



AF 9100:2026

Aerospace Quality Management System

WORK INSTRUCTION

Evidence Capture, Witnessing and Independent Replay

AF-WI-9100-004

FIRST EDITION

30 September 2026 | English master text

Publication identity and application

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Use and document-control boundary

This companion implements the supplied AF 9100 requirement basis without changing the original standard. Its process allocation, examples, checklists and record design are authored implementation material. Actual mission or product limits, specialist procedures, permissions and genuine observations must be completed before consequential use. Applicable source minima and independent decision conditions cannot be reduced by this companion.

The printed edition date identifies the companion series; it is not evidence that later preparation, review or operational decisions occurred on that date. New support codes in this set are proposed allocations for controlled registration. Established AF-IG-9100-001, AF-FAQ-9100-001 and AF-TR-9100-001 identities are retained; earlier files, the corporate master list and ASTRA codes are not overwritten.

Equivalent combined or digital records are permitted when all required fields, relationships, authority and history remain intact. A completed PDF field or typed name is not evidence of an authenticated approval. Blank records in this delivery contain no invented applicant, signature, event or result.

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Select actual scope → complete application criteria → use the applicable procedure and technical book → capture authentic evidence → evaluate every applicable condition → obtain the required independent decision. Document availability does not establish implementation or conformity.

1 Purpose and controlled work

Use this instruction within the adopted local process and exact source scope. It supports reproducible execution but does not replace the complete applicable AF requirements or actual technical authorization.

2 Detailed work sequence

1. Confirm lawful access and identity

Record actual performer, observed task, object, equipment, method, source system, time and permissions.

2. Select representative work

Include difficult, changed and adverse cases within the actual population; disclose selection limits and unobserved features.

3. Capture original events

Preserve raw files, measurements, conditions, actions, interruptions and any coaching or substitution. Mark recorded versus live and generated versus authentic material.

4. Evaluate purpose-specific validity

Check whether the observation supports the claimed requirement and configuration. A clear image or signature does not establish the hidden underlying condition.

5. Replay the decision

Use the same frozen criterion, inputs, method, uncertainty and role authority. Investigate disagreements in facts or rule interpretation before closure.

6. Hand over usable evidence

Verify readable originals, relationships, limitations, access and receiving acknowledgement, not only a summary report.

3 Safe adverse-case execution matrix

Challenge	Required behavior
Missing essential criterion	HOLD; complete the prospective technical basis.
Wrong object or loaded configuration	HOLD; reconcile identity and relevant verification.
Invalid measurement or negative uncertainty	HOLD; reject invalid input and review affected conclusions.
Interval overlaps the limit under DR-A	HOLD; neither demonstrated conformity nor proven physical defect.
Valid essential failure with high total score	FAIL / no dependent positive release.
Open minor at new attestation	No grant, renewal or extension until verified closure.
Evaluator approves own third-party case	Block assignment; require competent independent decision.
Expired person authority at event time	Block dependent reliance; later renewal does not repair the past.
Unavailable source labeled N/A	Reject exclusion; restore the not-demonstrated state.
A test record is published as live	Stop publication and isolate the test system.
Missing evidence link after recovery	Hold assured use until semantic integrity is established.
Same file count, wrong current status	Fail reconciliation and correct the affected state.
Appeal used to revive suspended status	No automatic reinstatement or extension.
Suspension clock reset with new number	Reject reset; preserve original resolution deadline.
Closed provider without receiving custodian	Incomplete closure; assign and accept continuing duties.

4 Actual execution and verification record

Test / work item ID and exact source

Actual local system, method or calculation baseline

Preconditions and input / protected test environment

Independently specified expected behavior

Actual steps and observed result / raw evidence

Original defect, consequences and affected prior outputs

Correction, original-case retest and regression

Tester, reviewer and genuine acceptance / unresolved restrictions

Appendix A — Controlling source and evidence

Source: AF 9100:2026, Aerospace Quality Management System, FIRST EDITION, 29 September 2026; supplied 131-page PDF. Source page references below locate the original publication. These excerpts are read with the complete applicable standard; local implementation sequences do not replace it.

V.1 Assessment planning and evidence sampling

SOURCE p. 87 | Normative when applicable

V.1(a) The assessor shall establish the object, scope, applicable requirements, sites, functions, products, periods and authorized evidence access. Sampling shall consider criticality, changes, poor performance, process diversity and potential systemic failure. Sample limitations shall be recorded and shall constrain the resulting claim.

V.1(b) Assessment shall combine documented arrangements, interviews, observed work and retained results. The reviewer shall test whether records agree across the lifecycle. A completed questionnaire, certificate or policy statement alone shall not demonstrate implementation.

V.1(c) Organizational evaluation time and coverage shall follow Annex AC. The selected object route shall additionally follow Annex AA, and the actual decision shall follow Annex AD. Confidential evidence shall remain accessible to suitably authorized reviewers; unresolved absence of necessary evidence blocks the dependent conclusion.

Required evidence: Scope and route; approved plan; sample rationale; combined evidence; actual limits and access.

V.2 Findings and requirement-level conclusions

SOURCE p. 87 | Normative when applicable

V.2(a) Each finding shall identify the exact requirement, objective evidence, affected scope and gap. Classification shall follow Annex AD. A technical release hold shall be applied where needed irrespective of an administrative grade. Opportunities for improvement shall not conceal nonconformities.

