



## **NATIONAL TRANSPORTATION SAFETY BOARD**

Office of Aviation Safety  
Washington, D.C. 20594

February 2, 2015

### **Attachment 33 - 8900.1 Enroute Inspections**

# **OPERATIONAL FACTORS**

**DCA13MA081**

**VOLUME 6 SURVEILLANCE****CHAPTER 2 PART 121, 135, AND 91 SUBPART K INSPECTIONS****Section 9 Cockpit En Route Inspections****6-372 RECORDING OF ACTIVITIES.****A. Program Tracking and Reporting Subsystem (PTRS) Activities:**

- 1) **Maintenance:** 3629.
- 2) **Avionics:** 5629.
- 3) **Operations:** 1624.

**B. Activities Recorded in the Air Transportation Oversight System (ATOS) Database.** The Certificate Management Team (CMT) or Certification Project Team (CPT) records complete ATOS data collection activities in the ATOS database. The same data should never be entered in both the ATOS database and the PTRS. If reporting an ATOS activity, it is entered into the ATOS database using Safety Attribute Inspections (SAI), Element Performance Inspections (EPI), Dynamic Observation Reports (DOR), and Constructed Dynamic Observation Reports (ConDOR). Any followup reporting (e.g., enforcement investigation or self-disclosure) is reported in the appropriate system.

**6-373 OBJECTIVE OF EN ROUTE INSPECTIONS.** The primary objective of cockpit en route inspections is for an inspector to observe and evaluate the in-flight operations of a certificate holder within the total operational environment of the air transportation system. En route inspections are one of the Federal Aviation Administration's (FAA) most effective methods of accomplishing its air transportation surveillance objectives and responsibilities. These inspections provide the FAA with an opportunity to assess elements of the aviation system that are both internal and external to an operator.

**A.** Elements of the aviation system that are internal to the operator and can be observed during en route inspections are items such as the following:

- Crewmembers,
- Operator manuals and checklists,
- Use of minimum equipment lists (MEL) and Configuration Deviation Lists (CDL),
- Operational control functions (dispatch, flight following, flight locating),
- Use of checklists, approved procedures, and safe operating practices,
- Crew coordination/cockpit resource management,
- Cabin safety,
- Aircraft condition and servicing, and
- Training program effectiveness.

**B.** Elements of the aviation system that are external to the operator and can be observed during en route inspections are items such as the following:

- Airport/heliport surface areas,
- Ramp/gate activities,
- Airport construction and condition,
- Aircraft movements,
- Air traffic control (ATC) and airway facilities,
- ATC and airspace procedures,
- Instrument approach procedures (IAP),
- Standard Instrument Departures (SID),
- Standard Terminal Arrival Routes (STAR),
- Navigational aids, and
- Communications.

#### **6-374 REFERENCES, FORMS, AND JOB AIDS.**

##### **A. References (current editions):**

- Title 14 of the Code of Federal Regulations (14 CFR) parts 1, 61, 91, 121, 125, and 135.
- Operator's manual.
- FAA Order 8000.38, Aviation Safety Inspector Credential Program.
- FAA Order 8000.75, Aviation Safety Inspector En Route Inspection Procedures.
- FAA Order 8900.1, Volume 3, Chapter 2, Section 1, paragraph 3-42, Admission to Flight Deck—Physical, Cognitive, and Language Capabilities.

**B. Forms.** FAA Form 8430-13, Request for Access to Aircraft.

**C. Job Aids.** Air Carrier Cockpit En Route Inspection Job Aid (Figure 6-21).

**6-375 GENERAL INSPECTOR GUIDANCE.** General inspector guidance regarding the following is contained in Order 8000.75:

- Inspector qualifications,
- Authorization to conduct an en route inspection,
- Scheduling of an en route inspection,
- Cockpit en route inspections by cabin safety inspectors (CSI),
- Conduct on an en route inspection,
- Duty time,
- Reporting/recording procedures, and
- Issuance/control of FAA Form 8430-13.

