

The 15 Most Impactful Changes in AS9100 Rev D

Key Requirements Introduced in AS9100:2016 - and What Aerospace Auditors Expect Today

AS9100 Rev D (AS9100:2016) remains the current aerospace quality management standard, built on the ISO 9001:2015 framework. The changes it introduced over Rev C are exactly what registrars audit against today. Whether you are adopting AS9100 for the first time or maintaining an established certification, these are the fifteen requirements that matter most.

1. A New 10-Clause Structure

The standard was completely renumbered from an 8-element structure to a 10-clause structure. You do NOT have to renumber your quality management system, but if it doesn't put too much strain on your resources, renumbering is recommended so your personnel can better relate your system to the standard.

2. Context of the Organization

You must be able to demonstrate that management has a deep understanding of the company's internal and external issues, such as strengths, weaknesses, opportunities, and threats. Organizations are expected to monitor these issues on an ongoing basis.

3. Interested Parties

You need to document a general description of your external interested parties. Examples include customers, regulatory authorities, parent corporations, and shareholders.

4. Objective Programs

Instead of only defining an action plan when an objective is missed, you must now have a plan for each objective describing what will be done, what resources will be required, who will be responsible, when it will be completed, and how the results will be evaluated. We commonly refer to this as a documented objective program.

5. Risk-Based Thinking

Under Rev C, risk only had to be assessed at contract review or quoting, with the results communicated through product realization as applicable. Now organizations must also assess process risk, corporate risk, and opportunities.

6. Product Safety

Organizations must determine what controls are necessary to assure the safety of the products and services they offer, and must train their personnel on these requirements.

7. Ethics Training

Personnel must be made aware of the importance of ethical behavior. A documented company ethics policy is a practical way to anchor this training.

8. Management Review

Management review gained several new required inputs, including the performance of external providers, on-time delivery performance, the adequacy of resources, and the effectiveness of actions taken to address risks and opportunities. One new output was added: risks that have been identified. Action items must also be considered for the continual improvement process.

9. Organizational Knowledge

The new wording lends itself toward a matrix or database showing the organization has determined what knowledge and training its personnel need, and it pushes organizations further toward maintaining job descriptions.

10. Counterfeit Parts Prevention

Organizations must have a procedure for counterfeit parts prevention that includes sampling and analysis of raw materials and parts. Joining GIDEP (the Government-Industry Data Exchange Program) is a prudent way to meet the intent of the standard's note on counterfeit parts prevention.

11. Supplier Monitoring

It is now required to measure both on-time delivery (OTD) and quality performance for your suppliers.

12. Purchasing Flow-Downs

Flow-down requirements have been expanded, including the requirement for suppliers to make their employees aware of product safety, the importance of ethical behavior, and their contribution to product or service conformity.

13. Communication

Organizations must determine their requirements for internal and external communication: what to communicate, when to communicate, with whom to communicate, how to communicate, and who communicates.

14. Change Management

There is a stronger emphasis throughout the standard on controlling changes to the QMS, its processes, planning, production, and contracts.

15. Human Factors

Human factors appear in a note in the work environment section and as requirements in production control and corrective action root cause analysis. This is bigger than it looks: the AAQG (Americas Aerospace Quality Group) has distributed a lengthy human factors presentation among aerospace auditors. Consider these human factors in your system:

- **Ergonomics:** Machine and tool design, material flow, intuitive to use, at hand.
- **Equipment:** Suitable tools, appropriate clothing, access equipment, raw materials.
- **Culture:** Management attitude, can/can't-do mindset, pride, values, reward and recognition, pressures, resources.
- **Competence:** Knowledge, skills, experience, documented information, training, coaching, support.
- **Environmental:** Time of day, temperature, lighting, noise, distractions, safety risks, rest and refreshment.
- **Feelings:** Mental state, physical health, perception of worth, ambition, view of leadership, confidence, co-worker relationships.
- **Lessons Learned:** Fatigue, lack of concentration, complacency, lack of knowledge, distraction, lack of teamwork, lack of resources, pressure, lack of assertiveness, stress, lack of awareness, negative norms (incorrect tribal knowledge).

Adopting AS9100 or preparing for surveillance?

Let's start with a conversation - no jargon, no pressure. We'll assess your system against AS9100 Rev D, close the gaps, and make sure your team is ready for the audit. Call (844) MY-ISO-PRO or email Sales@MyISOFamily.com.

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