

VOLUME 3 GENERAL TECHNICAL ADMINISTRATION**CHAPTER 32 MANUALS, PROCEDURES, AND CHECKLISTS FOR 14 CFR
PARTS 91K, 121, 125, AND 135****Section 8 Safety Assurance System: Evaluate General Maintenance Manuals****3-3306 GENERAL.**

A. Evaluate a Manual. This section contains general information, direction, and guidance to be used by the principal maintenance inspector (PMI) in the evaluation of an operator's General Maintenance Manual (GMM). Specific oversight on Title 14 of the Code of Federal Regulations (14 CFR) parts 121 and 135 air carriers is accomplished in the Safety Assurance System (SAS). Some operators prefer their general manual to be called General Practices and Procedures (GPP). The operator's GMM/GPP is a segment of the operator's general manual system. Part 121, § 121.133 and part 135, § 135.21 require that each operator prepare and keep current "a manual." The manual mentioned is often referred to as a GMM/GPP, which the Federal Aviation Administration (FAA) requires to contain guidance for ground and management personnel during the conduct of the operator's maintenance.

B. Required Contents. Sections 121.135 and 135.23 specify topics that must be addressed in an operator's GMM/GPP. The operator's GMM/GPP must contain the duties and responsibilities for each category of employee. This manual must also provide sufficient policy, direction, and guidance to its employees for the safe and efficient performance of their duties. In addition, an operator's GMM/GPP must address the policies, systems, and procedures necessary to comply with maintenance operations specifications (OpSpecs) provisions and safe operating practices. This section contains discussions of selected topics that PMIs should look for when evaluating an operator's GMM/GPP, and which may be required by the operator's initial and final compliance statements.

3-3307 PROCEDURES.

A. Review Operator's Management Structure. When evaluating an operator's GMM/GPP, PMIs must ensure that the operator's management structure is included in the GMM/GPP, and that it meets the following guidelines:

1) Management Structure. The GMM/GPP must contain a description of the operator's management structure as it pertains to the Continuous Airworthiness Maintenance Program (CAMP) and its responsibility for the airworthiness of its aircraft. Organizational entities, Areas of Responsibility (AOR), and titles of key management positions must all be identified in the management structure. This description should contain information on how the maintenance management structure interfaces with the quality management structure and the responsibilities of both. Organizational charts and diagrams may also be useful in showing the relationship between operational units within the company.

2) Names of Management Personnel. The GMM/GPP must list the names of the individuals filling required management positions. An acceptable way for the operator to meet this requirement is to include a copy of its OpSpecs in the manual. The FAA may approve

management structures and titles different from those specified by 14 CFR part 119, § 119.65 by granting a deviation to these regulations. When the FAA grants such a deviation, it must be listed in OpSpec A005 along with the names and titles of the approved management positions listed in OpSpec A006.

B. Verify Inclusion of Authorized Maintenance. When evaluating an operator's GMM/GPP, PMIs must ensure that the operator's authorized maintenance is included in the operator's GMM/GPP, and that it meets the following guidelines:

1) Clear Descriptions of Authorized Maintenance. The GMM/GPP must contain clear descriptions of the types and level of maintenance that the operator is authorized to conduct under its part 121 operating certificate. One way an operator may describe the scope of its CAMP, which should include the types and kinds of authorized and prohibited maintenance, is to include a copy of the operator's OpSpec D072 in the GMM/GPP. Since the OpSpecs are designed to address a variety of situations and are not easy to understand, the PMI should encourage operators to extract the applicable information and incorporate it into the GMM/GPP. Clearly written direction and guidance on how the operator will comply with the authorizations and limitations should also be included.

2) Inclusion of Organization Charts, Programs, and Information Retrieval Systems. PMIs must review and ensure the manual has all the following required information:

a) A chart or description of the certificate holder's organization required by § 121.365, and a list of persons with whom it has arranged for the performance of any of its required inspections and other maintenance, preventive maintenance, or alterations, including a general description of that work.

b) The programs required by § 121.367 that must be followed in performing maintenance, preventive maintenance, and alterations of that certificate holder's airplanes, including airframes, aircraft engines, propellers, appliances, emergency equipment, and parts thereof. The programs must include at least the following:

1. The method of performing routine and nonroutine maintenance (other than required inspections), preventive maintenance, and alterations.

