OAS-69, Interagency Pilot Evaluation/Qualification Check, will be used to record all flight evaluations. If any deficiencies are identified during the evaluation, a written statement describing the deficiencies will be made in the remarks section of the form. The completed form will be attached to other pilot records and forwarded through the appropriate OAS regional office.

D. Restrictions and Limitations. (Contractor)

1. DOI special use flight evaluations should not duplicate FAA flight inspections. The FAA is responsible for conducting pilot evaluations in accordance with contractor's certificates. DOI is responsible for conducting special use flight evaluations in accordance with contract specifications and the applicable Interagency Practical Test Standards. This mandate to not duplicate does not preclude a DOI inspector from failing an applicant due to observed deficiencies in basic flying skills normally inspected by the FAA.

2. As a matter of policy, if a situation develops which requires the inspector to take control of the aircraft in the interests of safety, the pilot will be considered to have failed the evaluation and shall not be issued a pilot qualification card regardless of how good the pilot's performance was in all other aspects of the operations.

3. Inspectors will adhere to the minimum safe altitudes as described in the appropriate FAA Practical Test Standards or Interagency PTS for the maneuvers demonstrated.

4. The use of an aircraft without fully functioning dual controls is at the discretion of the inspector.

5. Pilots will not be given multiple, simultaneous emergencies.

6. Inspectors will adhere to the limitations as described in the aircraft's flight manual or pilot operating handbook.

7. When required per the Interagency PTS, only the throttle/power lever will be used to reduce power in a simulated engine failure. Airplane low level simulated engine failures must be done over an area where a safe and legal landing may be completed if necessary.

8. Emergency procedures assessed during a DOI special use flight evaluation should be simulated only using scenario based oral testing except in cases where actually performing the emergency function is required by the IPTS for that special use activity (i.e. emergency jettison of load during short haul or SEAT evaluations, simulated engine failure during low level flight, etc.).

9. During vendor pilot evaluations, inspectors must not simulate emergencies by pulling circuit

breakers, reducing power (except low level airplane evaluations), requiring demonstration of emergency gear extension, etc. These types of evaluations are the FAA's responsibility.

10. A thorough preflight briefing with the pilot shall clearly define how the inspector may simulate emergencies and how true emergencies will be handled.

11. Helicopter - Autorotations, simulated stuck pedals, simulated tail rotor failures, simulated hydraulic failures during vendor pilot special use flight evaluations are prohibited.

12. OAS Pilot Inspectors will not train contractor pilots. If deficiencies are noted during a flight evaluation, it is the contractor's responsibility to provide corrective training.

18. DOCUMENTING CONTRACT INSPECTION DEFICIENCIES

A. The Inspector will document contract compliance deficiencies on the OAS-68, Inspection Report. Use OAS-68D Aircraft Pre-Use Inspection Discrepancy Reports to record specific aircraft discrepancies and subsequent corrective actions and reference the presence of aircraft discrepancies on the OAS-68. Submit these forms to the COTR and notify the CO that deficiencies are present. Deficiencies include:

1. Aircraft, pilots, vehicles unavailable or not ready for inspection.
2. Required items and equipment listed in the contract but not installed or with the operator.
3. All safety of flight issues found during the inspection process.
4. Any documents or data found questionable during an inspection.
5. All open requests to third parties for clarification or ruling on conflicting subjects.
(Include the statement "requested clarification.")

B. The Inspector may list items found that are not a safety of flight or contract requirement on the inspection deficiency report form with notation "info only".

1. This "info only" notation is best used when providing operators added helpful information that is not considered a deficiency. (If you are climbing around and inspecting an operator's aircraft, why not provide them a list of things you have spotted?)

2. The use of personal "info only" notes is totally optional.
3. Examples of the proper use of this list:
 - a. Working rivets found on a nonstructural part of the aircraft.
 - b. A short positive statement that the records were found in great condition or the aircraft is in good shape.

19. ENDING CONTRACTOR INSPECTIONS/OUT-BRIEF PROCEDURES

*Property of the United States Government
This Document Contains Sensitive But Unclassified Information
Do not remove this notice
Properly destroy when no longer needed*

A. Out-Brief Preparation.

1. The inspector(s) will:

- a. Review any open-ended items that require additional attention or inspections such as ground support vehicles, fuel tanks, buckets, longlines, and remote hooks.
- b. Review all documents for completion.
- c. Ensure that the list of aircraft and equipment inspected is complete.

