Chapter 03: Maintenance Operations

01. Work Order Creation and Scheduling

Manage work order creation and scheduling to ensure efficient maintenance operations and optimal resource utilization.

Purpose

Establish a systematic approach to creating, documenting, and scheduling maintenance work orders that ensures efficient resource allocation, regulatory compliance, and clear communication between clients and maintenance team members throughout the maintenance process.

Roles and Responsibilities

Client Service Representative:

- Manage client communications and service requests
- Process documentation and billing
- Obtain client authorizations and approvals
- Coordinate scheduling and aircraft availability
- Maintain professional client relationships

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

Initial Work Order Creation

- **Collect client maintenance request** - Gather aircraft information, maintenance requirements, preferred dates, and any special client needs or constraints
- **Verify aircraft information** - Confirm aircraft registration, make, model, serial numbers, and current

maintenance status in aircraft records

- **Review maintenance history** - Examine previous work orders, recurring maintenance items, and any outstanding airworthiness directives or service bulletins
- **Determine work scope** - Define specific maintenance tasks, regulatory requirements, and estimated labor hours based on manufacturer specifications

Technical Assessment and Planning

- **Conduct preliminary inspection** - Perform visual assessment of aircraft condition to identify additional maintenance needs and verify reported discrepancies
- **Research regulatory requirements** - Review applicable FAA regulations, airworthiness directives, and manufacturer service bulletins for compliance obligations
- **Estimate parts and materials** - Identify required components, consumables, and special tools needed for maintenance completion
- **Calculate labor requirements** - Determine technician skill levels needed, estimated work hours, and potential overtime considerations

Work Order Documentation

- **Create work order record** - Enter complete aircraft and client information into maintenance tracking system with unique work order number
- **Document work scope details** - Record specific maintenance tasks, regulatory references, and completion criteria in work order system
- **Attach supporting documentation** - Include manufacturer maintenance manuals, service bulletins, and previous maintenance records as references
- **Generate cost estimate** - Calculate total labor, parts, and miscellaneous costs with appropriate markup and present to client for approval

Schedule Coordination

- **Check technician availability** - Review maintenance team member schedules and match qualified technicians to specific work requirements
- **Coordinate hangar space** - Reserve appropriate maintenance facility space based on aircraft size and work scope requirements
- **Schedule parts delivery** - Coordinate parts ordering and delivery timing to align with planned maintenance start dates
- **Confirm client schedule** - Verify aircraft availability dates and coordinate with client operational requirements

Work Order Approval and Finalization

- **Obtain client authorization** - Present final work scope, cost estimate, and schedule to client for written approval before work commencement
- **Assign work order number** - Generate unique tracking number and enter into maintenance management system for progress monitoring
- **Distribute work assignments** - Provide detailed work order information to assigned technicians with clear task specifications and completion requirements
- **Update scheduling system** - Enter confirmed work order into master maintenance schedule with resource allocations and milestone dates

Process Mapping

Flowchart to show sequential steps

Tools and Resources

- Maintenance tracking software system
- Aircraft maintenance records and logbooks
- FAA regulations database (14 CFR Parts 43, 91)
- Manufacturer maintenance manuals and service bulletins
- Parts catalog and inventory management system
- Scheduling calendar and resource planning tools
- Cost estimation worksheets and pricing guidelines
- Client communication templates and authorization forms

Success Metrics

- **Completion Time:** Work order creation process completed within 4 hours of client request.
- **Quality Standard:** 100% accuracy in aircraft information and regulatory compliance documentation.
- **Safety Standard:** Zero work orders processed without proper regulatory review and technician qualification verification.
- **Client Satisfaction:** 95% client approval rating for work order accuracy and schedule communication.

Common Issues and Solutions

- **Issue:** Incomplete aircraft maintenance records affecting work scope determination
- **Solution:** Contact previous maintenance providers, review FAA records, and conduct thorough pre-maintenance inspection to establish baseline

Issue: Parts availability delays impacting scheduled maintenance completion

Solution: Maintain preferred vendor relationships, establish minimum stock levels for common components, and communicate delivery delays immediately to clients

Issue: Technician availability conflicts during peak maintenance periods

Solution: Cross-train team members on multiple aircraft types, maintain relationships with qualified contract technicians, and implement flexible scheduling procedures

Safety Considerations

⚠️ **WARNING:** Never authorize maintenance work without verifying technician qualifications and regulatory compliance requirements

⚡ **CAUTION:** Ensure all work orders include proper regulatory references and airworthiness requirements before technician assignment

ℹ️ **NOTE:** All work order modifications must be documented and approved by both client and maintenance leadership before implementation

✅ **BEST PRACTICE:** Review aircraft maintenance history and recurring issues before finalizing work scope to identify potential additional maintenance needs

Regulatory References

- **14 CFR Part 43** - Maintenance, Rebuilding, and Alteration
- **14 CFR Part 91.405** - Maintenance Required
- **14 CFR Part 91.409** - Inspections
- **AC 43-9C** - Maintenance Records
- **AC 43.13-1B** - Acceptable Methods, Techniques, and Practices