

VOLUME 6 SURVEILLANCE**CHAPTER 2 PARTS 121, 135, AND 91 SUBPART K INSPECTIONS****Section 5 Safety Assurance System: Conduct a Ramp Inspection on Cargo Loading
(Including Part 125)****6-265 REPORTING SYSTEM(S).**

A. Program Tracking and Reporting Subsystem (PTRS). Inspectors of Title 14 of the Code of Federal Regulations (14 CFR) part 91 subpart K (part 91K) and part 125 will document their surveillance in the PTRS using activity codes 1638, 3623, and 5623.

B. Safety Assurance System (SAS). For 14 CFR parts 121 and 135, inspectors will follow and use the associated SAS Data Collection Tools (DCT).

6-266 OBJECTIVE. This section provides guidance for conducting surveillance and inspection (maintenance and operations) on parts 91K, 121, 125, and 135 passenger, cargo, combi, and regional passenger aircraft that transport cargo, passenger baggage, Company Material (COMAT), and hazardous materials (hazmat) in the upper deck, lower deck, forward and/or aft cargo compartments, or pods.

6-267 GENERAL.**A. Federal Aviation Administration (FAA) Inspection Personnel.**

1) Aviation safety inspectors (ASI) should become familiar with the type of aircraft to be inspected before performing their surveillance. This may be accomplished through on-the-job training (OJT), the Air Cargo Operations Course 21000056, or formal aircraft systems training.

2) Due to certificate holder's varying schedules, inspectors may need to perform their surveillance outside of normal office hours or when time permits.

3) Inspectors will review the certificate holder's cargo operations procedures.

B. Coordination.

1) An ASI who needs additional information or guidance on a topic will coordinate with other ASIs who have experience in that specialty.

2) The responsible office for that area may need to coordinate with the Flight Standards office to gain access to a certificate holder's procedures manual. In addition, when it finds discrepancies, the responsible office for that area will communicate with the Flight Standards office before initiating corrective or enforcement action. In the case of hazmat discrepancies, inspectors will notify the regional hazmat branch manager through the appropriate Regional Operations Center (ROC). They will conduct any required investigation and handle any resulting corrective action.

3) Volume 3, Chapter 47, Section 1, Table 3-127, Delineation of Responsibilities, provides an overview of the responsibilities between the ASI disciplines and aircraft certification. This overview is not a comprehensive list. The intent of Table 3-127 is to display specific areas of discipline responsibility in relation to elements of Weight and Balance (W&B), airplane limitations, and cargo operations, and the overlap between them. Operations and Airworthiness inspectors should cross-train in areas of responsibility that overlap.

6-268 INITIATION AND PLANNING.

A. Initiation. This task can be scheduled in SAS as part of the Comprehensive Assessment Plan (CAP) by the principal inspector (PI) or recorded in SAS as an unplanned inspection initiated by special requirements.

B. Planning. The cargo ramp inspection provides the ASI with a good opportunity to ensure that the certificate holder's cargo programs are adequate and are being followed. To this end, the inspector should review the certificate holder's programs to familiarize themselves with the specific details of these programs. These may include:

- 1) Review operations specifications (OpSpecs) to verify the hazmat status of the certificate holder (i.e., will-carry or will-not-carry). A "will-carry" certificate holder will have OpSpec A055 issued.
- 2) Review certificate holder's cargo and baggage loading procedures.
- 3) Review certificate holder's W&B procedures.
- 4) Review certificate holder's procedures for different types of cargo such as oversized cargo, sports teams and their equipment, military contract loads (either cargo or troop transport), or special cargo.
- 5) Review certificate holder's procedures for loading last-minute items in cargo, baggage, pod compartments, and so forth. This may include items such as carry-on bags, plane-side bags or cargo, mail, or COMAT/hazmat.
- 6) Review the certificate holder's evaluation system (e.g., Continuing Analysis and Surveillance System (CASS), Internal Evaluation Program (IEP)) to identify possible negative trends in their cargo program. The major activities include surveillance, data analysis, corrective action, and followup.

