Quality Assurance Auditors & Industry Conference
February 2023 | New Orleans, LA

AAR M-1003 Quality Assurance Program

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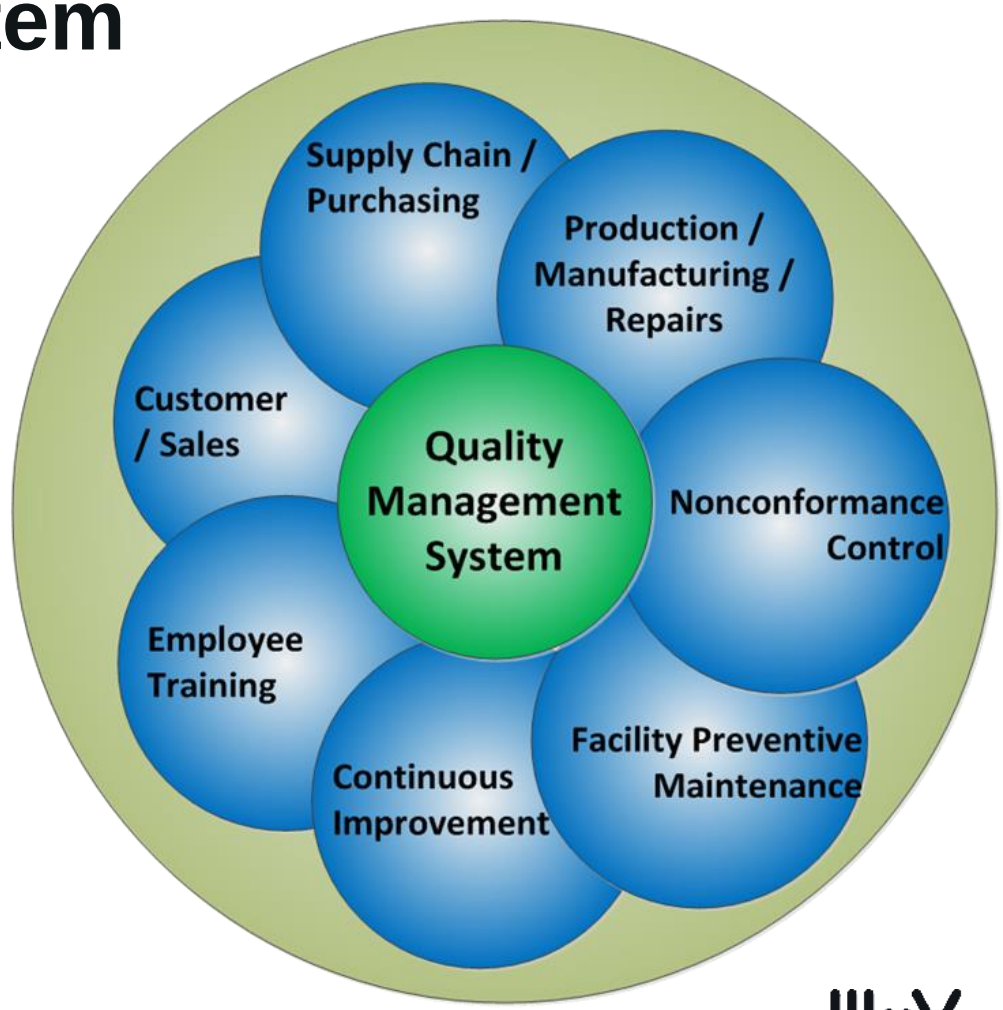
Quality Management System

- This presentation was developed for Quality Assurance Committee members to present to their purchasing / supply chain managers in their 16-representative companies

- It is to clarify:
  - What is a Quality Management System (QMS)
  - What is M-1003
  - What is Section J

    - Some purchasing / supply chain managers have heard ISO-9001 or M-1003 but really don't know what it is….