**6-376 COCKPIT EN ROUTE INSPECTION AREAS.** Inspectors should consider all inspection areas, both internal and external to the operator, to be of equal importance. Four

general inspection areas have been identified for observation and evaluation by inspectors during en route inspections (see Figure 6-21). These inspection areas are as follows:

- Crewmember,
- Flight conduct,
- Airport/heliport, and
- ATC/airspace.

**A.** The “crewmember” inspection area applies to both flightcrew members and cabin crewmembers. Inspectors should evaluate such items as crewmember knowledge, ability, and proficiency by directly observing crewmembers performing their respective duties and functions. The applicable job aid contains a list of reminder items which should be observed in the crewmember inspection area. These items are not all inclusive, but represent the types of items inspectors should evaluate during a cockpit en route inspection.

**B.** The “flight conduct” inspection area relates to 10 specific phases of flight which can be observed during an en route inspection. The job aid contains a list of the items that should be evaluated by inspectors during these phases of flight. These items are not all-inclusive and, in some cases (such as “powerback”), may not be applicable to the flight conducted. Inspectors are, however, encouraged to observe, evaluate, and report on as many of these items as possible.

**NOTE:** Inspectors that are unfamiliar with the operator’s specific procedures for operating the aircraft, should comment in their inspection reports on any item they believe should be brought to the principal operations inspector’s (POI) attention. Inspectors must use good judgment concerning whether to comment on these items when debriefing crewmembers.

**C.** The “airport/heliport” inspection area pertains to the various elements of airports or heliports that are passed through during the flight such as runways, taxiways, ramps, and aircraft ground movements. Inspectors should observe and evaluate as many of these elements as possible during an en route inspection.

**D.** The “ATC/airspace” inspection area pertains to the various elements of ATC and national or international airspace systems. These elements should be observed and evaluated by inspectors during en route inspections. From an operational standpoint, these evaluations are a valuable information source which can be used not only to enhance safety with respect to ATC and the airspace system, but also to enhance the effectiveness of en route and terminal facilities and procedures.

**E.** Although these four general inspection areas cover a wide range of items, they are not the only areas that can be observed and evaluated during cockpit en route inspections. Inspectors may have the opportunity to evaluate many other areas, such as line station operations, flight control procedures, and Flight Attendants (F/A) in the performance of their duties. These types of inspection areas can often be observed before a flight begins, at en route stops, or at the termination of a flight.

## **6-377 SPECIFIC COCKPIT EN ROUTE INSPECTION PRACTICES AND PROCEDURES.**

**A.** Before conducting en route inspections, it is important that inspectors become familiar with the operating procedures and facilities used by the operator. Inspectors can obtain such familiarization by reviewing pertinent sections of the operator's manuals and by asking questions of, and obtaining briefings from, the POI or other inspectors who are acquainted with the operator's procedures and facilities. The inspector is encouraged to comment on any procedure believed to be deficient or unsafe in the inspection report. The inspector must use good judgment, however, when debriefing crewmembers about procedures that may be specifically approved for that operator.

**B.** POIs are responsible for coordinating with their assigned operators to ensure that each operator has established procedures to be used by inspectors for scheduling the observer's seat (jump seat). POIs must ensure that an operator's procedures allow inspectors to have free, uninterrupted access to the jump seat. Inspectors should, however, make jump seat arrangements as far in advance as possible. Since inspectors may have sudden changes in schedule, and may not always be able to provide the appropriate advance notice, POIs must ensure that the operator's procedures are flexible and permit use of an available jump seat on short notice.

