



ASTRA

AEROSPACE STANDARD

ASSESSMENT CHECKLIST

Critical Processes and Products - Technical Assessment Checklist

AF-AST-CL-003

FIRST EDITION

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Aviation / Space / Defense / Future systems

Publication identity and use

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Publication and operation	Prepared publication. Actual technical approval, consultation, institutional adoption, operational effectivity and individual scope activation require separate authentic records.

Purpose and application

Requirement-level evaluation of Critical Processes and Products. Source conditions are reproduced in full; every response requires attributable evidence, sampling and a reasoned conclusion. Family checklists are used with CL-001, the actual profile and all triggered normative annexes.

Source requirements and added implementation detail

The controlling ASTRA source is identified above by content fingerprint. Numbered source clauses and annexes retain their own authority. The retained operating material is restructured and expanded with implementation methods, additional profile controls, worked synthetic examples, decision diagrams and record contracts. Added implementation detail is not presented as an earlier institutional approval or as a change to the supplied core standard. Any additional binding criterion requires the applicable technical adoption process.

The displayed publication date identifies the edition; it is not a fabricated authoring, test, approval or operational date. Actual records retain genuine event times and controlled versions. No named outside organisation or standard is incorporated as a normative reference. AF internal instruments and separate legal or contractual duties remain applicable within their actual scope.

Acceptance boundary

A positive grant requires every applicable mandatory condition to PASS, every N/A to have independent justification, every in-scope nonconformity to be verified closed, and competent independent authority. HOLD, unknown state, missing evidence, a favourable average, a signature image or a completed form cannot substitute for those conditions.

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1 How to use the requirement and child-condition checklist

Apply the following logic to the exact evaluated object and responsible function. A procedural checkpoint, product characteristic, competence decision and public credential are different objects. Their states shall not be collapsed into one score. Source: ASTRA 62.1–62.7 and Annex AL.

State	Sufficient basis	Required next action
PASS	Applicable; current approved predicate met by valid, purpose-specific evidence.	Retain the original evidence and bounded inference. Other mandatory gates still apply.
FAIL	Applicable; valid evidence demonstrates that the approved predicate is not met.	Contain affected use; retain the failure; assess cause, extent and required corrective verification.
HOLD	Applicability, criterion, method, evidence, uncertainty or authority is unresolved.	Resolve the missing basis. Do not manufacture a value, favourable default or product-defect conclusion.
N/A	Activity trigger and retained responsibility are absent; independent exclusion approval exists.	Retain the scope-specific reason and reassess when activity or responsibility changes.
UNSET	Only an uncompleted field in this PDF; not a conformity state.	No conclusion is recorded. Complete review before the field can support a decision.

For a compound source clause, create a child-condition ledger containing every separately testable condition, location, phase and operating mode. A sentence-level checkpoint is a navigation aid, not permission to merge unrelated predicates. Each child receives an ID, responsible owner, criterion, method, source evidence, uncertainty where relevant, current state and independent review. The parent cannot PASS while any mandatory child is FAIL, HOLD or UNSET.

An acceptable measurement interval and an acceptable authority chain are independent prerequisites. Use finite, unit-consistent, unrounded values; negative uncertainty, reversed limits, unknown version or wrong-object evidence produce HOLD. For inclusive [L,H] and accepted interval [a,b], PASS requires $a \geq L$ and $b \leq H$; FAIL requires $b < L$ or $a > H$; otherwise HOLD. Approved one-sided or exclusive boundaries retain their own declared predicate.

Positive-decision conjunction

Every applicable mandatory child is PASS AND each N/A is independently justified AND every in-scope nonconformity is verified closed AND scope, competence, independence and actual authority are valid AND required panel participation and voting rules are satisfied. No average, majority preference or payment supplies missing evidence.

Child-condition ledger and complete population

Stable source clause and child IDs; object, phase/mode, parameters, predicate, evidence, reviewer, actual dates, state and open actions. Use linked controlled continuations rather than hidden scrolling text.

Each source sentence is a separately recordable checkpoint below. Enumerations and compound conditions must additionally be expanded into a local child ledger under Clause 62.1. The printed sentence-level rows preserve source wording; they do not claim to predefine every possible application-specific child. The full relevant source annexes remain mandatory. UNSET is an uncompleted UI field, never an assessment result.

2 Evidence validity and decision sequence

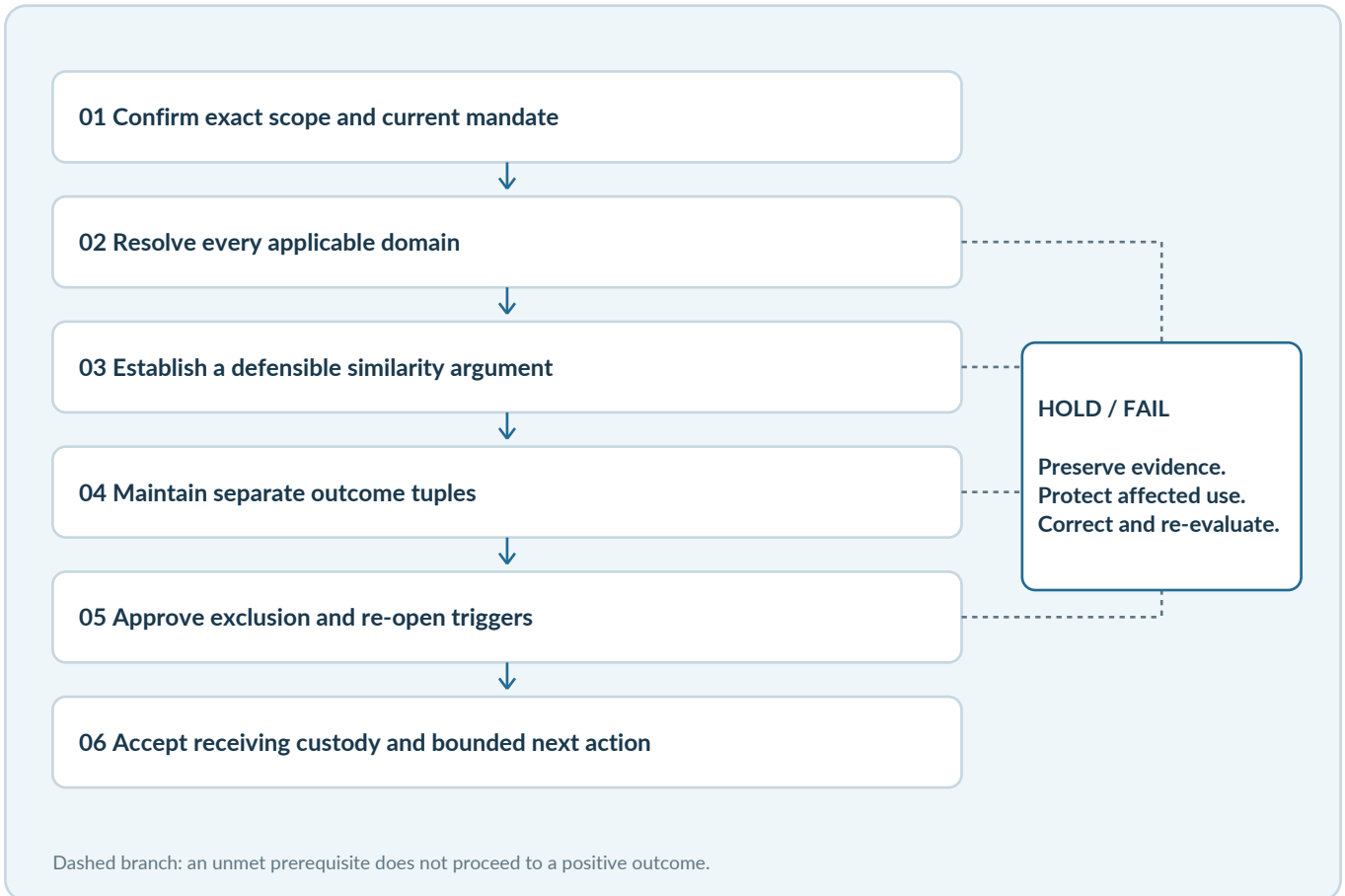
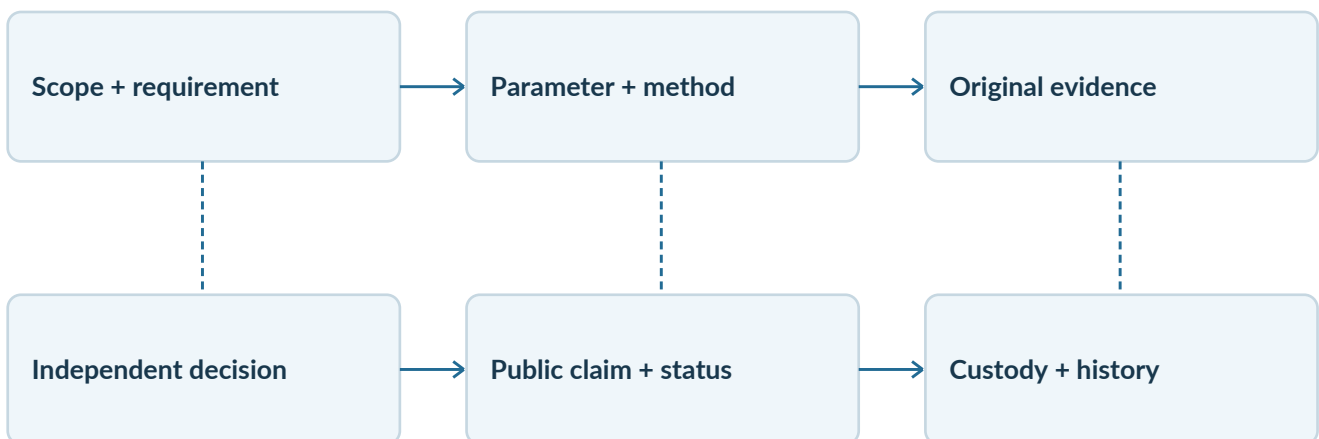


Figure — Implementation sequence for AF-AST-PR-004. Explanatory diagram; the source prerequisites and actual authority remain controlling.



Each relationship carries object identity, controlled version, actual event time and purpose-specific validity.

Figure — Scope-to-custody evidence relationships. A relationship is validated for its decision purpose, not merely because two identifiers exist.

3 Source conditions selected by family and retained responsibility

1.3 – Object and responsibility tuple

Source: AF-AST-STD-001 / FIRST EDITION, p. 10; exact source subclause 1.3.

1. Each application shall identify the responsible legal entity, actual performer, object type, family and module, sites and remote functions, configuration or programme version, lifecycle role, applicable period, criticality, profile and exclusions.	UNSET
2. Products, services, processes, people, supplier scopes, educational programmes, assessment providers and environmental statements are separate objects.	UNSET
3. A combined dossier may share evidence but shall provide a separate conclusion and status history for each claimed object.	UNSET
4. Where a duty is outsourced, the record shall identify both the performer and the organisation retaining accountability.	UNSET

Verify: Inspect the original evidence, actual implementation, method and configuration for each mandatory child condition. Complete scope tuple; separate requested outcomes; actual-performer map.

