

COCKPIT AND CABIN EN ROUTE INSPECTION JOB FUNCTION 18

OBJECTIVE. This chapter provides guidance in conducting a cockpit and cabin enroute inspection.

GENERAL

A. Inspector Qualifications

(1) Since Inspectors do not receive systems training on all aircraft, it is important to become familiar with the type of aircraft being inspected before performing the inspection. This can be accomplished through on the job training.

(2) The CAA does not allow two inspectors to perform this job task, therefore familiarity with the enroute inspection procedures is a necessity before performing this task.

B. Inspector Conduct. In performing this job task, the actions of an inspector is subject to the close scrutiny of airline employees and the general flying public. Therefore, be alert for leading questions from crewmembers regarding destinations, technical information, and other operators, although it is imperative that tact and good judgment be exercised at all times.

C. Inspector Expertise. Airworthiness and operations inspectors possess various degrees and types of expertise and experience. When an inspector needs additional information or guidance, they should coordinate with personnel experienced in that particular specialty.

INITIATION AND PLANNING

A. Initiation. This task is scheduled as part of the work program. Additional inspections may be initiated as requirements.

B. Planning

(1) When possible, an enroute inspection should be planned to preclude disruption of company scheduled flight checks by check airmen.

(2) Inspectors will make arrangements for the jump seat/forward passenger seat as far in advance of the flight as possible. Inspectors will have priority for available jump seats, except when a required company check is being conducted from the jump seat

(3) When it is necessary to board a flight at an intermediate stop, every effort should be made to advise the pilot in command, prior to boarding the flight, that an enroute inspection will be conducted.

PERFORMING THE COCKPIT AND CABINI ENROUTE INSPECTION

A. Maintenance Record Inspection. Open discrepancies or improperly deferred Minimum Equipment List (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.

B. 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 flight crew. Perform the interior inspection in accordance with the INTERIOR COMPLIANCE CHECKLIST in the APPENDIX.

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C. Exterior Inspection. It is recommended to accompany a crewmember on the exterior walk around to determine the thoroughness of the crewmembers inspection. It is important to be aware of the type of maintenance and servicing activities being accomplished. Perform the exterior inspection in accordance with the established EXTERIOR INSPECTION GUIDELINES.

D. Inflight 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) It is recognized that inspectors have different degrees of pilot skills, but the airworthiness inspector performing an enroute inspection is not there to evaluate the competency of the flight crew. 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 pilot in command and the assigned Principal Operations Inspector.

(3) While conducting an enroute inspection, do not manipulate, operate, select, or deselect any switches, circuit breakers, or controls.

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

- * Severe corrosion, fire, and structural damage resulting from the improper handling of some hazardous materials

B. Hazardous material (dangerous goods) should be handled in accordance with the operator's manual.

INSPECTORS BAGGAGE.

The inspector 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.

DEFERRED MAINTENANCE

A. Minimum Equipment List Deferred Maintenance. The operator's approved Minimum Equipment List allows the operator to continue a flight or series of flights with certain inoperative equipment. The continued operation must meet the requirements of the Minimum Equipment List 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.

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CREWMEMBER CERTIFICATES.

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. Therefore, ensure that all flight crewmembers have the proper certificates in their personal possession.

PROCEDURES

A. Initiate the Cockpit Enroute Inspection According to the Work Program

B. Prepare for Inspection. Contact the operator's scheduling section to reserve jump seat/forward passenger seat, as applicable.

C. Coordinate with Operator's Flight Operations Center One-Hour Prior to Flight

(1) Identify yourself to the operator representative and state that you are performing a cockpit enroute inspection on a specific flight.

(2) Present CAA identification

(3) Obtain the applicable operator boarding authorization. (Each operator has different boarding authorization procedures, but all have some method of accounting for the inspector being onboard.) If aircraft access is denied:

- * Advise the operator representative of the regulation authorizing inspector access to aircraft
- * Request to see the appropriate supervisor if the representative still refuses access
- * Stress the fact that the denial of access is contrary to regulations and that enforcement action may be taken
- * Upon return to the office, describe the occurrence to the appropriate supervisors if access was still denied

(4) Proceed to the aircraft as soon as possible to review the maintenance record and to perform interior and exterior predeparture inspections as time allows. Follow the operator's procedures for preboarding the aircraft.

D. Identify Yourself to The Flight Crew

(1) Before boarding the aircraft or performing the exterior inspection:

- * Identify yourself to the pilot in command and flight crew as an Airworthiness Inspector
- * State the purpose of the inspection

(2) If cockpit access is denied:

* Advise the pilot in command of the regulation authorizing inspector's access to the pilot's compartment

* Concede to the pilot's wishes if the pilot in command still refuses to allow access

* Make it very clear to the pilot in command that the denial of access is contrary to regulations and that enforcement action may be taken

* Upon return to the office, describe the occurrence to the appropriate supervisors if access was still denied

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E. Inspect the Aircraft Maintenance Record

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
- * Minimum Equipment List items were deferred per the procedural and placarding requirements of the operator's approved program
- * Major repairs and alterations are accomplished in accordance with the approved data. If there is any deviation, the deviation has been also approved.