**C.** Whenever possible, inspectors should plan cockpit en route inspections in a manner that will avoid disruption of operator scheduled line checks and initial operating experience (IOE) flights. Should an inspector arrive for a flight and find a line check or IOE in progress, the inspector must determine whether or not it is essential that the cockpit en route inspection be conducted on that flight. If it is essential, the operator must be so advised by the inspector and must make the jump seat available to the inspector. If the cockpit en route inspection can be rescheduled and the objectives of the inspection can still be met, the inspector should make arrangements to conduct the inspection on another flight. When a required checkride is being conducted by a check airman from the forward jump seat and the en route inspection is essential, the inspector should occupy the second jump seat, if one exists. On IOE flights, the check airman should normally occupy one of the pilot seats and the inspector should occupy the forward jump seat. When it is essential that the en route inspection be conducted on an aircraft that does not have two jump seats, the check airman must occupy a pilot seat and the inspector should occupy the jump seat. In such a case, the flightcrew member not being checked must either be seated in the cabin or not accompany the flight.

**D.** An inspector should begin a cockpit en route inspection a reasonable amount of time before the flight (approximately 1 hour) by reporting at the operations area or at the gate, as specified by the POI. There the inspector must first complete the necessary jump seat paperwork for inclusion in the operator's passenger manifest and Weight and Balance (W&B) documents. The inspector should then locate the flightcrew. After the inspector gives a personal introduction to the flightcrew, which includes presentation of FAA Form 110A, Aviation Safety Inspector's Credential, the inspector must inform the pilot in command (PIC) of the intention to conduct an en route inspection. The inspector should then request that, at a time convenient for the flightcrew, the flightcrew present both their airman and medical certificates to the inspector for examination. Also, the inspector should request that, at a convenient time, the flightcrew present flight information such as weather documents, Notices to Airmen (NOTAM), planned route of

flight, dispatch or flight release documents, and other documents with information about the airworthiness of the aircraft to the inspector for examination.

**E.** Sometimes an inspector cannot meet and inform the PIC of the intention to conduct an en route inspection before boarding the aircraft. In such a case, when boarding the aircraft, the inspector should make appropriate introductions, present FAA Form 110A for the PIC's inspection at the earliest convenient opportunity, and inform the flightcrew of an intention to conduct a cockpit inspection. In this situation, an F/A will usually be at the main cabin entrance door. One of the F/A's primary duties is to ensure that only authorized persons enter the aircraft, such as ticketed passengers, caterers, and authorized company personnel. Therefore, an inspector should be prepared to present FAA Form 110A and any applicable jump seat paperwork to the F/A as identification before entering the cockpit. When boarding the aircraft, an inspector should also avoid unnecessarily impeding passenger flow or interrupting F/As during the performance of their duties. Also, during this time an inspector usually has ample opportunity to observe and evaluate the operator's carry on baggage procedures and the gate agent's or F/A's actions concerning oversized items. Once inside the cockpit, the inspector should request an inspection of each flightcrew member's airman and medical certificates, if not previously accomplished. When the flightcrew has completed reviewing the aircraft logbooks (or equivalent documents), the inspector should inspect the logbooks to determine the airworthiness status of the aircraft.

**F.** The inspector should wear a headset during the flight. During cockpit en route inspections, inspectors must try to avoid diverting the attention of flightcrew members performing their duties during "critical phases of flight." Inspectors must be alert and point out to the flightcrew any apparent hazards, such as conflicting traffic. If during an en route inspection, an inspector becomes aware of a potential violation or that the flightcrew is violating a regulation or an ATC clearance, the inspector must immediately inform the PIC of the situation.

**G.** Inspectors should use the Cockpit En Route Inspection Job Aid (Figure 6-21) while conducting these inspections. This job aid contains a list of reminder items for the specific inspection areas that should be observed and evaluated. It also includes applicable key PTRS words and codes to facilitate the writing of the inspection report. Items may be evaluated during an en route inspection that are not listed on the job aid. For such items, inspectors should use the "other" PTRS comment code for the appropriate inspection area. Inspectors can also use this job aid to make notes during the inspection which can later be transferred to the PTRS data sheet.