Acceptance: Apply the prospective child predicates and Annex AL. All applicable mandatory children must PASS; independent N/A approval is required; no positive closure with HOLD, FAIL or missing evidence.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

1.5 – Activity-based applicability

Source: AF-AST-STD-001 / FIRST EDITION, p. 11; exact source subclause 1.5.

1. The applicant shall make a reasoned applicability decision for every common and family requirement.	UNSET
2. Non-applicability requires the actual activity and retained responsibility to be absent, without undermining a claimed outcome.	UNSET
3. Small size, another certificate, customer nomination or outsourcing alone does not justify exclusion.	UNSET
4. A provider that changes from distribution to repair, or from laboratory testing to product certification, shall reassess its scope before making the broader claim.	UNSET
5. Technical reviewers shall approve material exclusions and record the supporting evidence.	UNSET

Verify: Inspect the original evidence, actual implementation, method and configuration for each mandatory child condition. Approved applicability matrix; technical rationale; review triggers and version history.

Acceptance: Apply the prospective child predicates and Annex AL. All applicable mandatory children must PASS; independent N/A approval is required; no positive closure with HOLD, FAIL or missing evidence.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

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8.2 – Equipment identity and fitness

Source: AF-AST-STD-001 / FIRST EDITION, p. 18; exact source subclause 8.2.

1. Equipment, software-controlled instruments, fixtures, tools and reference artefacts shall be uniquely identified and suitable for the required range, resolution, accuracy, uncertainty and duty.	UNSET
2. Verify acceptance before first use, after repair or configuration change, and when validity is questioned.	UNSET
3. Records shall include version, location, maintenance, checks, restrictions and status.	UNSET
4. Calendar calibration alone shall not establish fitness for every method or specimen.	UNSET
5. Out-of-service equipment shall be prevented from supporting an authorised result.	UNSET

Verify: Inspect the original evidence, actual implementation, method and configuration for each mandatory child condition. Equipment register; acceptance and checks; method suitability; restricted-use controls.

Acceptance: Apply the prospective child predicates and Annex AL. All applicable mandatory children must PASS; independent N/A approval is required; no positive closure with HOLD, FAIL or missing evidence.

Evidence / method / parameter / sample references and limits

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8.3 – Traceability and calibration

Source: AF-AST-STD-001 / FIRST EDITION, p. 18; exact source subclause 8.3.

1. Measurement results shall have a technically appropriate documented connection to accepted reference quantities or justified reference bases, with uncertainty contributions and competent calibration evidence.	UNSET
2. Verify the actual service range and result, not only the provider's logo.	UNSET
3. Where direct reference traceability is not technically possible, document the alternative reference, method validation and limitations.	UNSET
4. Do not claim metrological traceability from an unverified manufacturer declaration or a broken chain of comparisons.	UNSET

Verify: Inspect the original evidence, actual implementation, method and configuration for each mandatory child condition. Calibration chain; certificates/results; uncertainty contributions; justified alternative basis.

Acceptance: Apply the prospective child predicates and Annex AL. All applicable mandatory children must PASS; independent N/A approval is required; no positive closure with HOLD, FAIL or missing evidence.

Evidence / method / parameter / sample references and limits

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9.4 – Measurement model and uncertainty

Source: AF-AST-STD-001 / FIRST EDITION, p. 20; exact source subclause 9.4.

1. Evaluate uncertainty appropriate to the reported result and decision.	UNSET
2. Identify measurand, significant corrections, input distributions, sensitivity coefficients, dependence, sample preparation and environmental effects.	UNSET
3. The calculation shall distinguish standard and expanded uncertainty, coverage factor, units and coverage interpretation.	UNSET
4. Known material bias shall be corrected or explicitly handled through an approved model, not hidden in a convenient uncertainty allowance.	UNSET
5. A result shall not inherit an uncertainty copied from an unrelated calibration capability.	UNSET

Verify: Inspect the original evidence, actual implementation, method and configuration for each mandatory child condition. Uncertainty budget; corrections; covariance; units; coverage and applicability justification.

Acceptance: Apply the prospective child predicates and Annex AL. All applicable mandatory children must PASS; independent N/A approval is required; no positive closure with HOLD, FAIL or missing evidence.

Evidence / method / parameter / sample references and limits

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9.5 – Decision rules and boundary results

Source: AF-AST-STD-001 / FIRST EDITION, p. 20; exact source subclause 9.5.

1. Agree the decision rule before evaluation and record its treatment of false acceptance, false rejection, uncertainty and criticality.	UNSET
2. Annex G sets the full-interval rule and alternative-rule controls.	UNSET
3. Conformity demonstrated, nonconformity demonstrated and indeterminate are separate outcomes under that rule.	UNSET
4. Indeterminate work remains held from acceptance pending valid disposition.	UNSET
5. Repeating observations until one passes, rounding a borderline value into compliance or changing the specification after seeing the result is not a valid resolution.	UNSET

Verify: Inspect the original evidence, actual implementation, method and configuration for each mandatory child condition. Pre-agreed rule; unrounded inputs; outcome; hold and authorised disposition.

Acceptance: Apply the prospective child predicates and Annex AL. All applicable mandatory children must PASS; independent N/A approval is required; no positive closure with HOLD, FAIL or missing evidence.

Evidence / method / parameter / sample references and limits

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11.3 – Existing evidence and reuse

Source: AF-AST-STD-001 / FIRST EDITION, p. 22; exact source subclause 11.3.

1. Review prior reports, approvals and certificates for authenticity, issuer competence, actual method, site, period, conditions and configuration.	UNSET
2. Identify precisely which requirement and decision use they support and what remains to be evaluated.	UNSET
3. Include adverse results and restrictions.	UNSET
4. Another outcome shall not be declared equivalent solely from a similar title or scope label.	UNSET
5. Evidence reuse may reduce repeated document requests but cannot remove necessary local implementation, witnessing or independent decision.	UNSET

Verify: Inspect the original evidence, actual implementation, method and configuration for each mandatory child condition. Reuse matrix; authenticity/scope checks; residual gaps; controlled access to original evidence.

Acceptance: Apply the prospective child predicates and Annex AL. All applicable mandatory children must PASS; independent N/A approval is required; no positive closure with HOLD, FAIL or missing evidence.

Evidence / method / parameter / sample references and limits

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12.3 – Method-family witnessing

Source: AF-AST-STD-001 / FIRST EDITION, p. 23; exact source subclause 12.3.

1. Group methods only when common principles, equipment, competence, ranges and failure mechanisms justify representativeness.	UNSET
2. Witness each distinct method or capability family, including material extremes and high-consequence tasks.	UNSET
3. A single demonstration shall not cover unrelated techniques merely because one employee performs them.	UNSET
4. Include the whole relevant task from preparation and identity through data interpretation and reporting.	UNSET
5. Map any unobserved part to valid supplementary evidence or exclude it from the granted scope.	UNSET

Verify: Inspect the original evidence, actual implementation, method and configuration for each mandatory child condition. Witnessing plan; family grouping rationale; observed limits; supplementary evidence.

Acceptance: Apply the prospective child predicates and Annex AL. All applicable mandatory children must PASS; independent N/A approval is required; no positive closure with HOLD, FAIL or missing evidence.

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13.3 – Witness control

Source: AF-AST-STD-001 / FIRST EDITION, p. 25; exact source subclause 13.3.

1. Record the actual task, date, site, equipment, software, personnel, conditions, method version and acceptance basis.	UNSET
2. Observe essential steps directly where required and prevent coached performance from being misrepresented as routine independent work.	UNSET
3. Controlled simulation is acceptable only where the profile justifies its fidelity and restrictions.	UNSET
4. Live work shall not be made unsafe to create a demonstration.	UNSET
5. A missing essential observation requires supplementary evidence, reassessment or restricted scope, not a presumed pass.	UNSET

Verify: Inspect the original evidence, actual implementation, method and configuration for each mandatory child condition. Witness log; essential steps; simulation validity; unobserved-step disposition.

Acceptance: Apply the prospective child predicates and Annex AL. All applicable mandatory children must PASS; independent N/A approval is required; no positive closure with HOLD, FAIL or missing evidence.

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14.1 – Finding formulation and classification

Source: AF-AST-STD-001 / FIRST EDITION, p. 25; exact source subclause 14.1.

1. A finding shall identify the exact requirement and version , objective evidence, gap, affected object/site/period and classification rationale.	UNSET
2. Use critical, major, minor and observation categories as defined in Annex G.	UNSET
3. An observation is not a substitute for a demonstrated failure.	UNSET
4. Several local failures may together establish systemic breakdown.	UNSET
5. Determine technical containment separately from administrative grade so that an immediate hazard is not delayed by debate over wording.	UNSET

Verify: Inspect the original evidence, actual implementation, method and configuration for each mandatory child condition. Requirement–evidence–gap record; classification; extent and protective decision.

Acceptance: Apply the prospective child predicates and Annex AL. All applicable mandatory children must PASS; independent N/A approval is required; no positive closure with HOLD, FAIL or missing evidence.

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14.2 – Immediate protection and notifications

Source: AF-AST-STD-001 / FIRST EDITION, p. 25; exact source subclause 14.2.

1. Upon a credible critical concern, the responsible organisation shall protect people and affected work immediately, preserve evidence and notify required recipients.	UNSET
2. A holder shall notify its operator within 24 hours of awareness; earlier applicable duties remain.	UNSET
3. On a substantiated critical concern, the operator shall suspend the affected status or impose an effective evaluated restriction within 24 hours.	UNSET
4. An independent duty function with a pre-existing mandate may act urgently, followed by prompt independent review.	UNSET

Verify: Inspect the original evidence, actual implementation, method and configuration for each mandatory child condition. Awareness and action times; containment; notification/acknowledgement; status decision.

Acceptance: Apply the prospective child predicates and Annex AL. All applicable mandatory children must PASS; independent N/A approval is required; no positive closure with HOLD, FAIL or missing evidence.

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14.3 – Occurrence, escape and systemic extent

Source: AF-AST-STD-001 / FIRST EDITION, p. 26; exact source subclause 14.3.

1. The organisation shall determine why the problem occurred and why existing controls did not prevent or detect it.	UNSET
2. Identify affected and potentially affected outputs, sites, learners, reports, suppliers and configurations, including those already delivered.	UNSET
3. Test causal explanations with evidence.	UNSET
4. Training, a revised procedure or blaming an operator alone is not sufficient where workflow, capacity, interface, equipment or management conditions contributed.	UNSET
5. Preserve rejected hypotheses and material uncertainty.	UNSET

Verify: Inspect the original evidence, actual implementation, method and configuration for each mandatory child condition. Population trace; tested causes; occurrence/escape controls; systemic review.