2. A designation of the items of maintenance and alteration that must be inspected (required inspections). This includes those that could result in a failure, malfunction, or defect endangering the safe operation of the aircraft if not performed properly or if improper parts or materials are used.

3. The method of performing required inspections and a designation by occupational title of personnel authorized to perform each required inspection.

4. Procedures for the reinspection of work performed pursuant to previous required inspection findings (buy-back procedures).

5. Procedures, standards, and limits necessary for required inspections, and acceptance or rejection of the items required to be inspected and for periodic inspection and calibration of precision tools, measuring devices, and test equipment.

6. Procedures to ensure that all required inspections are performed.

7. Instructions to prevent any person who performs any item of work from performing any required inspection of that work.

8. Instructions and procedures to prevent an inspector's decision regarding any required inspection from being countermanded by persons other than supervisory personnel of the inspection unit, or a person at that level of administrative control that has overall responsibility for the management of both the required inspection functions and the functions of other maintenance, preventive maintenance, and alterations.

9. Procedures to ensure that required inspections and other maintenance, preventive maintenance, and alterations that are not completed because of shift changes or similar work interruptions are properly completed before the aircraft is released to service.

c) A suitable system (which may include a coded system) that provides for preservation and retrieval of information in a manner acceptable to the Administrator, and that provides:

- A description (or reference to data acceptable to the Administrator) of the work performed;
- The name of the person performing the work if the work is performed by a person outside the organization of the certificate holder; and
- The name or other positive identification of the individual approving the work.

C. Review Manual for Weight and Balance (W&B) Procedures. When evaluating an operator's GMM/GPP, PMIs shall ensure that an operator's W&B procedures are included in the operator's manual system. If the operator elects to place the W&B system program in the GMM/GPP, that portion of the manual must be the "Procedures" portion. Each type of airplane used by the operator may require a separate FAA approval. The PMI shall verify that the following guidelines are met:

1) Placement of W&B Procedure. It may be appropriate for the operator to place the W&B procedure to be used by flightcrews in the Flightcrew Operating Manual (FCOM) and the procedures to be used by personnel other than flightcrews, such as maintenance personnel, in sections of the GMM/GPP. If the operator develops a single W&B procedure for all aircraft operated, it may be appropriate for the operator to place the procedure to be used by flightcrews and other maintenance personnel in the GMM/GPP. Operators may develop their own W&B procedures or use the procedures furnished by aircraft manufacturers. PMIs should recommend to the operator the current editions of:

- Advisory Circular (AC) 43.13-2, Acceptable Methods, Techniques, and Practices—Aircraft Alterations;
- AC 120-27, Aircraft Weight and Balance Control; and
- AC 120-85, Air Cargo Operations.

2) Approval of W&B Procedures. Approval is granted in OpSpec E096. Reference to the OpSpecs may be made in the GMM/GPP; however, the reference may not be used instead of a detailed description of the procedures to be used by ground maintenance, ground handling, and flightcrew personnel. PMIs must ensure that the information and guidance in the operator's GMM/GPP is consistent. The W&B procedures described in the operator's manuals should normally address the following topics:

- Procedures for complying with W&B limitations for each type of aircraft;
- For part 135 operators that operate multiengine aircraft, procedures for ensuring that the empty weight and center of gravity (CG) of each multiengine aircraft is determined by actually weighing the aircraft within the preceding 36 months;
- Procedures for determining the weight of passengers, crew, cargo, and baggage;
- Procedures for making the CG calculations, including loading schedules or other approved methods, if applicable;
- Procedures for the completion and disposition of load manifests and W&B records; and
- Procedures for loading the aircraft.

D. Review Operational Control Procedures. When evaluating an operator's GMM/GPP, PMIs must ensure that an operator's maintenance control procedures are included. Other areas should be explained as well, such as the duties and responsibilities of the maintenance control supervisor. The GMM/GPP should also explain the relationship between maintenance control and operations dispatch. It should further explain that only a licensed dispatcher could dispatch an aircraft. When training and operational control requirements for operational control personnel are not contained in a training and qualification document, they must be listed in the GMM/GPP. The PMI must ensure that the following requirements are met:

1) Part 121 Domestic and Flag Operations. The description of the operational control system used by part 121 operators conducting domestic and flag operations must be comprehensive. The interrelation of flight dispatch, crew scheduling, and maintenance (airworthiness) control must be outlined in detail. When evaluating an operator's GMM/GPP, PMIs shall ensure that maintenance-planning procedures are included. The direction and guidance for maintenance planning must be comprehensive and address the responsibilities of both maintenance control and quality control (QC).

