CHAPTER 44

INSPECTION OF OPERATOR'S MAINTENANCE FACILITY

0.0 LIST OF EFFECTIVE PAGES

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1.0 OBJECTIVE.

This chapter provides guidance for inspecting a certificated operator's maintenance or contract maintenance facility for regulatory compliance when the operator maintains its aircraft under a continuous airworthiness maintenance programme. Reference: ICAO Document 8335 -AN/879, Paragraphs, 6.4, 9.6.3 and 9.6.20 through 9.6.23.

2.0 GENERAL

The maintenance inspection is performed to ensure that adequate housing, equipment, spare parts, technical data and qualified personnel are being utilized to satisfactorily complete all maintenance functions.

3.0 PERFORMING THE INSPECTION

A. *Equipment Identification*. Inspectors should be aware of the type of aircraft being operated. The operations specifications will identify the type of aircraft authorized for use.

B. *Previous Inspection Reports.* Previous inspection reports, correspondence, and other documents in the office files should be reviewed to determine if there are any open items or if any areas are identified that require special attention.

C. *Facilities.* The maintenance facility is required to perform maintenance in accordance with the operator's maintenance manuals. The inspector should use these documents to determine what special equipment, housing, and environmental conditions are necessary to perform the work. For example, the manufacturer may require special stands, hand tools, or a dust-free environment to repair a specific item.

D. *Contract Maintenance Arrangements.* If any maintenance will be performed by a contract facility, an inspection must be performed at the contractor's facility. During the inspection the inspector must determine if the contractor has adequate facilities and personnel to perform the contracted work. The inspector must keep in mind that the contract maintenance facility is an extension of the operator's overall maintenance organization. Maintenance performed by the contractor must be in accordance with the operator's approved maintenance programme / schedule.

(1) The operator's manuals must be reviewed to determine the levels of maintenance performed at the contract maintenance facility.

(2) The contract maintenance facilities should be inspected to ensure that they are properly certificated and rated for the scope of work performed, e.g., aircraft, powerplant, propeller, components, and accessories.

E. *Enforcement History.* Inspectors should check the Enforcement Information to determine if there are any areas that require special attention. if a contract maintenance organization is used, it should also be checked.

F. *Approved Flight Manual.* The approved flight manual for operators of rotorcraft external load and agricultural operations should be reviewed to determine the type of equipment being used. Based on the listed equipment, this review will help determine if the maintenance base has the necessary tools and equipment to service the aircraft and associated devices, e.g., external load devices (rotorcraft) and spraying devices (agricultural operators).

4.0 PREREQUISITES AND CO-ORDINATION REQUIREMENTS

A. Prerequisites

- Knowledge of the Nigeria Civil Aviation Regulations.
- Familiarity with the type of operation being inspected

B. Co-ordination. This task may require co-ordination between the assigned Airworthiness Inspectors.

5.0 REFERENCES, FORMS, AND JOB AIDS

A. References

- Nigeria Civil Aviation Regulations
- Operator's maintenance manual
- Operations specifications
- CHECKLIST CL: O-AWS027

6.0 PROCEDURES

The team of inspectors:

A. *Review the Operator's Data*. Review the following:

(1) The office files to determine if any chronic or open items exist, status of Enforcement Investigation Reports, exemptions, etc.

(2) The operator's maintenance manuals to determine the level of maintenance accomplished and the complexity of operation at the maintenance facility.

(3) The operator's operations specifications to determine the maintenance and inspection program content and complexity.

B. *Inspect the Operator's Technical Library.* Ensure that all required technical data is available and current. If data is on microfiche, ensure that readers are available and serviceable. The data must include the following, as applicable:

- Operations specifications
- Operator's maintenance management exposition
- Aircraft manufacturer's manuals
- Propeller, appliance, engine, and emergency equipment manufacturer's manuals
- Manufacturer's and vendor's service bulletins/letters
- Applicable Civil Aviation Regulations
- Applicable Airworthiness Directives
- Applicable type data sheets/Supplemental Type Certificates
- Approved Flight Manual

C. *Inspect the Aircraft Maintenance Record Retention System*. See Chapter 5, Section 7 for guidance concerning Operator's Continuous Airworthiness Records, as applicable.

NOTE: Sample a representative number of aircraft records to ensure the integrity of the system.

D. *Inspect the Maintenance Organization.* Ensure the following:
(1) Staffing meets maintenance needs based on the complexity of operation.
(2) Responsibilities are separated between inspection and maintenance sections.
(3) Maintenance and inspection management personnel are qualified.

E. *Inspect the Operator's Maintenance Facilities*. Using the operator's manual as a reference, inspect the following:

(1) Parts and storage areas, to ensure:

(a) Adequate spare parts are available to support complexity of operation.

(b) Receiving inspections are accomplished in accordance with operator's manual.

(c) Shelf life-limits are established for items, and that these items are controlled in accordance with operator's manual or manufacturer's recommendations.