Acceptance: Apply the prospective child predicates and Annex AL. All applicable mandatory children must PASS; independent N/A approval is required; no positive closure with HOLD, FAIL or missing evidence.

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14.4 – Plans, closure and effectiveness

Source: AF-AST-STD-001 / FIRST EDITION, p. 26; exact source subclause 14.4.

1. Submit a corrective-action plan within 30 calendar days of finding notification.	UNSET
2. Verify major closure within 60 days and minor closure within 90 days, while immediate protection remains separate.	UNSET
3. Define effectiveness criteria and observation exposure before closing.	UNSET
4. Review changes for unintended effects.	UNSET
5. A new finding number, changed owner, amended report or rescheduled plan shall not restart the original clock.	UNSET
6. Missed deadlines trigger the affected status action in Annex H, not an automatic extension.	UNSET

Verify: Inspect the original evidence, actual implementation, method and configuration for each mandatory child condition. Accepted plan; original due dates; implementation and effectiveness evidence; verified closure.

Acceptance: Apply the prospective child predicates and Annex AL. All applicable mandatory children must PASS; independent N/A approval is required; no positive closure with HOLD, FAIL or missing evidence.

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14.5 – Existing status and new grants

Source: AF-AST-STD-001 / FIRST EDITION, p. 26; exact source subclause 14.5.

1. Initial grants, renewals and extensions require closure of every in-scope nonconformity.	UNSET
2. An existing status may continue with a local minor only after adequate protection, reviewed cause and extent, accepted plan and a reasoned independent conclusion that essential controls remain intact.	UNSET
3. A major compromising ongoing conformity requires suspension, unless an independently demonstrated unaffected scope can be restricted.	UNSET
4. A future promise of correction is not present competence.	UNSET

Verify: Inspect the original evidence, actual implementation, method and configuration for each mandatory child condition. Independent continuation/restriction rationale; closed findings for grant; current protection.

Acceptance: Apply the prospective child predicates and Annex AL. All applicable mandatory children must PASS; independent N/A approval is required; no positive closure with HOLD, FAIL or missing evidence.

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19.12 – Technical witnessing for accreditation

Source: AF-AST-STD-001 / FIRST EDITION, p. 33; exact source subclause 19.12.

1. The accrediting team shall witness representative activities for every distinct method family or inspection capability and examine a complete application-to-report trail.	UNSET
2. Include adverse work, authorised sign-off, uncertainty, outsourced results and subsequent controls.	UNSET
3. Similar-method grouping requires a written technical rationale.	UNSET
4. An organisational audit with no relevant technical observation is not a completed laboratory or inspection competence evaluation.	UNSET
5. The final scope shall match the actual demonstrated capability, locations and limitations.	UNSET

Verify: Inspect the original evidence, actual implementation, method and configuration for each mandatory child condition. Witness coverage; complete case trail; independent scope review; accreditation decision.

Acceptance: Apply the prospective child predicates and Annex AL. All applicable mandatory children must PASS; independent N/A approval is required; no positive closure with HOLD, FAIL or missing evidence.

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30.2 – Controlled transition

Source: AF-AST-STD-001 / FIRST EDITION, p. 48; exact source subclause 30.2.

1. For a new profile or substantive version , identify affected holders, evidence gaps, changed methods, competence, system updates, communications and effectivity.	UNSET
2. Set a technically justified transition that does not waive immediate safety duties.	UNSET
3. Preserve the basis of previous decisions and state when additional assessment is needed.	UNSET
4. Neither indefinite grandfathering nor automatic retrospective invalidation is presumed.	UNSET
5. A future requirement is not applied as though it had governed an earlier decision.	UNSET

Verify: Inspect the original evidence, actual implementation, method and configuration for each mandatory child condition. Transition plan; holder impact; competence/tool updates; actual effective versions.

Acceptance: Apply the prospective child predicates and Annex AL. All applicable mandatory children must PASS; independent N/A approval is required; no positive closure with HOLD, FAIL or missing evidence.

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30.4 – Scope withdrawal and learner/customer protection

Source: AF-AST-STD-001 / FIRST EDITION, p. 48; exact source subclause 30.4.

1. Before closing a profile or provider operation, identify active holders, open cases, pending appeals, unresolved findings, learners, records, status, contracts and financial duties.	UNSET
2. Notify affected parties and arrange lawful transfer or teach-out as relevant.	UNSET
3. A closure shall not erase adverse evidence or imply continued authority.	UNSET
4. Preserve access to historical decisions and correction channels.	UNSET
5. If urgent cessation is required, prioritise protection and accurate communication while completing residual obligations.	UNSET

Verify: Inspect the original evidence, actual implementation, method and configuration for each mandatory child condition. Closure plan; affected-party notices; transfer/teach-out; retained records and remedies.

Acceptance: Apply the prospective child predicates and Annex AL. All applicable mandatory children must PASS; independent N/A approval is required; no positive closure with HOLD, FAIL or missing evidence.

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31.3 – Actual adoption record

Source: AF-AST-STD-001 / FIRST EDITION, p. 49; exact source subclause 31.3.

1. Record the authenticated legal operator, technical approval, consultation completion, competent institutional adoption, signatories, effective date, applicable instruments and any necessary compatibility amendments.	UNSET
2. Keep edition date distinct from legal or operational effectivity.	UNSET
3. Uncompleted approval fields shall not be filled with assumed names or dates.	UNSET
4. Programme-wide adoption alone shall not activate every listed technical scope; each profile requires the independent readiness and scope decision in Annex P.	UNSET

Verify: Inspect the original evidence, actual implementation, method and configuration for each mandatory child condition. Authentic adoption; completed compatibility conditions; individual scope activation.

Acceptance: Apply the prospective child predicates and Annex AL. All applicable mandatory children must PASS; independent N/A approval is required; no positive closure with HOLD, FAIL or missing evidence.

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41.2 – Integrated route and hidden characteristics

Source: AF-AST-STD-001 / FIRST EDITION, p. 62; exact source subclause 41.2.

1. The production route shall identify every process stage, branch, handover and external performer that can affect a required characteristic.	UNSET
2. Essential variables shall include relevant preparation and downstream treatment, not only the main machine cycle.	UNSET
3. Qualification shall cover representative materials, geometry, equipment, software, personnel and environmental conditions.	UNSET
4. Final inspection shall not be assumed capable of detecting all latent process defects.	UNSET
5. The route shall preserve failed runs, rework and technical restrictions through product acceptance.	UNSET

Verify: Inspect the original evidence, actual implementation, method and configuration for each mandatory child condition. Route and dependency map; qualification matrix; essential variables; hidden-property rationale; original run history.

Acceptance: Apply the prospective child predicates and Annex AL. All applicable mandatory children must PASS; independent N/A approval is required; no positive closure with HOLD, FAIL or missing evidence.

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54.4 – Occurrence, escape and affected population

Source: AF-AST-STD-001 / FIRST EDITION, p. 79; exact source subclause 54.4.

1. Investigation shall examine both why an event occurred and why existing controls failed to prevent or detect it.	UNSET
2. The organisation shall preserve original evidence, competing explanations and uncertainty.	UNSET
3. Population tracing shall include already delivered products, services, reports and decisions that share relevant causes.	UNSET
4. Replacing a person or issuing training shall not alone close a systemic weakness in work design, resources, interfaces or measurement.	UNSET
5. Later correction shall not be backdated to legitimise earlier unsupported work.	UNSET

Verify: Inspect the original evidence, actual implementation, method and configuration for each mandatory child condition. Occurrence/escape analysis; population and dependency trace; tested causes; historical impact and recipient action.

Acceptance: Apply the prospective child predicates and Annex AL. All applicable mandatory children must PASS; independent N/A approval is required; no positive closure with HOLD, FAIL or missing evidence.

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56.5 – Export, migration and meaningful recovery

Source: AF-AST-STD-001 / FIRST EDITION, p. 81; exact source subclause 56.5.

1. Transfer shall preserve readable evidence, identities, versions, field semantics, units, time zones, approvals, relationships and current and historical status.	UNSET
2. Reconciliation shall examine meaning as well as counts; equal file totals may conceal substitutions or missing links.	UNSET
3. Recovery shall distinguish availability from integrity and reconcile events after the selected recovery point.	UNSET
4. A sent archive is not accepted custody.	UNSET
5. The receiving function shall demonstrate usable access and acknowledge continuing duties before dependent cutover.	UNSET

Verify: Inspect the original evidence, actual implementation, method and configuration for each mandatory child condition. Export manifest; semantic reconciliation; preserved source; recovery integrity; receiving acceptance and custody.

Acceptance: Apply the prospective child predicates and Annex AL. All applicable mandatory children must PASS; independent N/A approval is required; no positive closure with HOLD, FAIL or missing evidence.

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61.3 – Dependent documents and compatibility

Source: AF-AST-STD-001 / FIRST EDITION, p. 86; exact source subclause 61.3.

1. The responsible custodian shall identify every affected profile, manual, procedure, checklist, form and register before use of this text.	UNSET
2. Existing 108-title architecture and F01–F08 codes shall remain stable.	UNSET
3. Newly added requirements shall be mapped to the actual dependent documents; a previous checklist shall not be assumed to cover them.	UNSET
4. Actual constitutional and legal obligations remain separately applicable.	UNSET

Verify: Reconcile the dependency register against selected requirements and operating versions.

Acceptance: Every required operating document is available, consistent and authorised for the intended use. Unresolved conflicts place dependent use on HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

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62.1 – Atomic requirement record

Source: AF-AST-STD-001 / FIRST EDITION, p. 88; exact source subclause 62.1.

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|--|------------------|
| 1. Each assessed requirement shall have a stable identifier, one accountable owner, an applicability trigger, defined object and configuration, required behaviour or characteristic, observable conditions, verification method and acceptance predicate. | <div>UNSET</div> |
| 2. Compound statements shall be separated into individually testable rows without deleting any condition. | <div>UNSET</div> |
| 3. Terms such as adequate, suitable, promptly or representative shall be resolved through the explicit records in this clause before they support an acceptance decision. | <div>UNSET</div> |

Verify: Inspect each requirement row and its linked method, boundary and predicate.

Acceptance: Every applicable row is evaluable without inventing an object, limit, observation or decision role. Unresolved essential terms result in HOLD.

Evidence / method / parameter / sample references and limits

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62.2 – Mandatory parameter completion

Source: AF-AST-STD-001 / FIRST EDITION, p. 88; exact source subclause 62.2.

- | | |
|---|------------------|
| 1. An application-dependent value shall be entered in a controlled parameter schedule before the relevant test or evaluation. | <div>UNSET</div> |
| 2. Each entry shall state symbol, meaning, unit, inclusive or exclusive bounds, uncertainty treatment, operating modes, technical derivation, source evidence, approver and change trigger. | <div>UNSET</div> |
| 3. A declared value is not adequate merely because the applicant selected it. | <div>UNSET</div> |
| 4. The independent reviewer shall challenge whether it bounds the claimed environment and consequence. | <div>UNSET</div> |

Verify: Recalculate derivations and check mission, interface and obligation coverage.