### **6-378 CONDUCT OF SPECIFIC COCKPIT EN ROUTE INSPECTION.**

**A. Safety Briefing and Radio Monitoring.** Once situated in the cockpit, the inspector should check the jump seat oxygen and emergency equipment (if applicable) and connect the headset to the appropriate interphone system. The PIC or a designated crewmember should offer to give the inspector a safety briefing. If the PIC does not make such an offer, the inspector should request a briefing. It is important that the inspector monitor all radio frequencies being used by the flightcrew to properly evaluate ATC procedures, flightcrew compliance, transmission clarity, and radio phraseology. The monitoring of these frequencies also ensures that the inspector does not inadvertently interfere with any flightcrew communications. Inspectors should continuously monitor these frequencies to remain aware of the progress of the flight.

**B. Crewmember Certificates and Identification.** There have been several occasions in which pilots have operated certificate holder aircraft without having in their personal possession airman certificates and current medical certificates. In some cases, pilots have operated for long periods of time with suspended certificates. The inspector should ensure the following:

1) For part 121 operations:

a) The PIC must have in possession the following:

- Photo identification as required by part 61, § 61.3(a)(2);
- An airline transport pilot (ATP) certificate;
- First class medical certificate, which is valid for 12 months for pilots under 40 years old and for 6 months for pilots who are 40 years of age or older; and
- Appropriate type rating for the aircraft being operated.

b) The second in command (SIC) must have in possession the following:

1. For part 121 domestic operations, flag, or supplemental operations requiring only two pilots:

- Photo identification as required by § 61.3(a)(2);
- An ATP certificate with appropriate aircraft type rating or an ATP certificate with restricted privileges and an appropriate aircraft type rating; and
- At least a second class medical certificate, which is valid for 12 months.

NOTE: For those pilots who are employed as an SIC in part 121 operations on July 31, 2013, compliance with the type rating requirement in part 121, § 121.436(b) is not required until January 1, 2016.

2. For part 121 flag or supplemental operations requiring three or more pilots:

- Photo identification as required by § 61.3(a)(2);
- An ATP certificate with appropriate aircraft type rating. In this scenario, a pilot must hold an ATP certificate issued per the requirements of § 61.159. An ATP certificate issued per the reduced flight hours in § 61.160 is not sufficient; and
- A first class medical certificate, which is valid for 12 months for pilots under 40 years old and for 6 months for pilots who are 40 years of age or older.

c) Flight Engineers (FE) must have in their possession the following:

- Appropriate FE's certificate; and
- Second class medical certificate, which is valid for 12 months.

2) For part 135 operations:

a) The PIC must have in possession the following:

1. For operations in turbojets, aircraft with 10 or more passenger seats, or scheduled multiengine commuter operations:

- Photo identification as required by § 61.3(a)(2);
- An ATP certificate;
- First class medical certificate, which is valid for 12 months for pilots under 40 years old and 6 months for pilots who are 40 years of age or older; and
- Appropriate type rating for the aircraft being operated.

2. For operations not described in subparagraph 6-378B2)a)1):

- Photo identification as required by § 61.3(a)(2);
- A commercial pilot certificate with an instrument rating for the aircraft being operated; and
- At least a second class medical certificate, which is valid for 12 months.

b) The SIC must have in possession the following:

- Photo identification as required by § 61.3(a)(2);
- A commercial pilot certificate with an instrument rating for the aircraft being operated; and
- At least a second class medical certificate, which is valid for 12 months.

c) FEs must have in their possession the following:

- Appropriate FE's certificate; and
- Second class medical certificate, which is valid for 12 months.

**C. Exemptions.** If any required crewmember does not have a pilot certificate and/or medical certificate in their possession, the operator may have an approved process in place for lost/missing pilot and/or medical certificates generated from an exemption.

**D. Violations.** If the flightcrew members do not have the proper, current certificates in their possession and the operator does not have an approved method via exemption:

1) Advise the offending crewmembers that they will be in violation of § 61.3 and/or 14 CFR part 63, § 63.3.