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Quality Management System

- Both M-1003 and ISO-9001 are quality standards

- Both standards require a facility to develop a QMS - to have a formalized system of documented policies, procedures and processes for consistently achieving customer requirements and objectives, they both serve many purposes including:
  - Improving processes
  - Reducing waste
  - Lowering costs
  - Facilitating and identifying opportunities
  - Engaging staff

- What is the difference between M-1003 and ISO-9001?

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M-1003 vs. ISO-9001

M-1003 Quality Standard

- Managed by Railroad Committee
- Specific to the NA Railroad Industry
- AAR Technical Approval, if required
- Subscription to AAR Circular Letters
- Chapter 7 nonconformance reporting
- Audited by an AAR Approved Auditors
- Audit checklist must be used (QAPE)

ISO-9001 Quality Standard

- Managed by European Committee
- Applies to all Industries (generic)
- Has no Technical Requirements
- No RR Industry Information
- No nonconformance report program
- Audited by non-Railroad Auditors
- Audit checklist not required (consistent?)

- Audit findings for RR shops with M-1003 certification vs. audit finding in non-M-1003 Shops

- Shops that were not M-1003 certified had 34% more exceptions (random sampling done by AAR MID)

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M-1003 Quality Assurance Specification

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- **What is it?**
  - Railroad industry standard for a Quality Management System
- **Why do we use it?**
  - Catastrophic failures decrease 50% after M-1003 was initiated
  - Increases safety and reduce costs
- **What's its history?**
  - Started with journal roller bearings
  - Companies want the certification to give the industry confidence in their products

1985

1 Activity

2 AAR Auditors

Today

135 Activities

64 AAR Auditors

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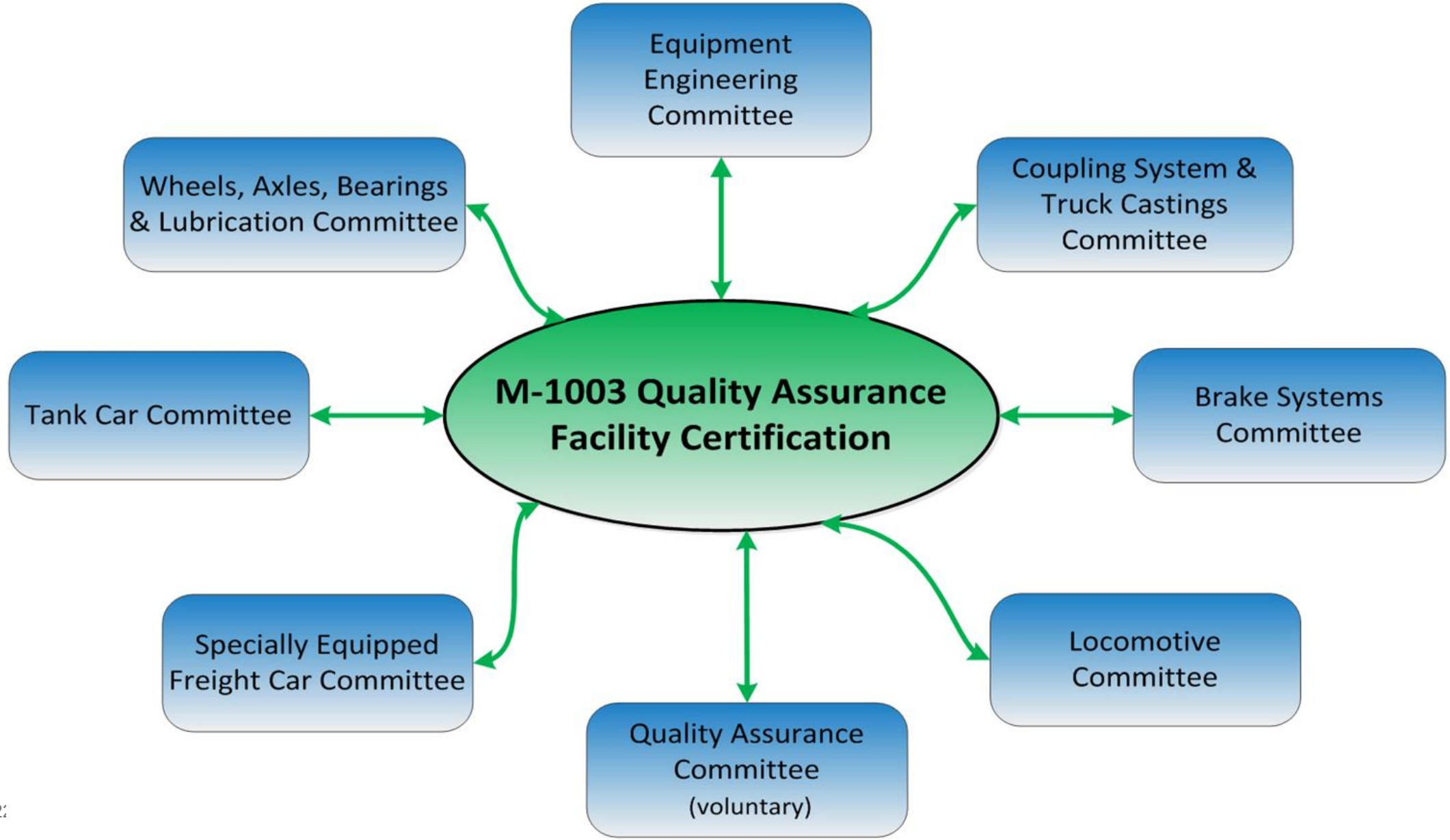
AAR Technical Committee and M-1003