Acceptance: The complete parameter set is approved prospectively. A blank, TBD, unsupported factor or undefined threshold blocks the dependent release.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

62.3 – Evidence validity before conformity

Source: AF-AST-STD-001 / FIRST EDITION, p. 88; exact source subclause 62.3.

- | | |
|--|-------|
| 1. The evaluator shall first determine whether evidence belongs to the correct object, configuration, period, method and authorised performer and whether it is usable for the intended inference. | UNSET |
| 2. Only valid relevant evidence shall enter a conformity predicate. | UNSET |
| 3. Rejected, corrupted, missing, unobservable or wrong-version evidence shall remain identified. | UNSET |
| 4. Evidence may be valid and show failure; an invalid test is not a valid pass or a valid proof of product failure. | UNSET |

Verify: Check provenance, configuration, method capability, original data and uncertainty separately from result classification.

Acceptance: Validity is established before PASS or FAIL is assigned; otherwise use HOLD with an explicit invalidity or evidence-gap reason.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

62.4 – Four requirement states

Source: AF-AST-STD-001 / FIRST EDITION, p. 88; exact source subclause 62.4.

- | | |
|---|-------|
| 1. A requirement state shall be PASS, FAIL, HOLD or N/A. | UNSET |
| 2. PASS means the approved predicate is satisfied by valid evidence. | UNSET |
| 3. FAIL means valid evidence demonstrates that the predicate is not satisfied. | UNSET |
| 4. HOLD means applicability, method, evidence, uncertainty or authority is not sufficiently resolved. | UNSET |
| 5. N/A means the trigger and retained responsibility are absent and independent approval of that exclusion is recorded. | UNSET |
| 6. Missing equipment, budget, access or time shall not justify N/A. | UNSET |

Verify: Execute the truth table in Annex AL using actual scope and evidence.

Acceptance: Exactly one current state is assigned with reason and traceable evidence. All earlier states are retained.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

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62.5 – No compensation or favourable default

Source: AF-AST-STD-001 / FIRST EDITION, p. 89; exact source subclause 62.5.

1. A positive conformity decision shall require PASS for every applicable mandatory requirement, closure of every in-scope nonconformity, valid independent competence and actual authority.	UNSET
2. N/A rows shall have approved reasons	UNSET
3. HOLD and FAIL rows shall not contribute a favourable default.	UNSET
4. Weighted scores, averages, majority votes, programme membership or good results in another discipline shall not compensate for an unmet condition.	UNSET

Verify: Reconcile the complete requirement population with the decision dossier; test missing and negative cases.

Acceptance: The Boolean conjunction in Annex AL is true. Otherwise no positive grant, renewal or extension is permitted.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

62.7 – Decision replay and consistency

Source: AF-AST-STD-001 / FIRST EDITION, p. 89; exact source subclause 62.7.

1. A decision shall be reproducible from the same frozen requirements, parameter values, original evidence, calculation version, uncertainty model and role assignments.	UNSET
2. Two competent reviewers reaching different results shall identify the differing input, predicate, assumption or expertise before closure.	UNSET
3. Interpretation records may clarify a term but shall not change limits after results are known.	UNSET
4. Equation inputs shall retain unrounded values.	UNSET

Verify: Independently replay a selected boundary case and reconcile every difference.

Acceptance: The replay produces the same supported state, or the case remains HOLD pending a controlled technical resolution.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

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63.1 – Domain selection without geographic omission

Source: AF-AST-STD-001 / FIRST EDITION, p. 90; exact source subclause 63.1.

1. The mission owner shall assess every domain in Annex AK and record applicable, not applicable or not yet determined.	UNSET
2. The scope shall include terrestrial preparation, launch and recovery interfaces as well as the in-space activity.	UNSET
3. Earth orbit, cislunar and libration-region operations, solar and planetary missions, small bodies, ocean-world exploration and interstellar precursor concepts shall not be excluded solely because they differ from conventional satellite operations.	UNSET

Verify: Compare the mission concept and responsibility map with all Annex AK domain rows.

Acceptance: Every domain has a reasoned disposition. Any unassessed domain that can affect a required outcome remains HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

63.3 – Environment, phase and mode matrix

Source: AF-AST-STD-001 / FIRST EDITION, p. 90; exact source subclause 63.3.

1. For each applicable domain, define mission phase, operating mode, intended duration, exposure, interfaces, repairability, accessible evidence and credible degraded states.	UNSET
2. Include dormant storage, transport, separation, commissioning, routine service, communication outage, servicing, retirement and loss-of-mission conditions when relevant.	UNSET
3. A qualification for one phase shall not automatically cover another phase with different loads, resources or observability.	UNSET

Verify: Review the complete phase-by-mode matrix and its verification links.

Acceptance: Every safety-, mission- or claim-relevant cell has accepted evidence or an explicit restriction; no essential unexamined cell is passed by analogy.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

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63.6 – Interface and lifecycle closure

Source: AF-AST-STD-001 / FIRST EDITION, p. 91; exact source subclause 63.6.

- | | |
|---|-------|
| 1. The scope shall include relevant upstream and downstream duties, including supplied design data, ground services, communications, receiving facilities, environmental custody and long-term records. | UNSET |
| 2. Transfers shall identify the sender, receiver, evidence and acceptance. | UNSET |
| 3. A contractor delivering one subsystem shall not be made responsible for unrelated mission duties, but an integrator shall not exclude duties it retains because they are performed by others. | UNSET |

Verify: Trace each interface to an accountable performer and retained owner.

Acceptance: No essential responsibility, evidence handover or terminal obligation is orphaned.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

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64.2 – Geometry, reference frames and event time

Source: AF-AST-STD-001 / FIRST EDITION, p. 92; exact source subclause 64.2.

- | | |
|--|-------|
| 1. Trajectory- and geometry-dependent information shall identify frame origin, orientation, epoch, time scale, units, state covariance and transformation version. | UNSET |
| 2. An exchanged position or orientation shall not be accepted without enough metadata to transform it consistently. | UNSET |
| 3. Surface-relative, body-fixed, inertial and local engineering coordinates shall remain distinct. | UNSET |
| 4. Event time, receipt time and ground processing time shall not be merged. | UNSET |

Verify: Recompute selected transformations and challenge wrong-frame and stale-epoch inputs.

Acceptance: Transformations meet the approved error and time bounds; incompatible or ambiguous metadata produces HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

64.5 – Heritage and similarity

Source: AF-AST-STD-001 / FIRST EDITION, p. 92; exact source subclause 64.5.

1. A heritage argument shall compare actual design, materials, manufacturing source, mission exposure, software, interfaces and life history.	UNSET
2. Identify unchanged evidence, invalidated evidence and new demonstration.	UNSET
3. Successful service of a related design shall be accepted only for characteristics and mechanisms it actually supports.	UNSET
4. Lack of a recorded failure shall not prove performance of an unmonitored critical characteristic.	UNSET

Verify: Review a difference matrix and trace each retained conclusion to applicable original evidence.

Acceptance: Every material difference has a technical disposition and sufficient evidence before the new claim is accepted.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

68.7 – Status and long-term custody

Source: AF-AST-STD-001 / FIRST EDITION, p. 101; exact source subclause 68.7.

1. Closure shall record whether an asset is operating, restricted, dormant, disposed, lost or unknown using verified evidence and defined meanings.	UNSET
2. Loss of communication shall not be labelled successful disposal.	UNSET
3. Assign remaining notices, monitoring and records to an actual custodian.	UNSET
4. A closed commercial contract does not close an unresolved technical or environmental obligation.	UNSET

Verify: Trace final-state evidence and accepted transfer of residual duties.

Acceptance: Terminal claims match observed or explicitly bounded inferred states, and every continuing duty has a receiving owner.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

72.1 – Time horizon and recoverability

Source: AF-AST-STD-001 / FIRST EDITION, p. 108; exact source subclause 72.1.

1. The mission basis shall define duration, distance-dependent communication, resource evolution, repairability, replacement feasibility and the period over which responsibility and evidence must remain usable. UNSET

2. A planned future repair, relay or supplier service shall not be credited as available without supported commitments and a demonstrated capability basis. UNSET

Verify: Review life and support assumptions against mission phases and credible loss cases.

Acceptance: Essential mission and protective functions remain supported for the declared duration; speculative future services are not favourable defaults.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

72.2 – Solar and extreme thermal exposure

Source: AF-AST-STD-001 / FIRST EDITION, p. 108; exact source subclause 72.2.

1. Solar, close-body and thermal-extreme missions shall define time-varying flux, geometry, shadowing, surface properties, degradation and transient response. UNSET

2. Protection shall be qualified at the relevant material, assembly and system levels. UNSET

3. Inverse-square screening and steady-state radiation equations are only applicable within their stated assumptions and do not close transient or coupled behaviour. UNSET

Verify: Review environment-specific models, uncertainty, qualified materials and correlated tests.

Acceptance: Required temperature, gradient, integrity and functional limits are met throughout the approved envelope; unexamined coupled effects remain HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

72.3 – Low-flux and limited-power missions

Source: AF-AST-STD-001 / FIRST EDITION, p. 108; exact source subclause 72.3.

1. Distant missions shall evaluate end-of-life generation, storage, conversion, thermal support, communication and command survival concurrently.	UNSET
2. Prioritised load shedding and dormant modes shall have validated authority and state-recovery rules.	UNSET
3. Average energy sufficiency shall not hide a time-local peak or thermal survival failure.	UNSET

Verify: Reconcile resource profiles and perform representative low-resource and recovery verification.

Acceptance: Every essential resource and protection predicate passes; unavailable generation or unsupported recovery is not treated as normal service.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

72.4 – Autonomy during long communication delay

Source: AF-AST-STD-001 / FIRST EDITION, p. 108; exact source subclause 72.4.

1. The mission shall identify decisions that cannot wait for ground response and bound the authority assigned to onboard functions.	UNSET
2. Validation shall account for delayed or unavailable external information, model mismatch, finite stored procedures and safe terminal behaviour.	UNSET
3. Ground approval received after the hazardous event would occur is not an effective preventive control.	UNSET

Verify: Evaluate latency arithmetic and scenario-based autonomous response evidence.

Acceptance: Protective authority is executable within the approved response time; otherwise redesign, restriction or additional evidence is required.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

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72.5 – Ageing and long-term digital support

Source: AF-AST-STD-001 / FIRST EDITION, p. 108; exact source subclause 72.5.

1. The assurance plan shall address materials ageing, accumulated environment, clock stability, memory integrity, software dependencies, obsolete tools, lost expertise and cryptographic migration.	UNSET
2. Preserve executable or reconstructable models and interpretable data dictionaries.	UNSET
3. Availability of a signed file does not establish its future readability or the continued correctness of its engineering meaning.	UNSET

Verify: Review long-life evidence and test migration, recovery and independent reconstruction.