(2) Ensure the length of deferrals are not exceeded, by reviewing the following:

- * Maintenance record pages
- * Deferred maintenance list
- * 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
- * The name or other positive identification of the person approving the work

(4) Determine if repetitive problems indicate a trend.

F. Perform the Interior Inspection, as per the INTERIOR COMPLIANCE CHECKLIST in the APPENDIX.

G. Conduct the Exterior Inspection of Aircraft, as per the established EXTERIOR INSPECTION GUIDELINES.

(1) Record any discrepancies noted during the exterior inspection and bring them to the attention of the pilot in command or appropriate operator personnel.

(2) Evaluate the action(s) taken by the operator in response to the discrepancies.

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. If the discrepancy constitutes an unsafe condition, notify the operator and supervisor immediately.

H. Prior to Push Back, Accomplish the Following:

(1) Ensure all of the discrepancies noted during predeparture were corrected

(2) Request and review the pilot and medical certificates of all flight crewmembers. Ensure the following:

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(a) Pilot in command. The pilot in command must have in possession the following:

- * An Airline Transport Pilot certificate
- * First class medical certificate, which is valid in accordance with the requirement
- * Appropriate type rating for the aircraft being operated

(b) Second in command. The First Officer must have in possession the following:

- * At least a commercial pilot certificate in the appropriate category and class
- * Appropriate instrument rating for the aircraft being operated
- * First class medical certificate, which is valid in accordance with the requirement

(3) If the flight crewmembers do not have the proper, current certificates in their possession:

(a) Advise the offending crewmembers that they will be in violation of the CAA regulations.

(b) If the flight crewmembers still elect to operate the aircraft without having the appropriate certificates in their possession:

- * Deplane
- * Terminate this inspection
- * Immediately notify the operator's operations center

(4) 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 limits
- * The actual center of gravity 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
- * The identification of the flight crewmembers and their respective position assignments

(5) 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.

I. Monitor Inflight Operations

NOTE: During the enroute inspection, point out any potential violations prior to their occurrence and inform the crew of the possible consequences.

(1) Ensure the flight crew is using and following the operator's approved checklists for an activities.

(2) Exercise good cockpit discipline and ensure the flight crew does the same, to include the following:

- * Sterile cockpit rule compliance
- * Proper use of cockpit/personal lighting
- * Compliance with the pilot in command's requests

(3) Monitor all gauges during flight for normal operation.

(4) Monitor communications for crew compliance with air traffic control.

(5) Ensure that left and right seat crewmembers are in compliance with the oxygen requirements.

(6) Note and record all discrepancies observed.

NOTE: To assist the crew, be alert for any proximity of air traffic

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J. Debrief Flight Crew. At the termination of the flight, state whether the operations were satisfactory or unsatisfactory.

(1) If irregularities were noted in the performance of any aircraft system, discuss them with the pilot in command. Ensure that these discrepancies are entered in the aircraft maintenance record. If the pilot in command is unwilling to enter these discrepancies, advise that the failure to record these discrepancies is contrary to regulatory requirements.

(2) Unsatisfactory operational findings should be brought to the attention of the operator's assigned Principal Operations Inspector.

K. Analyze enroute inspection results for any follow up action.

L. Document Task. File all supporting paperwork in the operator's office file through the supervisor.

APPENDIX: INTERIOR COMPLIANCE CHECKLIST

§ 25.785 Seats, berths etc.

- * Do all seats have a TSO?
- * Are there any potentially lethal objects within striking radius of the head?
Bulkheads, slide containers, seat armrests etc.
- * Do armrests fold up beyond the seat back?
- * Do footrests incorporate any potentially injurious features (to persons attempting to deploy or stow them)? If they deploy into required crossaisles or passageways, is there a mechanical lockout in the stowed position?
- * Do all seats have approved seatbelts? Is there a tendency for the seat belt shackle to become tangled or hung up on seat structure?
- * Do all F/A seats have shoulder harnesses as well as lap belts?
- * Is flight attendant direct view no worse than on previous arrangements? For those airplanes with this requirement as part of the certification basis, do they meet the current criteria?
- * Is there a handhold for passengers to steady themselves?
- * Are all projecting objects that could be contacted in flight padded?
- * Are all flight attendant seats located near a required floor level exit?

§ 25.787 Stowage compartments

- * Does each compartment have a weight limit placard?
- * Are all compartments completely enclosed?
- * Are double latches present where necessary?
- * Are there provisions to account for wear and tear in service?
- * Are means of latching positive with a positive indication when latched or unlatched?

§ 25.789 Retention of items of mass

- * Is compartment sub-division (critical load distribution) accounted for in weight limits i.e., single carts in a two-cart stall?
- * Are meal containers stowed in pairs, and is this accounted for with latches or placarding?
- * Are there restraints in each direction (including aft and up)?

§25.791 Passenger information signs

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- * Is a passenger information sign visible from each flight attendant and passenger seat?
- * If there are seats that translate or swivel, is a sign visible from each seat position?