2) If the flightcrew members still elect to operate the aircraft without having the appropriate certificates in their possession:

- a) Deplane,
- b) Terminate this inspection, and
- c) Immediately notify the operator's operations center.

#### **E. Load Manifests.**

1) Ensure the load manifest contains the following information:

- The number of passengers,
- The total weight of the loaded aircraft,
- The maximum allowable takeoff weight for that flight,
- The center of gravity (CG) limits,
- The actual CG of the loaded aircraft, unless the aircraft is loaded according to an approved loading schedule,
- The registration number of the aircraft or the flight number,
- The origin and destination of the flight, and
- The identification of the flightcrew members and their respective position assignments.

2) Ensure the proper fuel load is on board by comparing fuel gauges to the minimum fuel required for dispatch. This fuel requirement is normally found on the dispatch release.

**F. Crewmember Observations.** Inspectors should observe and evaluate the crew during each phase of flight. This should include an evaluation of crewmember adherence to approved procedures and a proper use of all checklists. The inspector should also observe the PIC's crew management techniques, delegation of duties, and overall conduct. All crewmembers must follow sterile cockpit procedures. Some of the areas that should be observed and evaluated during each flight phase are as follows:

1) **Preflight.** Inspectors should determine that the flightcrew has all the necessary flight information including the appropriate weather, dispatch, or flight release information; flight plan; NOTAMs; and W&B information. MEL items should be resolved in accordance with the operator's MEL and appropriate maintenance procedures. Inspectors should observe the flightcrew performing appropriate exterior and interior preflight duties in accordance with the operator's procedures.

2) **Predeparture.** Inspectors should observe the flightcrew accomplishing all predeparture checklists, takeoff performance calculations, and required ATC communications. The flightcrew should use coordinated communications (via hand signals or the aircraft interphone) with ground personnel. Often, pushback or powerback clearance must be obtained from the appropriate ATC or ramp control facility. When W&B information is transmitted to the aircraft by company radio during the outbound taxi, the flightcrew should follow the operator's

procedures as to which crewmember receives the information and completes the final takeoff performance calculations and which crewmember monitors the ATC frequency. The inspector should observe the following:

- Accomplishment of checklists during taxi,
- Adherence to taxi clearances,
- Control of taxi speed,
- Compliance with hold lines, and
- Flightcrew conduct of a pretakeoff briefing in accordance with the operator's procedures.

**3) Takeoff.** The takeoff procedure should be accomplished as outlined in the operator's approved maneuvers and procedures document. Inspectors should observe and evaluate the following items or activities during the takeoff phase:

- Aircraft centerline alignment,
- Use of crosswind control techniques,
- Application of power to all engines,
- Takeoff power settings,
- Flightcrew callouts and coordination,
- Adherence to appropriate takeoff or V speeds,
- Rate and degree of initial rotation,
- Use of flight director (FD), autopilot, and autothrottles,
- Gear and flap retraction schedules and limiting airspeeds, and
- Compliance with the ATC departure clearance or with the appropriate published departure.

**4) Climb.** The climb procedure should be conducted according to the outline in the operator's approved maneuvers and procedures document. Inspectors should observe and evaluate the following items and activities during the climb phase of flight:

- Climb profile/area departure,
- Airspeed control,
- Navigational tracking/heading control,
- Powerplant control,
- Use of radar, if applicable,
- Use of autoflight systems,
- Pressurization procedures, if applicable,
- Sterile cockpit procedures,
- Vigilance,
- Compliance with ATC clearances and instructions, and
- After-takeoff checklist.

**5) Cruise.** Procedures used during cruise flight should conform to the operator's procedures. Inspectors should observe and evaluate the following areas during the cruise phase of flight:

- Cruise mach/airspeed control,
- Navigational tracking/heading control,
- Use of radar, if applicable,
- Use of turbulence procedures, if applicable,
- Monitoring fuel used compared to fuel planning,
- Awareness of mach buffet and maximum performance ceilings,
- Coordination with cabin crew,
- Compliance with oxygen requirements, if applicable,
- Vigilance, and
- Compliance with ATC clearances and instructions.