Acceptance: Essential historical and current evidence remains usable and required support has accepted continuity arrangements.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

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72.6 – Scientific instruments and observation integrity

Source: AF-AST-STD-001 / FIRST EDITION, p. 109; exact source subclause 72.6.

1. Observation claims shall identify instrument calibration, alignment, background effects, processing, timing, uncertainty and data-loss conditions.	UNSET
2. Engineering acceptance of an instrument shall be separated from a scientific inference from its output.	UNSET
3. Changes in reduction software shall retain earlier processing and the reason for differences.	UNSET

Verify: Reprocess a representative observation from identified source data and calibration.

Acceptance: The stated technical data-quality criteria are met; disputed scientific interpretation is not declared certain by an ASTRA engineering result.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

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72.7 – Future-domain feasibility and responsible closure

Source: AF-AST-STD-001 / FIRST EDITION, p. 109; exact source subclause 72.7.

- | | |
|--|------------------------------------|
| 1. Very long-range or novel propulsion and infrastructure concepts shall identify what has actually been demonstrated and what remains theoretical or unvalidated. | <input type="text" value="UNSET"/> |
| 2. Requirements may define a future scope, but no operational capability shall be granted from aspiration alone. | <input type="text" value="UNSET"/> |
| 3. The final record shall preserve terminal-state uncertainty, remaining obligations and custody after active support ends. | <input type="text" value="UNSET"/> |

Verify: Review demonstration-state claims, technical gaps and actual terminal evidence.

Acceptance: Only the demonstrated bounded capability is recognised; speculative performance and unknown final states remain clearly identified.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

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74.7 – Disposition and residual responsibility

Source: AF-AST-STD-001 / FIRST EDITION, p. 113; exact source subclause 74.7.

- | | |
|---|------------------------------------|
| 1. Final disposition shall identify sample, container, residue, facility, record and long-term custody obligations. | <input type="text" value="UNSET"/> |
| 2. Transfer shall include receiving acceptance and usable evidence. | <input type="text" value="UNSET"/> |
| 3. Mission completion shall not terminate a continuing protection or scientific-record duty. | <input type="text" value="UNSET"/> |
| 4. The custodian shall preserve genuine access conditions and correction channels after organisational closure. | <input type="text" value="UNSET"/> |

Verify: Trace final-state evidence and accepted residual duties.

Acceptance: No required custody or protection obligation is abandoned and no unverified disposal is claimed complete.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

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75.3 – Essential variables and remote monitoring

Source: AF-AST-STD-001 / FIRST EDITION, p. 114; exact source subclause 75.3.

1. The qualified envelope shall identify influential variables, combinations, tolerances, monitoring performance and reaction rules.	UNSET
2. Retain actual variable histories, interruptions and sensor gaps by output identity.	UNSET
3. Remote telemetry shall support acceptance only for properties and mechanisms demonstrated to be observable or validly inferred.	UNSET
4. A successful process command does not prove the intended material transformation occurred.	UNSET

Verify: Review representative qualification, sensor/model validation and raw production history.

Acceptance: All required variables and output characteristics are supported; an unobservable essential property requires additional evidence or a restricted outcome.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

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75.7 – Handover, resource claims and closure

Source: AF-AST-STD-001 / FIRST EDITION, p. 115; exact source subclause 75.7.

1. The final claim shall state actual production, quality, quantity, conditions, uncertainty, exclusions and accepted receiving responsibility.	UNSET
2. Demonstration of a resource process creates no ownership, extraction right or operating permission.	UNSET
3. Waste, residues, hazardous inventories and long-term custody shall have accepted disposition.	UNSET

Verify: Reconcile reported outputs, accepted products, rights/permissions and final-state evidence.

Acceptance: The claim is bounded to measured and accepted achievement; undeveloped scale-up and unknown disposition remain separate.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

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77.2 – Campaign design and article pedigree

Source: AF-AST-STD-001 / FIRST EDITION, p. 118; exact source subclause 77.2.

- | | |
|--|-------|
| 1. Define qualification articles, flight or service articles, specimens, representative differences, prior exposure, fixtures, operating modes and cumulative test sequence. | UNSET |
| 2. Identify which conclusions may be transferred between articles and why. | UNSET |
| 3. Failed tests, repairs and substitutions shall remain in the same historical chain. | UNSET |

Verify: Review specimen-to-product and test-to-configuration equivalence records.

Acceptance: All material differences and accumulated effects are evaluated before evidence reuse; unrepresentative essential evidence is not accepted.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

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77.3 – Measurement and uncertainty readiness

Source: AF-AST-STD-001 / FIRST EDITION, p. 118; exact source subclause 77.3.

- | | |
|---|-------|
| 1. Before execution, verify instrument identity, calibration, range, bandwidth, synchronisation, environment, software, raw-data retention and uncertainty suitability. | UNSET |
| 2. Sensor placement and spatial coverage shall represent the characteristic being accepted. | UNSET |
| 3. Protect the article and personnel through separately specified stop conditions. | UNSET |

Verify: Inspect the full measurement chain and execute relevant readiness checks.

Acceptance: All required channels are valid for the intended inference; a missing, saturated or misconfigured critical channel prevents that acceptance.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

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77.5 – Original data and invalid tests

Source: AF-AST-STD-001 / FIRST EDITION, p. 118; exact source subclause 77.5.

1. Retain actual setup, input and response histories, environmental conditions, interruptions, alarms, raw files, corrections, uncertainty and validity classification.	UNSET
2. An invalid run shall state what evidence remains usable and which requirement is not demonstrated.	UNSET
3. A repaired or changed article shall not silently replace the originally failed configuration.	UNSET

Verify: Reconstruct a selected run from raw data and contemporaneous records.

Acceptance: The run is independently interpretable and no failed, invalid or missing evidence is concealed.

Evidence / method / parameter / sample references and limits

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77.6 – Numerical and attribute acceptance

Source: AF-AST-STD-001 / FIRST EDITION, p. 119; exact source subclause 77.6.

1. Quantitative decisions shall use the prospectively selected predicate and uncertainty rule.	UNSET
2. Attribute decisions shall name observable states and essential steps rather than unstructured judgement.	UNSET
3. Equality at an inclusive limit is handled as specified; empty acceptance regions, invalid units and non-finite values produce HOLD.	UNSET
4. Rounding shall not change an outcome.	UNSET

Verify: Replay boundary, negative and missing-input cases using Annex AL and Annex AM.

Acceptance: The correct state follows deterministically from valid unrounded inputs and the approved predicate.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

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77.7 – Retest and corrective verification

Source: AF-AST-STD-001 / FIRST EDITION, p. 119; exact source subclause 77.7.

1. Retest shall follow an approved rationale, defined scope and representative configuration.	UNSET
2. It shall preserve the original failure and address causal, exposure and selection effects.	UNSET
3. Repeated trials until a pass occurs are not an acceptance strategy.	UNSET
4. Corrective verification shall include the original failure mode and relevant regression, not merely a new favourable measurement.	UNSET

Verify: Review the retest authorisation, all attempts and failure-to-correction trace.

Acceptance: The original deficiency and affected requirements are demonstrably resolved; otherwise the claim remains failed or held.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

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78.7 – Recovery and semantic portability

Source: AF-AST-STD-001 / FIRST EDITION, p. 121; exact source subclause 78.7.

1. Export and recovery shall preserve identities, scope, configuration, evidence states, decisions, history, units, time basis, permissions and relationships.	UNSET
2. Equal file counts do not establish equal meaning.	UNSET
3. Reconcile events after the recovery point and obtain receiving acceptance before cutover.	UNSET
4. Service availability and evidence-integrity acceptance are separate.	UNSET

Verify: Execute missing-link, wrong-version, interrupted-write, expired-authority and restore tests.

Acceptance: All essential records and relationships are usable and correct; unresolved evidence loss keeps dependent decisions on HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

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79.4 – Affected populations and historical decisions

Source: AF-AST-STD-001 / FIRST EDITION, p. 122; exact source subclause 79.4.

- | | |
|--|------------------------------------|
| 1. An event shall be traced to affected configurations, fleet members, materials, methods, software, personnel, reports and prior decisions. | <input type="text" value="UNSET"/> |
| 2. Determine both occurrence and escape causes and test competing explanations. | <input type="text" value="UNSET"/> |
| 3. Changing a supplier, restarting a service or training one person shall not by itself close a shared systemic cause. | <input type="text" value="UNSET"/> |

Verify: Inspect end-to-end dependency and look-back analysis with actual notifications.

Acceptance: All materially dependent outputs are addressed; no valid adverse history is erased by later correction.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

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79.5 – Terminal evidence and responsible transfer

Source: AF-AST-STD-001 / FIRST EDITION, p. 122; exact source subclause 79.5.

- | | |
|--|------------------------------------|
| 1. Terminal-state claims shall specify the exact intended condition, permitted inference, observation method, resources and residual duties. | <input type="text" value="UNSET"/> |
| 2. Transfer shall preserve custody and receiving acceptance of records, hazardous inventory, notices, monitoring and unresolved remedies. | <input type="text" value="UNSET"/> |
| 3. A file sent or contract ended is not accepted closure. | <input type="text" value="UNSET"/> |

Verify: Reconcile final-state evidence, inventory and recipient acknowledgement.

Acceptance: Every required terminal criterion is demonstrated or openly limited, and every remaining duty has an actual receiving owner.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

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80.1 – One complete application schedule

Source: AF-AST-STD-001 / FIRST EDITION, p. 124; exact source subclause 80.1.

1. The schedule shall join the object tuple, F01–F08 selection, Annex AK domains, phase/mode matrix, required methods, parameter records, competence, evidence, independent decisions and continuing controls. UNSET

2. All triggers in Annex AO shall be resolved. UNSET

3. Shared records may be reused after relevance review, but shall not merge distinct objects, outcome classes or actual authority. UNSET

Verify: Reconcile the full schedule with Clauses 1, 4, 62 and 63 and Annex C.

Acceptance: No essential scope, parameter, responsibility or evidence field remains undefined before a positive decision.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

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80.2 – Domain and verification completeness

Source: AF-AST-STD-001 / FIRST EDITION, p. 124; exact source subclause 80.2.

1. Map every applicable domain and requirement to valid verification and to an accountable conclusion. UNSET

2. Treat domain counts, test counts and completed checklist percentages as planning measures only. UNSET

3. Annex T is not exhaustive of all future methods; a newly discovered material mechanism shall create a controlled additional requirement and evidence task before the affected claim proceeds. UNSET

Verify: Perform forward and reverse traceability and inspect omitted-domain reasons.

Acceptance: Every applicable condition passes or has a justified approved N/A; no HOLD or FAIL is hidden by a coverage percentage.

Evidence / method / parameter / sample references and limits

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80.5 – Continuing conformity and change

Source: AF-AST-STD-001 / FIRST EDITION, p. 124; exact source subclause 80.5.

1. Maintain surveillance, technical validity, people, resources, configuration, monitoring and actual state history under the controlling clocks.	UNSET
2. Mission, environment, population or technology changes shall trigger impact review before expanded reliance.	UNSET
3. Restoration shall preserve expiry unless a full renewal has occurred and shall not validate the suspended interval.	UNSET

Verify: Audit actual completion, change and status records rather than scheduled dates alone.

