



Chapter 04: Avionics Operations

07. Documentation and Records Management

Maintain comprehensive documentation and records for all avionics work performed in compliance with Part 145 requirements.

Purpose

This process establishes procedures for maintaining comprehensive documentation and records for all avionics work performed to ensure compliance with Part 145 repair station requirements and provide complete traceability of all maintenance activities. The process ensures proper documentation creation, storage, and retrieval to support regulatory compliance and quality assurance.

Roles and Responsibilities

Avionics Technician:

- Conduct avionics system assessments and repairs
- Prepare detailed work scope and time estimates
- Document component requirements and procedures
- Coordinate with parts department for availability
- Ensure regulatory compliance for avionics work

A&P Mechanic:

- Execute assigned maintenance tasks per specifications
- Review work order technical requirements
- Provide technical input for work scope estimates
- Document completion status and discrepancies
- Ensure regulatory compliance in all maintenance work

Chief of Maintenance:

- Review and approve complex or high-value work orders
- Assign qualified technicians to specific maintenance tasks
- Ensure regulatory compliance for all maintenance work
- Resolve scheduling conflicts and resource allocation issues
- Oversee maintenance quality and safety standards

Process Steps

Work Order Documentation Phase

- **Create work order package** - Establish complete documentation package including work scope, procedures, and required forms
- **Assign documentation tracking** - Assign unique work order numbers and establish tracking through completion
- **Distribute work packages** - Provide complete documentation packages to assigned technicians with all required forms
- **Monitor documentation progress** - Track documentation completion throughout work performance and identify missing items

Maintenance Action Recording Phase

- **Record work performed** - Document all maintenance actions taken including procedures followed and materials used
- **Document test results** - Record all test data, measurements, and acceptance criteria verification
- **Complete component records** - Update component installation records including serial numbers and configuration data
- **Record inspection results** - Document all inspections performed and compliance verification results

Quality Review and Approval Phase

- **Conduct documentation review** - Review completed documentation for accuracy, completeness, and regulatory compliance
- **Verify technical accuracy** - Confirm all technical data and procedures are correctly documented and referenced
- **Obtain required approvals** - Secure all required signatures and approvals from qualified personnel
- **Process final documentation** - Complete final documentation package preparation for record storage

Record Storage and Retrieval Phase

- **File completed records** - Store completed documentation in organized filing system with proper indexing
- **Update electronic records** - Enter documentation data into electronic maintenance tracking systems
- **Establish retrieval procedures** - Ensure documentation can be quickly located and retrieved when needed

- **Maintain backup systems** - Implement backup and disaster recovery procedures for critical documentation

Process Mapping

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Work Order Creation → Documentation Assignment → Maintenance Recording → Test Documentation → Quality Review → Approval Process → Record Storage → Retrieval System

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Tools and Resources

Documentation Systems:

- Work Order Management Software
- Electronic Document Management System
- Maintenance Tracking Database
- Record Storage and Filing Systems

Forms and Templates:

- Work Order Forms and Checklists
- Maintenance Record Templates
- Component Installation Records
- Quality Control Inspection Forms

Regulatory References:

- Part 145 Documentation Requirements
- Maintenance Record Keeping Standards
- Component Traceability Requirements
- Regulatory Reporting Procedures

Success Metrics

- **Completion Time:** Work order documentation completed within 24 hours of work completion.
- **Quality Standard:** 100% of documentation packages complete and accurate on first quality review.
- **Safety Standard:** All regulatory documentation requirements met with zero compliance violations.

- **Client Satisfaction:** Documentation provided to clients within 48 hours of work completion when requested.

Common Issues and Solutions

- **Issue:** Incomplete or inaccurate documentation submitted by technicians
- **Solution:** Implement mandatory documentation training for all technicians, establish documentation checklists and review procedures, and provide immediate feedback on documentation quality to improve compliance

Issue: Difficulty locating historical maintenance records when needed

Solution: Implement comprehensive indexing and cross-referencing systems, establish electronic search capabilities, and maintain current location tracking for all physical documentation

Issue: Regulatory compliance issues identified during audits or inspections

Solution: Conduct regular internal documentation audits, establish corrective action procedures for identified deficiencies, and maintain current training on regulatory requirements for all personnel

Safety Considerations

- **⚠ WARNING:** Incomplete or inaccurate maintenance documentation may result in regulatory violations and compromise aircraft airworthiness

⚡ **CAUTION:** Ensure all documentation is legible and permanent to prevent loss of critical maintenance history information

i NOTE: All maintenance documentation must be retained according to regulatory requirements and be available for inspection by regulatory authorities

✓ **BEST PRACTICE:** Implement electronic backup systems for all critical documentation to prevent loss due to physical damage or destruction

Regulatory References

- **14 CFR Part 145.219** - Recordkeeping requirements for repair stations
- **14 CFR Part 43** - Maintenance, Rebuilding, and Alteration documentation standards
- **AC 43-9C** - Maintenance Records guidance for documentation requirements
- **14 CFR Part 91.417** - Maintenance records requirements for aircraft owners
- **FAA Order 8900.1** - Flight Standards Information Management System documentation guidance