**6) Descent.** Procedures used during descents should conform to the operator's procedures. Inspectors should observe and evaluate the following areas during the descent phase of flight:

- Descent planning,
- Crossing restriction requirements,
- Navigational tracking/heading control,
- Use of radar, if applicable,
- Awareness of maximum operating limit speed ( $V_{MO}/M_{MO}$ ) and other speed restrictions,
- Compliance with ATC clearance and instructions,
- Use of autoflight systems,
- Pressurization control, if applicable,
- Area/situational awareness,
- Altimeter settings,
- Briefings, as appropriate,
- Coordination with cabin crew,
- Sterile cockpit procedures,
- Completion of appropriate checklist, and
- Vigilance.

**7) Approach.** Procedures used during the selected approach (instrument or visual) should be accomplished as outlined in the operator's maneuvers and procedures document. Inspectors should observe and evaluate the following areas during the approach phase of flight:

- Approach checklists,
- Approach briefings, as appropriate,
- Compliance with ATC clearances and instructions,
- Navigational tracking/heading and pitch control,
- Airspeed control, reference speed for final approach ( $V_{REF}$ ),
- Flap and gear configuration schedule,
- Use of FD, autopilot, autothrottles,
- Compliance with approach procedure,
- Sinkrates,

- Stabilized approach in the full landing configuration,
- Flightcrew callouts and coordination, and
- Transition to visual segment, if applicable.

**8) Landing.** Procedures used during the landing maneuver should conform to those outlined in the operator's maneuvers and procedures document. Inspectors should observe and evaluate the following areas during the landing phase of flight:

- Before-landing checklist,
- Threshold crossing height,
- Aircraft centerline alignment,
- Use of crosswind control techniques,
- Sinkrates to touchdown,
- Engine spool up considerations,
- Touchdown and rollout,
- Thrust reversing and speedbrake procedures,
- Use of autobrakes, if applicable,
- Braking techniques,
- Diverting attention inside the cockpit while still on the runway, and
- After-landing checklist.

**9) Pre-Arrival.** Pre-arrival and parking procedures should conform to the operator's procedures as outlined in the appropriate manual. Inspectors should evaluate crew accomplishment of after landing checklists, ground crew parking, and passenger deplaning procedures.

**10) Arrival.** Inspectors should observe and evaluate the flightcrew as they complete postflight duties such as postflight checks, aircraft logbook entries, and flight trip paperwork completion and disposition.

**G. Other Inspection Areas.** During the en route inspection, inspectors should observe and evaluate other inspection areas, such as ATC and airspace procedures and airports or heliports that the flight transits during the cockpit en route inspection.

**1)** When evaluating airports or heliports, inspectors should observe the condition of surface areas, such as ramp and gate areas, runways, and taxiways. The following list contains other areas which may be observed and evaluated by inspectors during cockpit en route inspections:

- Taxiway signs, markers, sterile areas, and hold lines,
- Ramp vehicles, equipment, and movement control,
- Aircraft servicing, parking, and taxi operations,
- Obstructions, construction, and surface contaminants (such as ice, slush, snow, fuel spills, rubber deposits, etc.),
- Snow control, if applicable, and
- Security and public safety.

2) During cockpit en route inspections, inspectors have the opportunity to observe and evaluate ATC operations and airspace procedures from the vantage point of the aircraft cockpit. Inspectors may observe and evaluate the following areas from the cockpit:

- Radio frequency congestion, overlap, or blackout areas,
- Controller phraseology, clarity, and transmission rate,
- Automated terminal information service,
- Use of full call signs,
- Simultaneous runway use operations,
- Clearance deliveries,
- Acceptable and safe clearances,
- Aircraft separation standards, and
- Acceptability of IAPs, departure procedures, and feeder routings.