Acceptance: The current claim remains fully supported; overdue or invalidated conditions trigger the applicable restriction, suspension or withdrawal.

Evidence / method / parameter / sample references and limits

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4 Retained subject controls and added R07–R12 extensions

F02-CP01 – Thermal treatment

Qualified heat-treatment operations for defined metallic or other technically justified material families and states, including relevant preparation, thermal cycles, atmosphere, cooling and post-treatment. Identify the relationship between a qualified process window and each product property being accepted.

Claim boundary: Qualification applies to the stated thermal process envelope, not every material, furnace load or delivered article.

F02-CP01-R01 – Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Define the actual material condition, intended property change and approved product/process specification; do not combine materially different routes merely under one thermal-treatment title.	UNSET
--	-------

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP01-R02 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Demonstrate equipment suitability and representative load conditions, including temperature measurement, control, spatial behaviour and the effect of tooling or loading on the article.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

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F02-CP01-R03 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Preserve the complete actual thermal and environmental history for each run, linked to material lots, articles, programme version and responsible personnel.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

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F02-CP01-R04 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Verify required resulting properties with representative specimens and suitable methods; a furnace trace within the intended window is not by itself proof of every material property.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

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F02-CP01-R05 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Investigate sensor failure, interrupted cycles and excursions from the last demonstrated valid state; later successful treatment does not automatically validate earlier affected products.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

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F02-CP01-R06 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Qualify changes in material, loading, equipment, control software, monitoring or downstream processing before relying on prior evidence for the altered route.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

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F02-CP01-R07 — Mission and environment transfer

New implementation detail aligned with ASTRA 62.1–62.2; 63.2–63.6; 64.1–64.6

1. For thermal treatment, define the qualified or evaluated envelope for thermal history, representative loads and material response.

UNSET

2. Compare the intended mission, material, site, configuration and phase/mode with the actual evidence.

UNSET

3. Identify material differences and allocate new demonstration before relying on heritage or terrestrial qualification.

UNSET

Verify: Inspect the difference matrix, environmental inputs, owner approvals and requirement-to-method links.

Acceptance: PASS only when every influential difference is either bounded by valid retained evidence or closed by accepted additional demonstration. Missing essential transfer evidence is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP01-R08 — Essential properties and observability

New implementation detail aligned with ASTRA 62.3–62.5; 77.1–77.6

1. Identify the failure and evidence risks specific to this subject: one control sensor can conceal an unobserved article-temperature excursion. UNSET

2. State which critical properties are directly observed, measured, inferred using a validated model or unknown. UNSET

3. Allocate separate child predicates for each hidden property and each essential protective function. UNSET

Verify: Review detection capability, raw observations, model validity and limitations against each claimed property.

Acceptance: A valid observation supports only its demonstrated property and domain. An unobservable essential condition is HOLD, not a favourable default or a proven product defect.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP01-R09 — Configuration and data identity

New implementation detail aligned with ASTRA 33.3–33.4; 56.1–56.5; 62.7; 78.7

1. Bind thermal history, representative loads and material response to actual configuration, controlled technical data, source/lot or record identity, equipment and software state, authorised performer and actual event time. UNSET

2. Preserve failed runs, changed objects and prior evidence through any digital transfer. UNSET

Verify: Replay one result from original records and verify event-time authority, method version and the evaluated-to-delivered relationship.

Acceptance: PASS requires reproducible identity and valid links for the actual claim. Wrong configuration, stale state, inaccessible evidence or an unverified substituted record is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP01-R10 — Subject-specific adverse demonstration

New implementation detail aligned with ASTRA 62.6–62.7; 77.5–77.8; Annex AP

1. Challenge the following mechanism through a safe authorised test, independent record review or controlled simulation appropriate to this subject: compare control and independent measurement history with representative resulting-property evidence. UNSET

2. Define the expected outcome before execution, retain original failures and repeat the failed case after correction. UNSET

Verify: Compare prospective expectations, actual observations, conditions, evidence, defect disposition and relevant regression.

Acceptance: Every essential adverse scenario must have valid accepted evidence. A scripted teaching example is not actual qualification; unavailable required observation remains HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP01-R11 – Receiving interface and bounded output

New implementation detail aligned with ASTRA 32.5; 48.4–48.6; 63.6; 80.4

1. Deliver the bounded output to process authority and product acceptance function.	UNSET
2. Reconcile identity, configuration, conditions, unresolved limitations, technical eligibility, remaining duties and readable evidence.	UNSET
3. Identify the actual performer and the organisation retaining acceptance responsibility.	UNSET

Verify: Check the sending manifest, actual recipient access, acknowledgement, restrictions and remaining action owners.

Acceptance: Transfer is complete only after the necessary receiving acceptance is authentic. Sending a file, reconciling quantity or generating a certificate does not establish technical eligibility.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP01-R12 – Independent release and continuing validity

New implementation detail aligned with ASTRA 15.1–15.5; 16.1–16.6; 62.4–62.7; 80.1–80.6

1. Evaluate F02-CP01 independently within its declared object and outcome class.	UNSET
2. Reconcile the original R01–R06 controls with R07–R11, applicable source requirements, prospective parameters, findings and actual authority.	UNSET
3. Monitor the subject-specific changes stated in this profile and reopen affected conclusions when the evidence changes.	UNSET

Verify: Independently replay the final predicate and inspect scope, exclusions, competence, conflict clearance, findings closure and event history.

Acceptance: No positive grant, renewal or extension while any applicable mandatory child is FAIL, HOLD or UNSET. N/A requires independent scope justification; technical concessions remain separate from conformity.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP02 – Fusion joining

Fusion-based joining of specified material combinations, joint geometries and product families, with defined preparation, consumables, equipment, personnel and subsequent verification. Separate procedure qualification, operator authority and product joint acceptance.

Claim boundary: No universal joining parameters or permission to fabricate restricted products is supplied; the outcome is limited to the demonstrated joining scope.

F02-CP02-R01 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Establish a qualified procedure for the actual joint, materials and intended duty, identifying essential variables and limitations before production.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP02-R02 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Verify consumable identity, condition, preparation and storage, and trace base-material and joining-material lots to the actual joint.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP02-R03 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Demonstrate competent personnel or validated automated equipment for the authorised operation, including setup, monitoring, interruptions and rework boundaries.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP02-R04 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

 1. Record relevant actual joining conditions and concealed steps; a finished external appearance is not complete evidence of internal joint integrity. UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP02-R05 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

 1. Use representative destructive/property and non-destructive evidence as technically required, with F03 competence separate from the joining qualification. UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP02-R06 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

 1. Control repair, repeat work and changes in process/material/geometry with authorised technical review and required requalification rather than retrospective acceptance. UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP02-R07 — Mission and environment transfer

New implementation detail aligned with ASTRA 62.1–62.2; 63.2–63.6; 64.1–64.6

- | | |
|--|-------|
| 1. For fusion joining, define the qualified or evaluated envelope for fusion-joint procedure and material/geometry envelope. | UNSET |
| 2. Compare the intended mission, material, site, configuration and phase/mode with the actual evidence. | UNSET |
| 3. Identify material differences and allocate new demonstration before relying on heritage or terrestrial qualification. | UNSET |

Verify: Inspect the difference matrix, environmental inputs, owner approvals and requirement-to-method links.

Acceptance: PASS only when every influential difference is either bounded by valid retained evidence or closed by accepted additional demonstration. Missing essential transfer evidence is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP02-R08 — Essential properties and observability

New implementation detail aligned with ASTRA 62.3–62.5; 77.1–77.6

- | | |
|---|-------|
| 1. Identify the failure and evidence risks specific to this subject: a sound visible surface can conceal an unverified internal joint characteristic. | UNSET |
| 2. State which critical properties are directly observed, measured, inferred using a validated model or unknown. | UNSET |
| 3. Allocate separate child predicates for each hidden property and each essential protective function. | UNSET |

Verify: Review detection capability, raw observations, model validity and limitations against each claimed property.

Acceptance: A valid observation supports only its demonstrated property and domain. An unobservable essential condition is HOLD, not a favourable default or a proven product defect.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP02-R09 — Configuration and data identity

New implementation detail aligned with ASTRA 33.3–33.4; 56.1–56.5; 62.7; 78.7

1. Bind fusion-joint procedure and material/geometry envelope to actual configuration, controlled technical data, source/lot or record identity, equipment and software state, authorised performer and actual event time.

UNSET

2. Preserve failed runs, changed objects and prior evidence through any digital transfer.

UNSET

Verify: Replay one result from original records and verify event-time authority, method version and the evaluated-to-delivered relationship.

Acceptance: PASS requires reproducible identity and valid links for the actual claim. Wrong configuration, stale state, inaccessible evidence or an unverified substituted record is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP02-R10 — Subject-specific adverse demonstration

New implementation detail aligned with ASTRA 62.6–62.7; 77.5–77.8; Annex AP

1. Challenge the following mechanism through a safe authorised test, independent record review or controlled simulation appropriate to this subject: reconcile procedure variables, joint identity, representative property tests and qualified defect detection.

UNSET

2. Define the expected outcome before execution, retain original failures and repeat the failed case after correction.

UNSET

Verify: Compare prospective expectations, actual observations, conditions, evidence, defect disposition and relevant regression.

Acceptance: Every essential adverse scenario must have valid accepted evidence. A scripted teaching example is not actual qualification; unavailable required observation remains HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP02-R11 — Receiving interface and bounded output

New implementation detail aligned with ASTRA 32.5; 48.4–48.6; 63.6; 80.4

1. Deliver the bounded output to joining technical authority and receiving fabrication route.

UNSET

2. Reconcile identity, configuration, conditions, unresolved limitations, technical eligibility, remaining duties and readable evidence.

UNSET

3. Identify the actual performer and the organisation retaining acceptance responsibility.

UNSET

Verify: Check the sending manifest, actual recipient access, acknowledgement, restrictions and remaining action owners.

Acceptance: Transfer is complete only after the necessary receiving acceptance is authentic. Sending a file, reconciling quantity or generating a certificate does not establish technical eligibility.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP02-R12 – Independent release and continuing validity

New implementation detail aligned with ASTRA 15.1–15.5; 16.1–16.6; 62.4–62.7; 80.1–80.6

1. Evaluate F02-CP02 independently within its declared object and outcome class.	UNSET
2. Reconcile the original R01–R06 controls with R07–R11, applicable source requirements, prospective parameters, findings and actual authority.	UNSET
3. Monitor the subject-specific changes stated in this profile and reopen affected conclusions when the evidence changes.	UNSET

Verify: Independently replay the final predicate and inspect scope, exclusions, competence, conflict clearance, findings closure and event history.