6-269 MAINTENANCE RECORDS.

A. Cargo-Related Equipment. Maintenance, when performed, should be recorded prior to an approval for return to service. This also holds true for cargo-related equipment. The records should include unit load devices (ULD), net, or cargo loading system (CLS) component repairs conducted in house or by outside agencies, and record retention and receiving inspections of those items. The certificate holder's manual should describe the procedures for ensuring that recording requirements are met for cargo-related equipment.

B. Correcting Mechanical Discrepancies. Every mechanical discrepancy in the maintenance log must be either corrected or deferred (including CLS components) using the methods identified in the certificate holder's maintenance procedures manual.

6-270 DEFERRED MAINTENANCE.

A. Minimum Equipment List (MEL), Configuration Deviation List (CDL), or Nonessential Equipment and Furnishings (NEF) List—Deferred Maintenance. An approved MEL/CDL/NEF allows the certificate holder to continue a flight or series of flights with certain inoperative or damaged equipment. Depending on the type of aircraft, this may affect the CLS or even limit or prevent the carriage of cargo in one or more positions, or in an entire compartment. The continued operation must meet the requirements of the MEL/CDL/NEF deferral classification and the requirements for the equipment loss.

B. Repairing Inoperative Items. The maintenance program accepted for a certificate holder must provide for prompt and orderly repairs of inoperative items.

6-271 AIRCRAFT INSPECTION GUIDELINES. Ensure the following:

A. Load Manifest. Ensure that the load manifest form is prepared and signed by employees of the certificate holder or other authorized, trained, and qualified persons assigned to supervise the loading of aircraft and prepare the load manifest form.

NOTE: Ensure that the special cargo load schematic is used and retained by the certificate holder. Refer to Volume 3, Chapter 47, Section 2, and Advisory Circular (AC) 120-85, Air Cargo Operations.

B. Upper Deck Inspection (Cargo/Combi Aircraft).

1) Inspect the main cargo door, door seal, locking mechanism, and door lock viewing windows (if installed) for damage, deterioration, distortion, and security.

2) Review station weight placards for loading. For all-cargo aircraft configuration main cargo deck, inspect firefighting equipment, Protective Breathing Equipment (PBE), and crewmember walkway access if required.

3) Inspect the cargo compartment, paying particular attention to the condition and security of the ceiling, sidewall linings, and floor panels. Holes in liners repaired by tape may indicate hidden structural damage. If damage is found, the MEL/CDL/NEF procedures must be followed (if applicable) or it must be repaired in accordance with the appropriate instructions for continued airworthiness (ICA).

4) Inspect main floor locks, floor tracks, drive wheels, rollers, side rails, and cargo loading components for security, damage, and general condition. Ensure compliance with the type certificate (TC)/Supplemental Type Certificate (STC) and associated supplements.

NOTE: Be aware of possible substitution of load-bearing components of the CLS. If any substitution of load-bearing components is found, contact the certificate holder for clarification. After completing the inspection, the ASI should contact the responsible Flight Standards office to discuss the results, if required.

5) Inspect the main cargo doorsill protector for installation, security, and condition (damage).

C. Main Cargo Compartment Inspection.

1) Inspect the main cargo compartment area for foreign object debris (FOD) and general cleanliness.

2) Inspect the overall condition of the smoke barrier curtain, if installed, or cockpit door seal, barrier net assembly, or solid bulkhead. Ensure that the net (if used) has the proper rating for its intended G-loading. Pay particular attention to the following:

a) The smoke barrier curtain must be free of tears, holes, and cuts to prevent smoke from entering the forward cabin and flight deck.

b) The cockpit door seal for condition and integrity.

c) The barrier net for condition and security (i.e., check for frayed straps, hardware integrity, and proper markings).

d) Cargo compartment retention nets for condition and security.

e) The solid bulkhead for condition and security.

f) The required placards, such as loading, fire suppression, and so forth.