**H. Debrief Crew.** After the flight has been terminated, the inspector must debrief the crew on any discrepancies observed and on any corrective actions that should be taken. If the inspector observed a violation during the flight and intends to recommend enforcement action or intends to make critical comments concerning the crew's performance, the inspector must inform the flightcrew during the debriefing.

### **6-379 AIRCRAFT AIRWORTHINESS PORTION OF THE COCKPIT EN ROUTE INSPECTION.**

**A. General Guidance.** Open discrepancies or improperly deferred MEL items have been discovered in maintenance records just prior to departure. The resulting corrective actions have resulted in lengthy delays.

1) Regulations require that maintenance be recorded when performed. Procedures for ensuring that these recording requirements are met are described in the operator's maintenance procedures manual.

2) The manual contains specific instructions on when an airworthiness release or record entry is required. All discrepancies entered in the record must either be corrected or deferred using the methods identified in the operator's maintenance procedures manual. The aviation safety inspector (ASI) must become familiar with the operator's maintenance record handling procedures.

**B. Aircraft Maintenance Record Inspection.** The inspector should:

NOTE: Notify the appropriate operator personnel immediately of any discrepancies noted during this inspection.

1) Ensure the following:

- Maintenance/airworthiness releases are current,
- No open items exist,

- All discrepancies are corrected or properly deferred, and
  - MEL items were deferred per the procedural and placarding requirements of the operator's approved program.
- 2) Ensure the length of deferrals is not exceeded by reviewing the following:
    - Maintenance record pages,
    - Deferred maintenance list, and
    - Deferred maintenance placards/stickers.
  - 3) Ensure that the maintenance records contain the following for each discrepancy:
    - A description of work performed or reference to acceptable data,
    - The name of the person performing the work, if outside the organization, and
    - The name or other positive identification of the person approving the work.
  - 4) Determine if repetitive problems indicate a trend.

NOTE: If actions taken by the operator do not comply with regulatory requirements or the operator's manual, terminate the inspection. Advise the operator of the noncompliance and the possibility of enforcement action.

**C. Interior Inspection.** This inspection should be performed without disturbing the loading and/or unloading of the passengers. Any discrepancies noted should be brought immediately to the attention of the flightcrew. Perform the interior inspection per the guidance in Figure 6-18, Interior Inspection Guidelines, in Volume 6, Chapter 2, Section 4, Ramp Inspections for Part 91 Subpart K Operators and Part 121 and 135 Air Carriers.

**D. Exterior Inspection.** The inspector should accompany a crewmember on the exterior walk-around to determine the thoroughness of the crewmember's inspection. It is important to be aware of the type of maintenance and servicing activities being accomplished. Perform the exterior inspection per the guidance in Figure 6-19, Exterior Inspection Guidelines, in Volume 6, Chapter 2, Section 4.

#### **E. In-Flight Monitoring.**

- 1) This phase of the inspection provides the opportunity to monitor aircraft systems and evaluate the effectiveness of maintenance performed to correct maintenance record discrepancies.
- 2) ASIs have different degrees of pilot skills, and the Airworthiness ASI performing an en route inspection is not there to evaluate the competency of the flightcrew. However, if obvious discrepancies are noted, such as a deviation from assigned altitude or other operational procedure, they must be brought to the attention of the PIC and the assigned POI.
- 3) While conducting an en route inspection, do not manipulate, operate, select, or deselect any switches, circuit breakers, or controls.

**6-380 CARGO/COMBINATION-CONFIGURED AIRCRAFT.**

**A.** Inspection results have disclosed instances of significant aircraft structural damage resulting from the careless loading of cargo, such as:

- Torn or punctured liners indicating hidden damage to circumferential stringers, fuselage skin, and bulkheads;
- Damaged rollers, ball mats, etc. causing significant structural damage to the floors; and
- Severe corrosion, fire, and structural damage resulting from the improper handling of some hazardous materials (hazmat).