Acceptance: No positive grant, renewal or extension while any applicable mandatory child is FAIL, HOLD or UNSET. N/A requires independent scope justification; technical concessions remain separate from conformity.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP03 – Solid-state joining

Solid-state joining routes for specified material pairs, interface conditions and geometries. The qualified process must address bond formation, interface properties and defects that may be inaccessible to final inspection.

Claim boundary: A qualified machine or process principle does not establish every joined interface or product duty.

F02-CP03-R01 – Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Define the mechanism, material pairing, interface design and intended properties of the particular joining route; do not infer equivalence from the absence of melting.	UNSET
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Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP03-R02 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Control preparation, oxide/contamination state, time between preparation and joining, fit and tooling where they affect the hidden interface.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP03-R03 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Qualify the actual equipment, tooling, digital programme and essential-variable combinations for representative geometries and material states.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP03-R04 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Preserve monitored process histories and link them to each output; define response to incomplete bonding indicators, tool wear or interrupted work.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP03-R05 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Demonstrate interface properties and defect-detection limits through suitable representative evidence rather than one accessible external inspection. UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP03-R06 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Assess changes in interface condition, material, tooling, software or sequence and justify retained evidence before partial or full requalification. UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP03-R07 — Mission and environment transfer

New implementation detail aligned with ASTRA 62.1–62.2; 63.2–63.6; 64.1–64.6

1. For solid-state joining, define the qualified or evaluated envelope for solid-state joint interface and controlled process history. UNSET

2. Compare the intended mission, material, site, configuration and phase/mode with the actual evidence. UNSET

3. Identify material differences and allocate new demonstration before relying on heritage or terrestrial qualification. UNSET

Verify: Inspect the difference matrix, environmental inputs, owner approvals and requirement-to-method links.

Acceptance: PASS only when every influential difference is either bounded by valid retained evidence or closed by accepted additional demonstration. Missing essential transfer evidence is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP03-R08 — Essential properties and observability

New implementation detail aligned with ASTRA 62.3–62.5; 77.1–77.6

1. Identify the failure and evidence risks specific to this subject: equipment settings alone do not establish the intended interface transformation. UNSET

2. State which critical properties are directly observed, measured, inferred using a validated model or unknown. UNSET

3. Allocate separate child predicates for each hidden property and each essential protective function. UNSET

Verify: Review detection capability, raw observations, model validity and limitations against each claimed property.

Acceptance: A valid observation supports only its demonstrated property and domain. An unobservable essential condition is HOLD, not a favourable default or a proven product defect.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP03-R09 — Configuration and data identity

New implementation detail aligned with ASTRA 33.3–33.4; 56.1–56.5; 62.7; 78.7

1. Bind solid-state joint interface and controlled process history to actual configuration, controlled technical data, source/lot or record identity, equipment and software state, authorised performer and actual event time. UNSET

2. Preserve failed runs, changed objects and prior evidence through any digital transfer. UNSET

Verify: Replay one result from original records and verify event-time authority, method version and the evaluated-to-delivered relationship.

Acceptance: PASS requires reproducible identity and valid links for the actual claim. Wrong configuration, stale state, inaccessible evidence or an unverified substituted record is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP03-R10 — Subject-specific adverse demonstration

New implementation detail aligned with ASTRA 62.6–62.7; 77.5–77.8; Annex AP

1. Challenge the following mechanism through a safe authorised test, independent record review or controlled simulation appropriate to this subject: trace actual influential-variable history to destructive or otherwise validated interface-property evidence. UNSET

2. Define the expected outcome before execution, retain original failures and repeat the failed case after correction. UNSET

Verify: Compare prospective expectations, actual observations, conditions, evidence, defect disposition and relevant regression.

Acceptance: Every essential adverse scenario must have valid accepted evidence. A scripted teaching example is not actual qualification; unavailable required observation remains HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP03-R11 – Receiving interface and bounded output

New implementation detail aligned with ASTRA 32.5; 48.4–48.6; 63.6; 80.4

1. Deliver the bounded output to joint qualification owner and product authority.	UNSET
2. Reconcile identity, configuration, conditions, unresolved limitations, technical eligibility, remaining duties and readable evidence.	UNSET
3. Identify the actual performer and the organisation retaining acceptance responsibility.	UNSET

Verify: Check the sending manifest, actual recipient access, acknowledgement, restrictions and remaining action owners.

Acceptance: Transfer is complete only after the necessary receiving acceptance is authentic. Sending a file, reconciling quantity or generating a certificate does not establish technical eligibility.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP03-R12 – Independent release and continuing validity

New implementation detail aligned with ASTRA 15.1–15.5; 16.1–16.6; 62.4–62.7; 80.1–80.6

1. Evaluate F02-CP03 independently within its declared object and outcome class.	UNSET
2. Reconcile the original R01–R06 controls with R07–R11, applicable source requirements, prospective parameters, findings and actual authority.	UNSET
3. Monitor the subject-specific changes stated in this profile and reopen affected conclusions when the evidence changes.	UNSET

Verify: Independently replay the final predicate and inspect scope, exclusions, competence, conflict clearance, findings closure and event history.

Acceptance: No positive grant, renewal or extension while any applicable mandatory child is FAIL, HOLD or UNSET. N/A requires independent scope justification; technical concessions remain separate from conformity.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP04 – Brazing and soldering

Brazed or soldered joints in structural, thermal, fluid, electrical or electronic applications within a declared duty and product boundary. Different joint functions and failure mechanisms require distinct technical justification.

Claim boundary: Brazing/soldering capability is bounded by the demonstrated joint family and function, not all structural and electronic applications.

F02-CP04-R01 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Define the actual joint function, material compatibility, geometry and acceptance basis before selecting qualification specimens and methods.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP04-R02 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Control source, condition, expiry and traceability of filler, solder, flux and related consumables along with the parent materials.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP04-R03 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Qualify preparation, assembly, thermal route and cleaning for the intended joint family, including hidden-interface and residue concerns.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP04-R04 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Record equipment/programme identity, responsible personnel, actual process history and interruptions; do not replace a complete route record with a visual pass.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP04-R05 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Verify relevant mechanical, leak, thermal or electrical characteristics and durability under the approved application basis, using competent methods.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP04-R06 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Review rework, substitutions and changed geometry or chemistry for effects on the joint and downstream system before acceptance.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP04-R07 — Mission and environment transfer

New implementation detail aligned with ASTRA 62.1–62.2; 63.2–63.6; 64.1–64.6

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|--|------------------------------------|
| 1. For brazing and soldering, define the qualified or evaluated envelope for brazed or soldered joints and post-process condition. | <input type="text" value="UNSET"/> |
| 2. Compare the intended mission, material, site, configuration and phase/mode with the actual evidence. | <input type="text" value="UNSET"/> |
| 3. Identify material differences and allocate new demonstration before relying on heritage or terrestrial qualification. | <input type="text" value="UNSET"/> |

Verify: Inspect the difference matrix, environmental inputs, owner approvals and requirement-to-method links.

Acceptance: PASS only when every influential difference is either bounded by valid retained evidence or closed by accepted additional demonstration. Missing essential transfer evidence is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP04-R08 — Essential properties and observability

New implementation detail aligned with ASTRA 62.3–62.5; 77.1–77.6

- | | |
|---|------------------------------------|
| 1. Identify the failure and evidence risks specific to this subject: an electrical continuity result can conceal unacceptable joint durability or retained residue. | <input type="text" value="UNSET"/> |
| 2. State which critical properties are directly observed, measured, inferred using a validated model or unknown. | <input type="text" value="UNSET"/> |
| 3. Allocate separate child predicates for each hidden property and each essential protective function. | <input type="text" value="UNSET"/> |

Verify: Review detection capability, raw observations, model validity and limitations against each claimed property.

Acceptance: A valid observation supports only its demonstrated property and domain. An unobservable essential condition is HOLD, not a favourable default or a proven product defect.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP04-R09 – Configuration and data identity

New implementation detail aligned with ASTRA 33.3–33.4; 56.1–56.5; 62.7; 78.7

1. Bind brazed or soldered joints and post-process condition to actual configuration, controlled technical data, source/lot or record identity, equipment and software state, authorised performer and actual event time.

UNSET

2. Preserve failed runs, changed objects and prior evidence through any digital transfer.

UNSET

Verify: Replay one result from original records and verify event-time authority, method version and the evaluated-to-delivered relationship.

Acceptance: PASS requires reproducible identity and valid links for the actual claim. Wrong configuration, stale state, inaccessible evidence or an unverified substituted record is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP04-R10 – Subject-specific adverse demonstration

New implementation detail aligned with ASTRA 62.6–62.7; 77.5–77.8; Annex AP

1. Challenge the following mechanism through a safe authorised test, independent record review or controlled simulation appropriate to this subject: compare preparation, consumable identity, actual cycle, cleanliness and task-specific joint evidence.

UNSET

2. Define the expected outcome before execution, retain original failures and repeat the failed case after correction.

UNSET

Verify: Compare prospective expectations, actual observations, conditions, evidence, defect disposition and relevant regression.

Acceptance: Every essential adverse scenario must have valid accepted evidence. A scripted teaching example is not actual qualification; unavailable required observation remains HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP04-R11 – Receiving interface and bounded output

New implementation detail aligned with ASTRA 32.5; 48.4–48.6; 63.6; 80.4

1. Deliver the bounded output to assembly owner and subsequent inspection function.

UNSET

2. Reconcile identity, configuration, conditions, unresolved limitations, technical eligibility, remaining duties and readable evidence.

UNSET

3. Identify the actual performer and the organisation retaining acceptance responsibility.

UNSET

Verify: Check the sending manifest, actual recipient access, acknowledgement, restrictions and remaining action owners.

Acceptance: Transfer is complete only after the necessary receiving acceptance is authentic. Sending a file, reconciling quantity or generating a certificate does not establish technical eligibility.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP04-R12 – Independent release and continuing validity

New implementation detail aligned with ASTRA 15.1–15.5; 16.1–16.6; 62.4–62.7; 80.1–80.6

1. Evaluate F02-CP04 independently within its declared object and outcome class.	UNSET
2. Reconcile the original R01–R06 controls with R07–R11, applicable source requirements, prospective parameters, findings and actual authority.	UNSET
3. Monitor the subject-specific changes stated in this profile and reopen affected conclusions when the evidence changes.	UNSET

Verify: Independently replay the final predicate and inspect scope, exclusions, competence, conflict clearance, findings closure and event history.

Acceptance: No positive grant, renewal or extension while any applicable mandatory child is FAIL, HOLD or UNSET. N/A requires independent scope justification; technical concessions remain separate from conformity.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP05 – Chemical surface preparation

Controlled chemical preparation, cleaning or activation of surfaces before coating, bonding, joining or other sensitive processing. Qualification concerns the required surface state and compatibility with downstream use, not merely completion of a bath step.

Claim boundary: This scope supplies assurance controls, not chemical formulations or hazardous processing instructions.