D. Lower, Forward, and/or Aft Compartment and Pods.

1) Inspect the compartment or pod to determine its condition, security, deterioration, and cleanliness.

2) Ensure that the required placards are installed.

3) Ensure that baggage is loaded in accordance with the certificate holder's Weight and Balance Program (WBP) and/or other certificate holder procedures.

4) Check the condition and security of tiedown devices/restraints.

5) Check the security of ballast, if installed.

6) If the aircraft is equipped with cargo pods, inspect the area like any other cargo compartment.

7) Inspect floor locks/CLS, if installed. Inspect door seals and mechanisms.

8) Inspect the interior, paying particular attention to the condition and security of the ceiling/sidewall linings and floor panels, including the proper installation of repair tape. Repair tape must comply with 14 CFR part 25, §§ 25.853(a) and 25.855(d).

9) Inspect cargo doors, door seals, locking mechanisms, and door lock viewing windows (if installed) for cleanliness, damage, deterioration, and security. Ensure that the fire detection/suppression is appropriate for its classification and that required placards are present.

10) Ensure that cargo is properly secured by appropriate tiedowns having enough strength to eliminate the possibility of shifting under all normal flight conditions.

11) Inspect retention nets for condition and security.

12) Ensure that loading/unloading is conducted in a safe manner in accordance with the certificate holder's procedures.

13) Whenever possible, inspect cargo for proper tagging and/or identification (e.g., mail, crew bags, equipment, and parts that the certificate holder considers COMAT).

14) Ensure that ceiling smoke detectors are free from obstruction.

15) Ensure that walkway areas are clear (as applicable).

E. ULDs.

1) Ensure that ULDs are eligible for transport on the aircraft.

NOTE: The Weight and Balance Manual (WBM) determines eligibility, as referenced in the TC, or STC W&B supplement.

2) Ensure that Technical Standard Order (TSO) markings are attached to cargo containers, nets, and pallets (if applicable). If active ULDs are present, ensure they are placarded as certified under FAA Order 8150.4, Certification of Cargo Containers with Self-Contained Temperature Control Systems (Active ULDs), and approved under part 121, § 121.305(d). A certificate holder must have specific procedures in its manual to carry active ULDs.

3) Inspect ULDs (nets, pallets, and containers) for serviceability per the certificate holder's procedures and limitations.

4) Ensure that identification markings are present in accordance with the certificate holder's procedures.

5) Evaluate cargo tracking devices, data loggers, radio frequency identification (RFID), and electronic bag tags in accordance with AC 91.21-1, Use of Portable Electronic Devices Aboard Aircraft.

6) Ensure that ULDs are properly secured.

F. Temperature-Controlled Shipping Containers.

1) Temperature-controlled shipping containers are devices designed to maintain their contents within strict temperature controls. These devices may bear a TSO, STC, Parts Manufacturer Approval (PMA), or be allowed by the TC.

2) For a certificate holder to carry these devices, it must incorporate or reference the pertinent parts of the device's certification documents into its manual. This includes training of appropriate personnel on the handling and maintenance of these devices. These units will be approved in the limitations section of the certification document for use with certain net and pallet combinations. Any aircraft that is eligible to carry the approved net and pallet combinations may carry these devices.

NOTE: Hazmat procedures may apply to these devices and/or their contents.

G. Weighing Scales.

1) Inspect current calibration of scales traceable to the National Institute of Standards and Technology (NIST), or equivalent.

2) Inspect overall condition of scales.

3) Ensure cargo weigh scales are calibrated, and periodically and functionally checked for accuracy in conformance with the certificate holder's program.

4) Observe weighing procedures and system integration to the load manifest.

H. Aircraft Loading and Ground Equipment.

1) Ensure that the aircraft is loaded/unloaded in accordance with the certificate holder's manual.