**B.** The surveillance of hazmat handling is not the primary function of the cockpit en route inspection. If discrepancies are noted in the handling of hazmat, contact the appropriate FAA security division.

**6-381 DEFERRED MAINTENANCE.**

**A. MEL Deferred Maintenance.** The operator's approved MEL allows the operator to continue a flight or series of flights with certain inoperative equipment. The continued operation must meet the requirements of the MEL deferral classification and the requirements for the equipment loss.

**B. Other Deferred Maintenance.**

1) Operators frequently use a system to monitor items that have previously been inspected and found to be within serviceable limits. These items are still Airworthy, yet warrant repair at a later time or when items no longer meet serviceable limits. This method of deferral may require repetitive inspections to ensure the continuing airworthiness of the items. Examples of items that are commonly deferred in this manner are fuel leak classifications, dent limitations, and temporary (Airworthy) repairs.

2) Passenger convenience item (not safety/airworthiness-related) deferrals should be handled according to the operator's program guidelines.

**C.** The operator's approved maintenance program must provide for the prompt and orderly repairs of inoperative items.

**6-382 ASI BAGGAGE.** The ASI must conform to the operator's approved carry-on baggage program. If there is any concern that the baggage will exceed operator limitations, it should be checked. The ASI's identification (FAA Form 110A and 8430-13) is adequate documentation for the operator to check the baggage.

**6-383 TASK OUTCOMES.**

**A. Recording the Use of FAA Form 8430-13.** Never report the use of FAA Form 8430-13 for the same en route activity in both the ATOS and PTRS databases.

**1) ATOS Database.** CMT members who perform en route activities that require the use of FAA Form 8430-13 to access aircraft flight decks or cabins for ATOS data collection should report such activities using the EPI in the ATOS database.

**2) DOR.** Inspectors who are not members of the CMT for the air carrier operating the aircraft should record cockpit or cabin en route data using a DOR. Use a DOR also if the cockpit or cabin en route activity is incidental to ATOS data collection (e.g., traveling from one location to another to perform official business).

**3) PTRS.** Inspectors on air carrier CMTs that are not subject to ATOS 1.2 policies and procedures should record the activity only in PTRS.

**B. Task Completion.** Completion of this task can result in the following:

- Satisfactory inspection, or
- Requirement for a follow-up inspection for a specific discrepancy.

**C. Task Documentation.** File all supporting paperwork in the operator's office file.

**6-384 FUTURE ACTIVITIES.** Schedule followup inspections, as applicable.

**6-385 COCKPIT EN ROUTE INSPECTION JOB AID.** Figure 6-21 is an example of the Cockpit En Route Inspection Job Aid, which is available on the district office job aid disk.



**Figure 6-21. Air Carrier Cockpit En Route Inspection Job Aid**

PTRS ACTIVITY: 1624 DATE		AIR CARRIER	FLT NO.	A/C REG NO.		MAKE	MOD/SERIES
PIC NAME:		CERT #	BASE	FROM	TO	RESULTS	HB REF VI.2.4
U = UNACCEPTABLE; P = POTENTIAL; I = INFORMATION, E = EXCEEDS							
CREWMEMBERS			CRUISE	729		PASSENGER HANDLING	637
KNOWLEDGE	101		* Speed Control	--		ACFT DISCREPANCIES	313
ABILITY/PROFICIENCE	103		* Navigation	--		WEIGHT & BALANCE	613
QUAL/CURRENCY	105		* Procedures	--		OPERATIONS SPECS	621
CERT/RATINGS	109		* Hi/Lo Buffet	--		HAZARDOUS MATERIAL	641
BRIEFINGS	111		* Oxygen Reqmnt's	--		OTHER REMARKS	699
MANUAL CURRENCY	203		* Fuel Mgmt	--		AIRPORTS/HELIPORTS	
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**RESERVED.** Paragraphs 6-386 through 6-400.