



AF 9100:2026

Aerospace Quality Management System

CONTROLLED SCHEDULE

Application Parameters, Methods and Decision Rules Schedule

AF-SC-9100-004

FIRST EDITION

30 September 2026 | English master text

Publication identity and application

Control	Publication value
Title	Application Parameters, Methods and Decision Rules Schedule
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Controlling source	AF 9100:2026 — FIRST EDITION — 29 September 2026
Responsible owner function	Relevant technical and scheme authority
Primary source anchors	2.2, AA.2, AD, M
Delivery status	Prepared implementation companion. Actual approval, adoption, effectivity and operational decisions are recorded separately.

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.

Interactive fields are blank by default. Save a working copy, use continuation records where necessary and preserve raw supporting evidence outside the PDF through controlled references. Separate issued PDFs are the authoritative interactive copies; the combined reading edition is flattened.

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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 Schedule application and source priority

Complete the actual role, scope and event-specific assignments before using this schedule. Source minimum intervals and gates are not optional planning targets. The schedule cannot waive an earlier technical, contractual or legal duty.

2 Prospective parameter and decision payload

Field group	Required information
Identity and ownership	Profile ID, revision, route, owner, technical approver, issue date and affected claims.
Object and domain	Exact object/configuration, sites, relevant users, operating or task conditions and exclusions.
Obligations and criteria	Requirement IDs, quantitative limits or defined attributes, legal and customer constraints, essential controls.
Evaluation design	Methods, test conditions, samples, representativeness, uncertainty, validity checks, required independence.
Decision	Pre-agreed passing rules, critical failures, treatment of unavailable evidence and nonconformities, decision authority.
Continuing basis	Surveillance, expiry or instance boundary, change triggers, renewal and retained support obligations.
Records and claims	Required reports, retention, authorized public statement, privacy and mark restrictions.

Q01 — Measurement model and combined uncertainty

Source anchors: 7.7; H.1-H.2; AD.2

Combine justified uncertainty contributions for the actual reported result.

Calculation element	Controlled method and interpretation
Equation	$u_c^2 = \sum(c_i^2 u_i^2) + 2 \sum(i < j)(c_i c_j \text{cov}(x_i, x_j)); U = k u_c$
Variables and units	u_i : standard uncertainties; c_i : sensitivity coefficients; covariance units follow the input quantities; k : justified coverage factor.
Worked synthetic values	For additive independent standard components 0.0012, 0.0015, 0.0010 and 0.0005 mm, $u_c=0.0022226111$ mm. At illustrative $k=2$, $U=0.0044452222$ mm.
Assumptions and validity	Linear approximation and covariance model must be suitable. Correct known significant effects first. $k=2$ is not an exact universal coverage statement.
Decision boundary	Accept the calculation only after model, inputs and intended rule are reviewed. This calculation alone does not accept the item.
Adverse checks	Reject negative/non-finite uncertainty; challenge copied uncertainty from another method and inappropriate division by sample size.

Q02 — Correlation sensitivity

Source anchors: H.4; 7.7

Expose reliance on shared references rather than assume independence.

Calculation element	Controlled method and interpretation
Equation	$\text{cov}(x_i, x_j) = \rho u_i u_j$; $u_{c, \text{corr}} = \sqrt{u_{c, \text{ind}}^2 + 2 \rho u_i u_j}$
Variables and units	ρ : supported correlation; all terms must refer to the same result model.
Worked synthetic values	With $\rho=0.5$ between the 0.0012 and 0.0010 mm components, $u_c=0.0024779023$ mm; the independent result was 0.0022226111 mm.
Assumptions and validity	Do not select correlation to minimize reported uncertainty. Input covariance must be physically justified and mathematically valid.
Decision boundary	Unresolved consequential dependence requires a bounded analysis or more evidence, not an unexplained zero covariance.
Adverse checks	Compare positive and negative plausible dependence and ensure the complete covariance matrix is valid.

Q03 — DR-A interval decisions and exact equality

Source anchors: AD.2-AD.6; H.3

Classify conformity, proven nonconformity and unresolved overlap using valid evidence.

Calculation element	Controlled method and interpretation
Equation	$a=y-U$; $b=y+U$. PASS: $a \geq L$ AND $b \leq H$. FAIL: $b < L$ OR $a > H$. Otherwise HOLD.
Variables and units	L,H: inclusive limits in the same units as corrected result y; U: non-negative justified expanded uncertainty. For asymmetric coverage use actual endpoints.
Worked synthetic values	Using illustrative $L=49.970$ mm, $H=50.030$ mm and explicitly rounded $U=0.00444522$ mm: $y=50.024 \rightarrow$ PASS; $50.028 \rightarrow$ HOLD; $50.036 \rightarrow$ FAIL; $50.02555478 \rightarrow$ PASS at exact upper equality; $50.02555479 \rightarrow$ HOLD.
Assumptions and validity	This example fixes its decimal U explicitly; an actual calculation uses the retained unrounded uncertainty. Do not use a numeric closeness tolerance to move a real result inside a limit.
Decision boundary	HOLD does not prove a physical defect. Rule selection and alternative approval follow AD; it is not acceptable to change rules after seeing a failure.
Adverse checks	Negative uncertainty, reversed limits, missing or non-finite input all produce HOLD; a zero uncertainty still requires a valid technical basis.

Blank controlled schedule entry

Schedule identity / owner / applicable source and version

Actual route / object / configuration / site / role

Applicable trigger and technical/clock condition

Approved limit or required record / units / boundary

Source evidence and technical derivation

Actual accountable function and independent reviewer

Genuine approval / effective event / current restrictions

Due event / actual completion / relevant time zone

Missed or failed condition / protection and escalation

Linked form and register / receiving acknowledgement

Appendix B — Local implementation and release

Readiness condition	Evidence before consequential use
Authority and responsibility	Actual legal operator, owner, competent technical authority, independent reviewer and permitted result class are recorded.
Scope and criteria	Object, configuration, site, period, trigger, every technical value or observable attribute, units and prospective approval are complete.
Evidence and methods	Original accessible evidence, representative observations, valid methods, uncertainty, adverse cases and limitations support the intended conclusion.
People and independence	Competence is current for each task; genuine conflicts, relevant prior work and needed separation have been checked.
Records and tools	Field meanings, unique IDs, original history, access, retention, recovery and actual deployed workflows have passed local validation.
Decision and public use	All relevant blockers are resolved; required independent decision and written permissions precede the exact public claim.
Continuity and handover	Receiving custody, unresolved duties, corrections and historical decisions survive transfer, retirement or provider closure.

Record the completed local readiness and actual authorization in AF-FR-9100-032 or an equivalent controlled record. Preserve the unchanged source standard and each earlier decision basis. A blocked activity may continue only within a genuinely permitted development boundary, not as a provisional conformity certificate.