2) Ensure special cargo is accepted, loaded, restrained, and unloaded using a special cargo analysis function (SCAF) and load schematic. This is all accomplished in accordance with the certificate holder's manual.

3) Ensure equipment tare weights, such as dollies, slave frames, containers, and carts, are known and subtracted from the total weight to calculate the cargo weight.

4) Ensure the positioning of appropriate ground equipment is in accordance with the certificate holder's manual.

5) Ensure the load sheets, signed load manifest, and/or load schematic are properly executed.

6) Ensure that hazmat, and/or special cargo load schematic information, or manual reference is relayed to the crew. Refer to Title 49 of the Code of Federal Regulations (49 CFR) part 175 and AC 120-85.

7) Observe general safety procedures used during cargo offloading operations, especially at night, for use of lighting, reflective clothing, flashlights, and wands.

8) Ensure appropriate/applicable personnel authorized by the certificate holder are trained, qualified, and authorized in accordance with the certificate holder's WBP.

a) During operations at remote sites, a person trained and authorized by the company to supervise cargo-loading operations must provide oversight for the cargo loading. The use of local personnel at these sites for loading cargo does not require certificate holder-specific training. All cargo-loading operations, when using untrained personnel, must be directly supervised during the loading by a person trained in the certificate holder cargo loading and securing procedures. The certificate holder designee ensures, and becomes responsible for, all certificate holder loading policy and procedures.

b) A flightcrew member shall not perform this duty unless properly trained and authorized by the certificate holder in the duties associated with the loading of cargo.

NOTE: The certificate holder should not use the provisions in the above for routine operations or frequently transited stations. The provision's intent provides flexibility for supplemental operations considered infrequent or one-time airlift events.

I. Transport of Special Cargo. Certificate holders should have processes, procedures, and controls in place when transporting special cargo, including implementing a SCAF to help identify special cargo, evaluate special cargo risks, and develop a plan to ensure a safe flight using the aircraft WBM. Special cargo requires special procedures for acceptance, handling, loading, and restraint. ULDs not fully restrained by the aircraft CLS (pallet locks and side rails) should be considered a special cargo load. An example includes any time restraining devices (not nets) are directly attached to the aircraft structure. Based on certificate holder procedures:

1) Ensure the SCAF participants are trained, qualified, and authorized to perform SCAFs.

2) Ensure the special cargo is evaluated for transport.

3) Ensure the special cargo is properly restrained (e.g., has the appropriate quantity and types of restraint, shoring, and arrangement).

4) Ensure load schematic is constructed and executed for special cargo.

5) Ensure load schematic and any necessary instructions are available to those personnel involved with or responsible for the loading and securing of cargo during cargo loading.

6) Ensure the load schematic is retained with the load manifest.

J. Hazmat. The surveillance of hazmat handling is not the primary function of the Flight Standards Service; however, to carry out their 14 CFR responsibilities, ASIs must be familiar with the 49 CFR regulations and the certificate holder's hazmat programs, including their approved training. If ASIs witness or suspect irregularities regarding hazmat, they should immediately contact the regional hazmat branch manager through the ROC. The hazmat branch manager will investigate all hazmat issues. Refer to http://www.faa.gov/about/initiatives/hazmat_safety/contact/.

NOTE: Corrosion and structural damage may occur by improper handling of some hazmat.

1) Inquire about proper training for loaders, load supervisors, and personnel involved in ULD buildup in hazmat recognition.

2) Inquire about proper training in hazmat recognition for maintenance personnel involved with the movement of COMAT.

3) Ensure proper loading and marking of hazmat. The ASI should contact the responsible Flight Standards office and the regional hazmat branch manager after noting discrepancies in the handling of hazmat.

4) Inquire about procedures for pilot notification of the amount and location of hazmat.

5) Look for signs of undeclared hazmat (e.g., no shipping papers, marks, labeling, or emergency response information) or release of hazmat into the environment.