(d) Components and hardware are properly identified, protected, and classified as to serviceability.

(e) Segregation of serviceable and unserviceable components and hardware is maintained.

(f) Hazardous materials are suitably segregated and stored.

(2) Special tools and test equipment, to ensure:

(a) Serviceability and calibration are accomplished in accordance with operator's manual.

(b) All required items are serviceable and within calibration criteria, to include traceability to one of the following:

- Nigeria Standards Organisation Weights and Measures Department.
- Standard established by the item's manufacturer

- If foreign manufactured, the standards of the country where manufactured

(c) Appropriate types and quantities are available

(d) Proper storage and protection are utilized

(3) Fuel/oil storage and dispensing facilities, if operated and maintained by operator. Chapter 5, Section 8 Monitor Operator's Refueling Procedures.

(4) De-icing chemical storage and dispensing equipment, if applicable. The following must be inspected to ensure compliance with the operator's manual:

(a) Chemical storage and dispensing
(b) Serviceability of equipment
(c) General condition and safety of storage areas
(d) Training of personnel in operator's de-icing procedures.

NOTE: If de-icing services are provided on a contract basis, ensure that the contractor meets the above requirements.

(5) Support shops (avionics, sheet metal, engine etc.), to ensure:
(a) All required technical data is current and available. If data is on microfiche, ensure that readers are available and serviceable.
(b) Staffing reflects complexity of shop.
(c) Personnel are properly trained, qualified, and authorized.
(d) Procedures for shift turnover are in place and properly utilized.

(e) All required special tooling and equipment is available, serviceable, and within calibration criteria.
(f) Maintenance tasks and inspection functions are being accomplished in accordance with operator's maintenance manual.
(g) Safety equipment is available and serviceable.
(h) Individual shop storage areas are maintained to same standards as main storage area.
(i) Work areas do not conflict with each other, e.g., lathe next to avionics repair area.
(j) Lighting, ventilation, and general housekeeping are adequate.

(6) Hangar facilities, to ensure:

(a) Facilities are adequate for work being performed.
(b) Staffing reflects the complexity of work being performed.
(c) Personnel are properly trained, qualified, and authorized.
(d) Procedures for shift turnover are in place and properly utilized.
(e) Special equipment and tooling is available, serviceable, and calibrated, if applicable.
(f) Safety procedures are established and adhered to.
(g) Procedures direct the flow and control of all maintenance and inspection records.
(h) Lighting, ventilation and general housekeeping are adequate.

(7) Hangar ground support equipment, to ensure the equipment is serviceable and appropriate for the work being performed.

F. Inspect the Engineering Department, if applicable. Ensure the following*:*

(1) Staffing is adequate for complexity of assigned duties
(2) Personnel are qualified
(3) All required technical data is current and available.

(4) Engineering orders are accomplished and recorded in accordance with operator's manual
(5) Major repair and alterations are accomplished in accordance with approved data. The data should be approved by the regulatory authority where the repairs or alterations were accomplished
(6) Major repair reports are retained and available

NOTE: Review a representative sample of operator generated Engineering Orders to ensure that the programme is being followed and items are being properly categorized (major vs. minor).

G. *Inspect the Inspection Department*. Ensure the following:

(1) Designated staffing is adequate for complexity of operation.
(2) Delegated staffing (Required Inspection Items) is at reasonable level.
(3) System ensures that inspection personnel are trained, qualified, and properly authorized.

H. Inspect the Maintenance control, if applicable

(1) Ensure the following:
(a) Staffing is adequate for the complexity of the operation and that personnel are trained and qualified.
(b) Technical data is available and current.
(c) Communications system provides effective communication between all departments and stations.

(2) Review the activity/turnover log to look for trends and to evaluate the general effectiveness of the overall maintenance programme

I. *Inspect the Maintenance Production/Planning Control, if applicable*. Ensure the following:

(1) Staffing is adequate for the complexity of the operation

(2) Planning system is effective, e.g., inspection/overhaul scheduling, facility scheduling, parts forecast, personnel requirements, and communication with other departments

(3) The system provides for scheduling corrections of deferred and carryover maintenance items

NOTE: Randomly sample a representative number of open and completed work packages to ensure the effectiveness of the system.

J. *Inspect Aircraft.* Inspect any available aircraft to determine the quality of maintenance being performed. Introduction to Aircraft and Equipment, Chapter 5, Section 1.

K. *Analyze Findings.* Upon completion of inspection, record all deficiencies noted and determine the appropriate corrective action(s) to be taken.

7.0 TASK OUTCOMES

A. Completion of this task may result in the following:

- Letter to the operator confirming results of the inspection.
- Enforcement Investigation Reports, as necessary.

B. *Document the Task*. File all supporting paperwork in the operator's office file.

8.0 FUTURE ACTIVITIES.

If deficiencies are noted during surveillance, schedule a follow-up inspection.