2. The Lead Inspector (if designated) will:

- a. Review all completed documents for accuracy.
- b. Ensure that the proper documents have been submitted.

B. Out-Brief with Vendor. The Inspector will:

1. Conduct a formal out-brief after the inspection is complete. The inspector may provide the vendor with updates, including deficiencies noted, during the course of the inspection, provided these updates do not significantly delay the completion of the inspection.

2. Explain the OAS-68, Inspection Report, including any approvals and discrepancies. If there are discrepancies, advise the contractor of the 60-day suspense date and document it on the OAS-68.

3. Try to keep the update positive, regardless of the inspection outcome. Do not allow the debrief to deteriorate into an argument over the validity of one or more noted deficiencies. In some cases, it may be useful to categorize the inspection as Compliance in Question/Research Required and settle any outstanding issues after consulting with the COTR, COR, CO or OAS HQ. Ask the contractor's representative to sign the OAS-68 or discrepancy report only in the event of a failure. If the representative refuses to sign to report, annotate the form accordingly.

20. ENDING INSPECTIONS EARLY. Problems encountered during an inspection can sometimes lead to a decision to discontinue the inspection prior to completion. If more than one inspector is involved, the lead inspector is responsible for making and announcing the decision. If the Inspector decides to end the inspection plan early, he or she will:

A. Immediately communicate this decision to the Regional Director and the Contracting Officer.

B. Document the discrepancies on the OAS-68 with the annotation, "Inspection terminated. Deficiencies noted may not be all inclusive. Pilot/aircraft/equipment not adequately prepared or available for inspection (as appropriate)."

C. Complete the "re-inspection schedule" section of the OAS-68, obtain the vendor's signature, and provide the vendor with a copy. If the vendor fails to maintain a helpful and courteous atmosphere, the inspector will depart and contact their supervisor. Inspectors shall remain courteous and non-confrontational.

21. STANDARDS OF PROFESSIONALISM. The following are basic direction and guidance for inspectors pertaining to principles of conduct during inspections.

A. The inspector is always in the public eye. Be sensitive to the responsibilities and demands of the inspector's position. OAS expects the inspectors to exercise good judgment, dress appropriately and behave professionally at all times.

B. Verify that subjects being communicated are understood by all, especially deficiency corrections etc.

C. Avoid lengthy conversations that are not related to the task at hand. D. Be objective and impartial while performing the inspection.

E. Listen objectively to the suggestions and comments of others. Demonstrate attention to and an understanding of their concerns.

F. Be sensitive to actual as well as perceived appearances of any conflict of interest that could disrupt the effectiveness or credibility of the inspection. Do not wear anything that reflects or promotes a contractor or anything of a political nature, etc.

G. Resolve professional differences of opinion by submitting a request for clarification or ruling from OAS HQ. This allows the inspection to stay on task and places the required research or approval in another location with the time and resources available to assist.

H. Avoid any action or inaction that contributes to the public perception of unfair treatment.

I. Do not spread privileged information or gossip about other companies that you may have inspected, especially direct competitors.

22. EXCEPTIONS, LIMITATIONS. This instruction was designed to be in compliance with the applicable provisions of 14 CFR, the Department Manuals, and OPMs. When a conflict with a higher level regulation or contract exists, the higher level must take precedence. Please direct questions to your Regional Director.

23. UPDATING THIS INSTRUCTION. The version control record is included as Appendix 1. Inputs for changes can be submitted to OAS Technical Services Division at any time. OAS Technical Services will coordinate these recommendations with OAS Inspectors and Regional Directors. Updates to this instruction will be made as required and distributed electronically to all OAS inspectors with changes highlighted and updated version information.