6) Inquire about safety procedures and equipment availability in case of a hazmat accident, such as a spill (e.g., mercury spill kit, emergency equipment).

K. Civil Reserve Air Fleet (CRAF). A significant number of U.S. air carriers participate in the Department of Defense (DOD) CRAF program. The DOD established this program to provide a rapid, organized system to augment the airlift capability of DOD aircraft during emergency situations.

1) If the operation involves the CRAF program with the Air Force (AF) Air Mobility Command (AMC), the ASI should ensure the following:

- Title 14 CFR regulations are followed;
- Special cargo procedures, if applicable, are followed;
- Cargo compartment reconfiguration changes are documented in the maintenance log for informational purposes only;
- All personnel involved with cargo functions are trained, qualified, and authorized; and
- Cargo weigh scales are calibrated and periodically and functionally checked for accuracy.

2) Unless granted a deviation by the Administrator under 14 CFR part 119, § 119.55, all operations supporting the DOD are considered commercial airlift operations and conducted under applicable 14 CFR regulations.

3) Ensure when military ULDs (pallet and net combinations) are used, they are authorized by the appropriate TC WBM or STC W&B supplement.

L. Carriage of Passengers Specified in §§ 121.583(a), 125.331, and 135.85. Although some in the industry refer to the persons listed in §§ 121.583(a), 125.331, and 135.85 as “supernumeraries,” they are defined in 14 CFR part 110, § 110.2 definition of “All-cargo operation” as passengers. Per § 110.2, “All-cargo operation means any operation for compensation or hire that is other than a passenger-carrying operation or, if passengers are carried, they are only those specified in § 121.583(a) or § 135.85 of this chapter.”

1) Inspect the passenger cabin (if equipped) for proper equipment, condition, and security.

2) Ensure the proper installation of emergency equipment and that each item has an inspection tag affixed.

3) Ensure that escape devices, such as slides, ropes, or descent devices, are serviceable per the certificate holder’s manual.

4) Ensure proper placarding of the passenger cabin for emergency exit.

5) Ensure that passenger to flight deck communications is serviceable.

6) Inspect the galley area (if installed) for condition and security.

6-272 INSPECTION RESULTS.

A. Common Discrepancies. The ASI must accomplish this inspection without interfering with the ground time limitations unless safety of flight becomes an issue. The following items, which are common discrepancies, may cause scheduling delays if found during a ramp inspection.

- Improper load manifest,
- ULDs are not Airworthy,
- Damage to aircraft loading system,
- Damage to the aircraft,
- Improper positioning of ground equipment,
- Inadequate training,
- Signs of undeclared hazmat, and
- Any other unusual certificate holder activity.

B. Corrective Action. The ASI must bring all noted discrepancies to the attention of appropriate personnel immediately (including the responsible Flight Standards office) to allow the certificate holder the opportunity to take corrective action without interrupting the flight

schedule. The ASI must verify that all corrective maintenance actions taken regarding maintenance discrepancies were in accordance with the requirements of the certificate holder's maintenance procedures manual. It is important to reemphasize that any suspected or known hazmat issues must be reported to the nearest FAA hazmat branch manager (through the appropriate ROC) for investigation and disposition.

6-273 PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites:

- Knowledge of the regulatory requirements of parts 91K, 121, 125, and 135, as applicable.
- Successful completion of the Air Cargo Operations Course 21000056.
- Experience working with similar type aircraft.

B. Coordination:

- This task may require coordination between Airworthiness and Operations ASIs.
- Responsible offices for that area should coordinate with the Flight Standards office.