§ 25.803 Emergency evacuation

- * Are there any tripping hazards present in the aisle, crossaisles or passageways?
- * Are there any other impediments (projecting objects) to rapid evacuation (head, arms legs)?
- * Are there any data sheet limitations regarding passenger capacity that are relevant to the interior arrangement?
- * {See also video monitors}

§ 25.807 Passenger emergency exits

- * Do all clear exit openings equal or exceed the minimum required dimensions, including any protrusions from linings, hinges etc.?
- * Are step-ups to and step-downs from exits within the requirements?
- * Is there a flight attendant seat positioned adjacent to each Type A exit?

§ 25.811 Emergency exit marking

- * Are all of the required signs (locator, bulkhead, marking) present and visible to persons in the main aisle?
- * Is the next exit sign visible from each point in the aisle?
- * Are all exit signs positioned such that they lead persons to exits and not into galleys or other "dead ends"?
- * Do curtains or other features, e.g. video monitors, interfere with exit sign visibility?
- * Are exit operating instructions clear?
- * Are exits identifiable from a distance equal to the airplane width?

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§ 25.813 Emergency exit access

- * Are all passageways unobstructed from the aisle to the exit opening, including galley features, retracted flight attendant seats and consideration of assist space?
- * Are assist spaces that are 12"x20" on the floor and usable provided at all floor level exits that have slides?
- * Is an assist handle provided at the assist space? (Is an assist handle required?)
- * Is there an unobstructed projected opening of overwing exits for the width of a seat, including the seatback in any position? (tools are required to defeat lockouts)
- * Are overwing hatches openable without interference, from the inside and outside?

§ 25.815 Width of aisle

- * Are any aisle widths compromised by recline or breakover of seatbacks? At divided zones?
- * Do rubstrips reduce the required aisle?
- * Are curtain tiebacks readily movable, where they project into the required aisle?
- * Do movable armrests that protrude into the required aisle return to the normal position when released? Are there appropriate placards for the armrests (where there are only one or two?)

§ 25.853 Compartment interiors

- * Are waste compartments completely enclosed?
- * Are there any areas where waste material could accumulate? Behind stowage units, sidewalls, seat armrest cavities?
- * Are ashtrays installed outside all lavatories?
- * Are all electrical wires protected from abrasion or crushing?
- * Are all seats fireblocked?
- * Has the applicant provided documentation that all materials in the cabin have been suitably tested to the applicable flammability test?

§ 25.1411 General (Safety Equipment)

- * Is emergency equipment readily accessible (not requiring special skills to remove)? Consider reclined seats, stowage of other equipment, stowage of carry on baggage.
- * Are emergency equipment stowage locations conspicuously and conveniently marked? Are placards as close to eye height as practicable? Are additional arrows needed to locate the specific stowage location?

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- * Do curtains block access to, or markings of, emergency equipment?
- * Is emergency equipment protected from damage in its stowage location?
- * Are there sufficient type and quantity of required items, i.e., fire extinguishers, oxygen bottles etc.?
- * Are lifevests easily removable by a seated, untrained person, at all locations? Is there a placard for all seats, including the forward rows, indicating the location of the vests?
- * Are there lifeline stowage provisions for all models required to have a lifeline?

SPECIAL AREAS OF ATTENTION

Galleys:

- * Are there any compartment doors that could interfere with exit opening? Are they spring loaded closed?
- * Are there any folding cart ramps that could be left down for takeoff and landing? Do they pose a tripping hazard?
- * Are all waste compartment doors self-closing or marked to be closed when not in use?
- * Are fixed items (ovens, coffee makers) installed for inspection?
- * Is all wiring protected from abrasion, especially from rotatable items?
- * Are the load limit and "close for taxi, takeoff, and landing" placards conspicuous, even when compartment doors are open?

Lavatories:

- * Does the lav door open into the aisle? Is it spring-loaded closed if evacuation flow tends to force it or keep it open?
- * Are oxygen drops compatible with both standing and seated occupants?
- * Are there any potential stowage areas that could lead to a fire hazard? Do these have "NO STOWAGE" placards?
- * Is there an ordinance sign?
- * Is there a means to unlock the lav door from the outside, without the use of tools?
- * Are waste compartments designed with wear and tear in mind? (latch engagement, degree of compartment sealing)?

Video Monitors: (If applicable)

- * Are aisle mounted monitors at least 73" off the floor, or retractable and so placarded?
- * Have all sharp corners been eliminated from the monitor shroud?
- * Do the monitors obscure any required exit sign?
- * Is there a manual means to retract monitors that are normally powered?
- * Do in-arm monitors easily break away if contacted by a passenger during turbulence?
- Are possible head contact surfaces padded?
- * Are monitors located under sidewall stowage bins retractable?
- * Can front row monitors be stowed, or become unstowed, such that they interfere with exit passageways, or other egress routes?

- * Do in-arm video monitors break away easily without breaking off or, if they do break, are there any sharp or hazardous protrusions? Is the monitor capable of being re-stowed for TT&L?
- * Is required placarding for stowage visible to the seated occupant?
- * Is the in-arm IVS cavity "completely open or completely closed" to address the collection of flammable materials?