V.2(b) The conclusion shall state conforming, nonconforming, not applicable with approved rationale or not yet demonstrated for each relevant requirement. Aggregate scores shall not offset missing mandatory evidence. The final decision shall identify unresolved issues and the precise scope that the evidence can support.

Required evidence: Requirement-level findings; classification; technical holds; evaluated applicability; clear conclusion. For Annex N, only N.1–N.3 and their required record tables are normative; the numerical worked examples are informative. For Annex AJ, required record fields and controls are normative, while filled sample values are informative.

V.3 Integrated audit trail and sample expansion

SOURCE p. 95 | Normative when applicable

V.3(a) An assessor may select a delivered serial, service event or task authorization and trace it backward through release, requirements, configuration, process, competent performer, measurement and external source. The assessor shall then trace relevant changes, field issues or complaints forward through population identification and corrective action.

V.3(b) When records disagree, the assessor shall expand the trail according to the potential extent and consequence. One successfully traced item does not verify the whole population. An apparent completeness score shall not conceal absent actual measurements, unverified qualifications or unresolved configuration changes.

Required evidence: Complete backward/forward trail; consistency checks; expanded samples; evaluated population limitations.

AC.6 Remote evaluation and access limitations

SOURCE p. 110 | Normative when applicable

AC.6(a) Remote methods may be used when identity, confidentiality, live observation, configuration, provenance and access provide evidence equivalent for the stated purpose. The provider shall document the suitability decision and limitations. Remote record review alone shall not replace necessary observation of a physical special process or safety-critical activity.

AC.6(b) Where reliable physical evidence cannot be obtained remotely, on-site evaluation or an appropriately controlled witnessed method shall be used. Restricted access shall be resolved through authorized arrangements. If necessary evidence remains unavailable, the corresponding conformity conclusion shall not be granted.

AC.6(c) Recording, screen capture and transfer of sensitive data shall be authorized. Live feeds shall be protected against selective or prerecorded presentation. Network failure or incomplete observation shall be recorded and the affected activity repeated or supplemented rather than marked complete.

Required evidence: Remote-method suitability review; authorized access; witnessed records; limitations and completed supplementary work.

AH.7 CAB application and competence evaluation

SOURCE p. 124 | Normative when applicable

AH.7(a) A CAB applicant shall submit its legal and governance information, impartiality analysis, requested detailed technical scope, methods, facilities, competence records, sample reports, internal evaluation, management review, complaints and corrective-action evidence. Requested activities not yet demonstrated shall be identified rather than described as established capability.

AH.7(b) The authorized competence-assessment team shall review documentation and evaluate the relevant operating sites, technical resources, methods, personnel, records and decisions. It shall witness representative activities for every distinct method family or assessment route, including the highest consequence and material scope limitations. Grouping shall be justified by actual technical similarity.

AH.7(c) The evaluation shall include at least one complete trace from application and contract review through technical execution, reporting, independent decision where applicable and subsequent control. It shall challenge unsuccessful work, amended reports, complaints and changes. Outstanding nonconformities in the requested scope shall be closed before grant.

Required evidence: CAB application dossier; detailed scope; on-site and witnessed evaluation; complete case trails; verified closure.

AJ.7 Digital implementation and record export

SOURCE p. 131 | Normative when applicable

AJ.7(a) A digital workflow shall implement required state transitions, approvals and access controls and shall be tested against permitted and prohibited cases. Tests shall include open critical findings, expired competence, unavailable evidence, mismatched configurations, suspended status and an attempted unauthorized approval.

AJ.7(b) An export shall preserve readable decisions, identities, configurations, requirements, actual results and relationships to supporting evidence. A summary PDF without the necessary source evidence shall not be described as a complete transferable dossier. Migration and restoration shall verify records and relationships, not merely file counts.

Required evidence: Workflow validation; prohibited-case tests; attributable approvals; complete exports; relationship and recovery verification.

Source tables — complete field and decision payloads

Table V-1 — Audit and assessment record fields

Source p. 87 | Required structure when applicable

Field	Minimum required content
Identity and scope	Evaluation ID, date, assessor, object route, entity/person, site, configuration, profile and period.
Requirement	Exact clause and lettered paragraph, normative table condition or profile criterion.
Sample	Records, items, people, sites and periods observed; selection method and limitations.
Evidence	Objective observations, actual results, traceable records and confidentiality controls.
Conclusion	Conforming, nonconforming, approved non-applicability or not yet demonstrated.
Finding and action	Requirement–evidence–gap, grade, extent, protection, cause, actions, owner and original deadline.
Closure and decision	Verified implementation and effectiveness; independent reviewer and decision; actual status and date.

Table AH-1 — Minimum CAB witnessing coverage

Source p. 124 | Required structure when applicable

Provider activity	Witnessed evidence	Competence conclusion shall identify
Testing / calibration	Actual representative method, sample preparation, equipment, data, uncertainty where relevant and authorized report.	Methods, quantities or properties, ranges/conditions, sites and demonstrated limitations.
Inspection	Actual inspection or a controlled representative task with the relevant configuration, access and acceptance criteria.	Inspection object, method, required independence and detection/access limitations.
ORG certification	Complete representative audit trail, team competence, scope, time, findings, review and decision.	Authorized organizational scopes, technical sectors and criticality coverage.
PRD / SVC / PRC certification	Actual profile review, technical evaluation, representative witnessing, independent decision and continuing controls.	Object families, profiles, technical evaluation methods and restrictions.
PER certification	Eligibility, examination security, practical evaluation, scoring, independent decision and credential control.	Role profiles, technical scope, examination methods and continued competence controls.