Approved:

Mark L. Bathrick, Director
Office of Aviation Services

Date

APPENDIX 1**Version Control Record**

Version	Date	Description of Revision/Update	Distribution
1.0	Apr 9, 2015	Initial release	All OAS Employees
1.1	Nov 1, 2015	First Revision	All OAS Employees

Appendix 2

**Equipment Requirements
FLEET AIR TACTICAL AIRPLANES**

Avionics Equipment	AIR TACTICAL TYPE		
	1	2	3
ELT - TSO-C126 (406 MHz)	X	X	X
VHF-AM 760-channel aeronautical radio(s)	X - 2 ea.	X - 2 ea.	X - 2 ea.
VHF-FM P-25 aeronautical radio(s)	X - 2 ea.	X - 1 ea.	X - 1 ea.
AUX-FM radio provisions	X - 1 ea.	X - 1 ea.	
AFF (Automated Flight Following)	X	X	X
Panel-mount type GPS	X	X	
Portable GPS (securely mounted)			X
Dual audio systems/aft XMIT/4X ICS	X	X	
Single audio system//2X ICS			X
Transponder	X	X	X
TCAS/TCAD/TAS	X	Optional	Optional
IFR equipment (VOR/GS/MB/DME/etc.)	X	Optional	Optional
EFB (Electronic Flight Bag) charging capability	X	Optional	Optional
VHF-FM radio programming port(s)	Optional	Optional	Optional
Onboard equipment			
Fire Extinguisher (2-B:C)	X	X	X
First Aid Kit (ALSE)	X	X	X
Survival Kit (ALSE)	X	X	X
Seat Belts and Shoulder Harnesses (ALSE)	X	X	X
High Visibility Aircraft Markings	X	X	X
Three point Strobes	X	X	X
Pulsating Landing Light system	X	X	X

Appendix 3

Equipment Requirements Fleet Smoke Jumper Aircraft

Avionics Equipment
ELT - TSO-C126 (406 MHz)
VHF-AM 760-channel aeronautical radio
VHF-FM P-25 aeronautical radio
AUX-FM radio provisions
AFF (Automated Flight Following)
Panel-mount type GPS
Cockpit dual audio systems/2X ICS
Rear audio panel aft XMIT/2X ICS
Internal PA system, with radio receive audio broadcast capability
Transponder
TCAS/TCAD/TAS
IFR equipment (VOR/GS/MB/DME/etc.)
Onboard equipment
Fire Extinguisher (2-B:C)
First Aid Kit (ALSE)
Survival Kit (ALSE)
Seat Belts and Shoulder Harnesses (ALSE)
High Visibility Aircraft Markings
Three point Strobes
Pulsating Landing Light system
Horizontal Static Line (STC)
Vertical Static Line (STC)
Exit Attached Jump Seat (STC)
Aft Bulkhead Cargo Net and Attachment rings
Aft Door Handrail
Jump Door Boot
Crash Axe
20 Ft. Transmit cord

Appendix 4

Equipment Requirements All Other Fleet Aircraft

Avionics Equipment
ELT - TSO-C126 (406 MHz)
VHF-AM radio 760 channel, 25kHz increments
AFF (Automated Flight Following)
Single audio system/2X ICS
Transponder
Onboard Equipment
Fire Extinguisher (2-B:C)
Strobe Lights
First Aid Kit (ALSE)
Survival Kit (ALSE)
<ul style="list-style-type: none"> • Seat Belts/Shoulder Harness minimum requirements • Four point belt/harness with inertia reels for front seat position in all helicopters • Three point harness for other helicopter seat positions • Seat Belts and Shoulder Harnesses - Current minimum requirements: • Three point belt/harnesses for both seats in tandem aircraft • Three point belt/harness for front seat position in all other fixed wing aircraft (air bag-equipped installations for Cessna airplanes with three-point restraints are authorized) • Lap belts for other fixed wing seat positions
Hobbs/tach meter
Overwater flights - Floats(single engine piston beyond gliding distance of land) - Life rafts (turbines operating above 500 feet AGL) - For Extended Overwater Operations, aircraft must be equipped per 14 CFR 135.165 and 14 CFR 135.167.
Dual lock physical security devices
Cargo – check for manufacturer’s required equipment for cargo operations (e.g., tiedown points, restraint devices)
Single Engine IFR (ref: 14 CFR 163) <ul style="list-style-type: none"> • Vertical speed indicator, free air temp indicator, heated pitot tubes for each A/S indicator • Alternate source of static pressure for altimeter, airspeed, vertical speed indicators • Power failure warning device or vacuum indicator for gyroscopic instruments • Two independent electrical power generating sources (or primary plus 150% battery) • Two independent sources of energy for all required gyroscopic instruments • Engine trend monitoring program that includes an oil analysis with maintenance records

NOTE: For current Interagency Helicopter Standards refer to:

http://www.doi.gov/aviation/library/upload/Interagency_Fire_Helicopter_Standards_MOU.pdf