2) Policies, Procedures, and Guidance. Inspectors must ensure that an operator's GMM/GPP contains the policies, procedures, and guidance to be used by the personnel who support the operator's maintenance efforts at the outlying line station level. This manual material must include those situations in which the operator maintains line stations, as well as situations in which the operator contracts for or purchases line station support. This type of material is

usually located throughout various user manuals, such as ground station and maintenance manuals, facilities and equipment (F&E) manuals, fueling manuals, and other special types of manuals. An operator may format and organize this type of manual material in a manner that is most consistent and usable for the operator's kind and type of operation. Regardless of the format and organization, however, this type of manual information is considered to be GMM/GPP material. The following are examples of the types of information that should be addressed in manual material concerning line station maintenance:

a) **Duties and Responsibilities.** The GMM/GPP, as appropriate, must contain an outline of the duties and responsibilities of line station supervisory personnel. The types of positions that should be addressed include the following: ground station maintenance personnel, and aircraft servicing personnel (when not addressed in the GOM). When an operator contracts for or purchases line station support, the GMM/GPP, as appropriate, must detail the procedures to be used by the personnel providing the support.

b) **Servicing and Ramp Maintenance.** The GMM/GPP must contain detailed safety procedures and guidance on servicing and maintaining aircraft during line station maintenance. These manuals should also contain instructions on the maintenance and use of ramp areas. The following are examples of procedures for aircraft servicing and ramp maintenance that should be addressed in the GMM/GPP:

- Procedures for the safety and protection of personnel working on the ramp;
- Procedures for fueling aircraft with or without passengers onboard, including any requirements for crewmembers to be onboard during fueling, or prohibitions against positioning fuel trucks next to open exits with passengers onboard;
- Procedures for operating ground equipment, including the capabilities and limitations of the equipment, and the training and qualification of persons using the equipment;
- Procedures and guidance for properly locating and stowing ground equipment;
- Procedures for the operation of aircraft cargo doors, baggage and cargo loading, and closing and checking the security of doors;
- Procedures for foreign object damage (FOD) control and periodically inspecting ramp areas;
- Procedures to be used during adverse weather conditions, such as thunderstorms, high winds, or low visibility; and
- Procedures for the inspection and removal of frost, ice, snow, or standing water.

c) **Hot and Cold Weather Maintenance.** PMIs should evaluate an operator's GMM/GPP to ensure that it contains detailed procedures and guidance on hot and cold weather maintenance, including the following:

- Procedures for the inspection of ramps for accumulation of frost, ice, snow, or standing water; and
- Restrictions and cautions on aircraft movements.

d) Deicing Procedures. Aircraft ground deicing procedures should be clearly delineated by the operator. While such procedures are usually in the operator's manual, the GMM/GPP must contain the following types of information concerning deicing for crewmembers, ground maintenance, and management personnel:

- Assignment of responsibility for ensuring that aircraft is clear of frost, ice, and snow accumulation;
- Conditions that require aircraft ground deicing;
- Procedures to ensure the effectiveness of deicing, including the frequency of applications, proper fluid mixtures, and tactile or close visual checks of selected portions of critical surfaces;
- Parts of the aircraft to deice, including a description of the critical surfaces of the aircraft used by the operator;
- Locations on the ramps or airports where deicing will be conducted;
- Engine auxiliary power unit (APU) and ground equipment operation during deicing;
- Passenger and ramp personnel protection during deicing;
- Procedures to be used by contract personnel when the operator contracts for deicing services;
- If applicable, a complete description of the elements of the operator's ground deicing/anti-icing program and the procedures required to operate under that program; and
- If applicable, a complete description of the ground deicing/anti-icing operational procedures that the operator uses to comply with §§ 121.629 and 135.227.

e) Contract Services. PMIs must ensure that the GMM/GPP, as appropriate, contains policy and guidance concerning the interrelationship between the operator's personnel and the personnel of organizations who provide contract services at line stations. Contractor personnel are required to be trained on operator-specific procedures. The appropriate manual must contain the specifications for the following: the types of training to be given to contractor personnel, who is responsible for providing the training, and who is responsible for keeping records of the training. Although the contractor may be delegated this responsibility, the operator has final responsibility.

RESERVED. Paragraphs 3-3308 through 3-3325.