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Implementing M-1003

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2.1 Objectives of Quality Assurance Program
2.2 Applicability and Scope
2.3 Quality Assurance Program & Manual Require
2.4 Management Responsibility
2.5 Production, Inspection, and Test Planning
2.6 Corrective and Preventive Actions
2.7 Document Control
2.8 Measuring and Testing Equipment
2.9 Purchasing/Contracting
2.10 Incoming Inspection
2.11 In-Process Inspection
2.12 Final Inspection
2.13 Inspection Status
2.14 Identification and Traceability
2.15 Process Control
2.16 Preservation, Packaging, and Shipping
2.17 Quality Records
2.18 Nonconformance Control
2.19 Quality Assurance Program Review & Manual Rev.
2.20 Statistical Methods
2.21 Internal Quality Audits
2.22 Training
2.23 Contract Review
2.24 Design Control

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M-1003 24-Element System Audit of a Facility's Quality Management System

2.1 Objective of QA Program

2.2 Applicability and Scope

2.3 QA Program and Manual Requirements

2.4 Management Responsibility

2.5 Production, Inspection, and Test Planning

2.6 Corrective and Preventive Actions

2.7 Document Control

2.8 Measuring & Testing Equipment

2.9 Purchasing / Contracting

2.10 Incoming Inspection

2.11 In-Process Inspection

2.12 Final Inspection

2.13 Inspection Status

2.14 Identification & Traceability

2.15 Process Control

2.16 Preservation, Packaging, and Shipping

2.17 Quality Records

2.18 Nonconformance Control

2.19 Quality Program Review & Manual Revision

2.20 Process Capability/Statistical Methods

2.21 Internal Quality Audits

2.22 Training

2.23 Contract Review

2.24 Design Control

WABL
CSTCC
BSC
TCC
EEC
LC

Certification Process

- Manual review
- In-plant audit
- QAC vote
- Company Registry
- 3-year Cycle

Year	M-1003 Certification	Audit Type Abbreviation
0	Initial Certification Audit	CT
1	Compliance Audit	C1
2	Compliance Audit	C2
3	Recertification Audit	RE

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M-1003 Nonconformance Reporting

Objectives of Nonconformance Reporting:

- Document and provide traceability of an M-1003 covered material or service failure (Activities)
- Document disposition, take corrective action, ensure cause of failure is eliminated, and ensure corrective action is effective and permanent (5-step RCCA process)

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Thank you

Association of American Railroads
Quality Assurance Committee