Chapter 04: Avionics Operations

15. Emergency and AOG Support

Provide emergency avionics support and Aircraft on Ground (AOG) services to minimize client downtime and restore aircraft to service quickly.

Purpose

This process establishes procedures for providing emergency avionics support and Aircraft on Ground (AOG) services to minimize client aircraft downtime and restore aircraft to service as quickly as possible. The process ensures rapid response to emergency situations while maintaining safety standards and regulatory compliance.

Roles and Responsibilities

Operations Leader:

- Oversee daily operations and coordinate between departments
- Authorize emergency response procedures and resource allocation
- Monitor safety compliance and operational excellence
- Coordinate scheduling across departments for operational coverage
- Review billing disputes and approve service adjustments
- Ensure regulatory compliance across all operations

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

Emergency Response Activation Phase

- **Receive emergency notification** - Document emergency call details including aircraft location, problem

description, and urgency level

- **Assess emergency priority** - Evaluate situation severity and determine appropriate response level and resources required
- **Activate response team** - Contact and deploy appropriate personnel based on emergency type and complexity
- **Establish communication** - Set up communication channels with client and coordinate response activities

Initial Assessment and Diagnosis Phase

- **Conduct remote assessment** - Gather information about problem symptoms and aircraft condition through remote consultation
- **Dispatch technician** - Send qualified technician to aircraft location with appropriate tools and equipment
- **Perform on-site diagnosis** - Conduct thorough troubleshooting and fault isolation to identify specific problem
- **Develop repair plan** - Create action plan including parts requirements, timeline, and resource needs

Emergency Parts Procurement Phase

- **Identify required parts** - Determine specific parts needed for repair with accurate part numbers and specifications
- **Locate parts sources** - Contact multiple suppliers to locate parts and determine fastest delivery options
- **Coordinate expedited delivery** - Arrange fastest possible parts delivery using appropriate shipping methods
- **Track parts delivery** - Monitor parts shipment status and coordinate with repair team for arrival timing

Emergency Repair Execution Phase

- **Execute repair procedures** - Perform emergency repairs using approved methods and maintaining safety standards
- **Conduct quality control** - Implement appropriate quality control measures for emergency repair work
- **Test system operation** - Verify repaired system operates properly and meets performance requirements
- **Document repair completion** - Complete all required documentation and obtain necessary approvals for return to service

Process Mapping

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Emergency Call → Priority Assessment → Team Activation → Remote Diagnosis → On-Site Assessment → Parts Procurement → Repair Execution → Quality Control → Return to Service

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# Tools and Resources

**Emergency Response Equipment:**

- Mobile Tool Kits and Test Equipment
- Emergency Communication Systems
- Transportation and Travel Resources
- Portable Work Stations and Lighting

**Parts Procurement Resources:**

- Emergency Parts Supplier Network
- Expedited Shipping Services
- Parts Authentication and Verification Tools
- Emergency Payment and Authorization Systems

**Documentation:**

- Emergency Response Procedures
- Contact Lists and Escalation Procedures
- Emergency Work Authorization Forms
- AOG Service Level Agreements

# Success Metrics

- **Completion Time:** Emergency response initiated within 2 hours of notification during business hours, 4 hours after hours.
- **Quality Standard:** 90% of AOG situations resolved within 24 hours with aircraft returned to service.
- **Safety Standard:** All emergency repairs meet full safety and regulatory requirements with zero compromise.
- **Client Satisfaction:** Client satisfaction rating of 4.9/5 for emergency response time and effectiveness.
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Common Issues and Solutions

- **Issue:** Required parts not available from normal suppliers causing extended AOG time
- **Solution:** Maintain relationships with multiple parts suppliers including international sources, consider approved alternate parts when available, and explore temporary operational limitations if approved by engineering

Issue: Complex problems requiring specialized expertise not immediately available

Solution: Maintain contact list of manufacturer technical support representatives, establish relationships with specialized avionics repair facilities, and consider remote technical support options

Issue: Emergency repairs performed under time pressure not meeting normal quality standards

Solution: Establish emergency quality control procedures that maintain safety while accommodating time constraints, provide additional training for emergency response procedures, and implement follow-up inspection requirements

Safety Considerations

- ⚠️ **WARNING**: Never compromise safety standards or regulatory requirements even under emergency time pressure as unsafe repairs create greater risks than continued downtime

⚡ **CAUTION**: Ensure emergency repairs are performed by qualified personnel using approved procedures and properly tested before return to service

ℹ️ **NOTE**: All emergency repairs must be properly documented and meet the same regulatory requirements as normal maintenance

✅ **BEST PRACTICE**: Maintain emergency response capabilities through regular training, equipment readiness, and supplier relationship management

Regulatory References

- **14 CFR Part 43** - Maintenance, Rebuilding, and Alteration requirements apply to emergency repairs
- **14 CFR Part 145** - Repair Station Operating Certificate requirements for emergency services
- **14 CFR Part 91.405** - Maintenance required including emergency maintenance documentation
- **AC 43-9C** - Maintenance Records requirements for emergency repair documentation
- **Emergency Response Regulations** - Various federal and state emergency response requirements