6-274 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- Title 14 CFR Parts 21, 23, 25, 27, 29, 43, 45, 47, 91, 121, 125, and 135.
- Title 49 CFR Parts 171, 172, 173, and 175.
- AC 25-17, Transport Airplane Cabin Interiors Crashworthiness Handbook.
- AC 25-18, Transport Category Airplanes Modified for Cargo Service.
- AC 120-27, Aircraft Weight and Balance Control.
- AC 120-85, Air Cargo Operations.
- Certificate Holder's Applicable Cargo Procedures Manual.
- Volume 3, Chapter 47, Section 1, Safety Assurance System: Evaluating a Certificate Holder/Applicant's Weight and Balance Program; Section 2, Safety Assurance System: Evaluating a Certificate Holder/Applicant's Weight and Balance Program (Operations); and Section 3, Safety Assurance System: Evaluating a Certificate Holder/Applicant's Weight and Balance Program (Airworthiness) (for additional information regarding surveillance of cargo operations and W&B procedures).
- Volume 10, Safety Assurance System Policy and Procedures.

B. Forms. None.

C. Job Aids. None.

6-275 PROCEDURES.**A. Prepare for the Inspection.**

- 1) Review the certificate holder's flight schedule, select the flight to be inspected, and note the type of operation (cargo or passenger). Make certain the selected flight has adequate ground time so that the inspection can be accomplished without schedule delays.
- 2) Determine if any recent problem areas have been identified for that type of aircraft.

B. Interview Flightcrew and/or Loading Supervisor. Introduce yourself to the flightcrew and/or loading supervisor, as appropriate, and describe the purpose and scope of the inspection. Record flightcrew information as required for entry into the PTRS or SAS DCT (as applicable).

C. Inspect Aircraft Maintenance Records with Emphasis on Cargo-Related Equipment.

- 1) Ensure that all open discrepancies from the previous flight are addressed per the certificate holder's manual, prior to departure of the aircraft.
- 2) Review the maintenance records to determine if repetitive maintenance problems exist, which might indicate a trend.
- 3) Ensure that all MEL/CDL/NEF items are deferred in accordance with the provisions of the certificate holder's approved MEL.

D. Perform Interior Inspection.

- 1) Perform this inspection, as applicable, in accordance with Figure 6-18, Interior Inspection Guidelines (located in Volume 6, Chapter 2, Section 4), paying particular attention to areas identified in Section 4.
- 2) Inspectors should plan their ramp inspection so that any inspection of the aircraft's interior equipment and furnishings would be conducted either before passengers are enplaned or after they are deplaned.

E. Examine Maintenance Record Entries. Ensure that the certificate holder has recorded all discrepancies noted during this inspection. If time is available, monitor their certificate holder's corrective actions.

F. Debrief Certificate Holder. Inform the appropriate personnel of inspection completion. Discuss the discrepancies found during the inspection with appropriate personnel.

G. Analyze Findings. Analyze each finding to determine if the maintenance-related discrepancies are the result of improper maintenance and/or missing or inadequate maintenance/inspection procedures.

NOTE: All aircraft ramp inspections must include at least an examination of the aircraft's registration, Airworthiness Certificate, and maintenance logbook.

6-276 TASK OUTCOMES.

A. Complete the PTRS Record. For those not under SAS.

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

- Appropriate enforcement action when analysis of the findings discloses improper maintenance.
- Written notification to the certificate holder of the necessary changes to the manual, when analysis of the findings discloses missing or inadequate maintenance/inspection procedures.
- Communication with the Flight Standards office by the responsible office for that area finding discrepancies.
- Hazmat issues reported to the regional hazmat branch manager.

C. Follow SAS Guidance. See Volume 10 guidance for Module 4, Data Collection and Data Reporting; along with Module 5, Analysis, Assessment, and Action (AAA), for PIs. Outcome tracking may be via the Action Item Tracking Tool (AITT).

D. Document the Task. File all supporting paperwork in the certificate holder's office file.

6-277 FUTURE ACTIVITIES. Based on inspection findings, determine if increased surveillance, additional enforcement, other job tasks, and/or additional coordination between the Flight Standards office and the responsible office for that area is required for noncompliant certificate holders to regain compliance.

RESERVED. Paragraphs 6-278 through 6-292.