F02-CP05-R01 – Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Identify the substrate, initial condition, required surface property and later process whose performance depends on preparation.	UNSET
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Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP05-R02 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Control chemical identity, batch/condition, contamination and relevant process monitoring under approved specialist instructions.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP05-R03 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Verify equipment, handling, rinsing, drying and time-to-next-process controls needed to preserve the qualified surface condition.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP05-R04 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Use a validated cleanliness or surface-condition method appropriate to the relevant mechanism and location; generic clean appearance is insufficient.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP05-R05 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Trace each prepared batch to chemistry/equipment history, actual conditions, personnel and downstream handover, including excursions and reprocessing.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP05-R06 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Assess changed chemicals, source, substrate, equipment or downstream process and obtain relevant requalification before dependent use.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP05-R07 — Mission and environment transfer

New implementation detail aligned with ASTRA 62.1–62.2; 63.2–63.6; 64.1–64.6

1. For chemical surface preparation, define the qualified or evaluated envelope for prepared surface condition and time to subsequent processing.

UNSET

2. Compare the intended mission, material, site, configuration and phase/mode with the actual evidence.

UNSET

3. Identify material differences and allocate new demonstration before relying on heritage or terrestrial qualification.

UNSET

Verify: Inspect the difference matrix, environmental inputs, owner approvals and requirement-to-method links.

Acceptance: PASS only when every influential difference is either bounded by valid retained evidence or closed by accepted additional demonstration. Missing essential transfer evidence is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP05-R08 — Essential properties and observability

New implementation detail aligned with ASTRA 62.3–62.5; 77.1–77.6

- | | |
|--|------------------------------------|
| 1. Identify the failure and evidence risks specific to this subject: a surface can leave its accepted state between cleaning and the next operation. | <input type="text" value="UNSET"/> |
| 2. State which critical properties are directly observed, measured, inferred using a validated model or unknown. | <input type="text" value="UNSET"/> |
| 3. Allocate separate child predicates for each hidden property and each essential protective function. | <input type="text" value="UNSET"/> |

Verify: Review detection capability, raw observations, model validity and limitations against each claimed property.

Acceptance: A valid observation supports only its demonstrated property and domain. An unobservable essential condition is HOLD, not a favourable default or a proven product defect.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP05-R09 — Configuration and data identity

New implementation detail aligned with ASTRA 33.3–33.4; 56.1–56.5; 62.7; 78.7

- | | |
|---|------------------------------------|
| 1. Bind prepared surface condition and time to subsequent processing to actual configuration, controlled technical data, source/lot or record identity, equipment and software state, authorised performer and actual event time. | <input type="text" value="UNSET"/> |
| 2. Preserve failed runs, changed objects and prior evidence through any digital transfer. | <input type="text" value="UNSET"/> |

Verify: Replay one result from original records and verify event-time authority, method version and the evaluated-to-delivered relationship.

Acceptance: PASS requires reproducible identity and valid links for the actual claim. Wrong configuration, stale state, inaccessible evidence or an unverified substituted record is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP05-R10 — Subject-specific adverse demonstration

New implementation detail aligned with ASTRA 62.6–62.7; 77.5–77.8; Annex AP

1. Challenge the following mechanism through a safe authorised test, independent record review or controlled simulation appropriate to this subject: reconstruct preparation, exposure, hold-time and downstream acceptance on the same article. UNSET

2. Define the expected outcome before execution, retain original failures and repeat the failed case after correction. UNSET

Verify: Compare prospective expectations, actual observations, conditions, evidence, defect disposition and relevant regression.

Acceptance: Every essential adverse scenario must have valid accepted evidence. A scripted teaching example is not actual qualification; unavailable required observation remains HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP05-R11 — Receiving interface and bounded output

New implementation detail aligned with ASTRA 32.5; 48.4–48.6; 63.6; 80.4

1. Deliver the bounded output to surface-process owner and downstream treatment function. UNSET

2. Reconcile identity, configuration, conditions, unresolved limitations, technical eligibility, remaining duties and readable evidence. UNSET

3. Identify the actual performer and the organisation retaining acceptance responsibility. UNSET

Verify: Check the sending manifest, actual recipient access, acknowledgement, restrictions and remaining action owners.

Acceptance: Transfer is complete only after the necessary receiving acceptance is authentic. Sending a file, reconciling quantity or generating a certificate does not establish technical eligibility.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP05-R12 – Independent release and continuing validity

New implementation detail aligned with ASTRA 15.1–15.5; 16.1–16.6; 62.4–62.7; 80.1–80.6

1. Evaluate F02-CP05 independently within its declared object and outcome class.	UNSET
2. Reconcile the original R01–R06 controls with R07–R11, applicable source requirements, prospective parameters, findings and actual authority.	UNSET
3. Monitor the subject-specific changes stated in this profile and reopen affected conclusions when the evidence changes.	UNSET

Verify: Independently replay the final predicate and inspect scope, exclusions, competence, conflict clearance, findings closure and event history.

Acceptance: No positive grant, renewal or extension while any applicable mandatory child is FAIL, HOLD or UNSET. N/A requires independent scope justification; technical concessions remain separate from conformity.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP06 – Plating and conversion coatings

Electrodeposited, chemically deposited or conversion-treated surfaces for specified substrates and functional requirements, including relevant preparation, treatment, post-treatment, inspection and downstream compatibility.

Claim boundary: Qualification does not authorise every substrate, coating or service-life claim; actual property limits require the approved technical basis.

F02-CP06-R01 – Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Define the substrate-treatment combination and intended functional properties, including effects on the component and subsequent assembly.	UNSET
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Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP06-R02 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Qualify the complete preparation, deposition/conversion and post-treatment route with representative geometry and sensitive locations.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP06-R03 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Maintain chemistry/source, bath condition, equipment and essential-variable monitoring linked to actual batch and article identities.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP06-R04 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Verify thickness, adhesion, surface condition, corrosion or other required performance with technically suitable specimens and methods.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP06-R05 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Evaluate hidden adverse effects and inspection limitations; a conforming visible coating does not establish every substrate or fatigue property.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP06-R06 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Control stripping, repair, repeat treatment and substitutions with technical disposition and requalification where prior evidence no longer bounds the route.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP06-R07 — Mission and environment transfer

New implementation detail aligned with ASTRA 62.1–62.2; 63.2–63.6; 64.1–64.6

1. For plating and conversion coatings, define the qualified or evaluated envelope for plated or conversion-coated substrate and functional properties.

UNSET

2. Compare the intended mission, material, site, configuration and phase/mode with the actual evidence.

UNSET

3. Identify material differences and allocate new demonstration before relying on heritage or terrestrial qualification.

UNSET

Verify: Inspect the difference matrix, environmental inputs, owner approvals and requirement-to-method links.

Acceptance: PASS only when every influential difference is either bounded by valid retained evidence or closed by accepted additional demonstration. Missing essential transfer evidence is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP06-R08 – Essential properties and observability

New implementation detail aligned with ASTRA 62.3–62.5; 77.1–77.6

1. Identify the failure and evidence risks specific to this subject: a thickness pass can coexist with an unverified adhesion or substrate-integrity condition. UNSET

2. State which critical properties are directly observed, measured, inferred using a validated model or unknown. UNSET

3. Allocate separate child predicates for each hidden property and each essential protective function. UNSET

Verify: Review detection capability, raw observations, model validity and limitations against each claimed property.

Acceptance: A valid observation supports only its demonstrated property and domain. An unobservable essential condition is HOLD, not a favourable default or a proven product defect.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP06-R09 – Configuration and data identity

New implementation detail aligned with ASTRA 33.3–33.4; 56.1–56.5; 62.7; 78.7

1. Bind plated or conversion-coated substrate and functional properties to actual configuration, controlled technical data, source/lot or record identity, equipment and software state, authorised performer and actual event time. UNSET

2. Preserve failed runs, changed objects and prior evidence through any digital transfer. UNSET

Verify: Replay one result from original records and verify event-time authority, method version and the evaluated-to-delivered relationship.

Acceptance: PASS requires reproducible identity and valid links for the actual claim. Wrong configuration, stale state, inaccessible evidence or an unverified substituted record is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP06-R10 — Subject-specific adverse demonstration

New implementation detail aligned with ASTRA 62.6–62.7; 77.5–77.8; Annex AP

1. Challenge the following mechanism through a safe authorised test, independent record review or controlled simulation appropriate to this subject: evaluate separately the coating, interface and substrate predicates after the actual route.

UNSET

2. Define the expected outcome before execution, retain original failures and repeat the failed case after correction.

UNSET

Verify: Compare prospective expectations, actual observations, conditions, evidence, defect disposition and relevant regression.

Acceptance: Every essential adverse scenario must have valid accepted evidence. A scripted teaching example is not actual qualification; unavailable required observation remains HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP06-R11 — Receiving interface and bounded output

New implementation detail aligned with ASTRA 32.5; 48.4–48.6; 63.6; 80.4

1. Deliver the bounded output to coating authority and accepting product function.

UNSET

2. Reconcile identity, configuration, conditions, unresolved limitations, technical eligibility, remaining duties and readable evidence.

UNSET

3. Identify the actual performer and the organisation retaining acceptance responsibility.

UNSET

Verify: Check the sending manifest, actual recipient access, acknowledgement, restrictions and remaining action owners.

Acceptance: Transfer is complete only after the necessary receiving acceptance is authentic. Sending a file, reconciling quantity or generating a certificate does not establish technical eligibility.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP06-R12 – Independent release and continuing validity

New implementation detail aligned with ASTRA 15.1–15.5; 16.1–16.6; 62.4–62.7; 80.1–80.6

1. Evaluate F02-CP06 independently within its declared object and outcome class.	UNSET
2. Reconcile the original R01–R06 controls with R07–R11, applicable source requirements, prospective parameters, findings and actual authority.	UNSET
3. Monitor the subject-specific changes stated in this profile and reopen affected conclusions when the evidence changes.	UNSET

Verify: Independently replay the final predicate and inspect scope, exclusions, competence, conflict clearance, findings closure and event history.

Acceptance: No positive grant, renewal or extension while any applicable mandatory child is FAIL, HOLD or UNSET. N/A requires independent scope justification; technical concessions remain separate from conformity.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP07 – Thermal spray processes

Thermal deposition of specified coating systems onto defined substrates, with attention to preparation, material feed, equipment, deposition history and subsequent finishing. Qualification is tied to functional coating requirements and representative geometry.

Claim boundary: No universal deposition settings are supplied; each coating process and product configuration retains its own acceptance boundary.

F02-CP07-R01 – Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Identify the coating function, substrate condition, material pairing and service environment before defining the qualification envelope.	UNSET
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Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP07-R02 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Control feedstock identity, condition, storage and permitted reuse, with source and batch links to the deposited coating.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP07-R03 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Qualify preparation, deposition equipment, programme and post-processing for representative geometry, access and coating-location variation.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP07-R04 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Preserve actual process history, operator/equipment status and monitoring, including interruptions and limits of in-process indications.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP07-R05 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Verify specified coating properties through suitable representative specimens and inspections; external appearance alone does not establish bond or internal structure.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP07-R06 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Assess repair, changed feedstock/equipment, geometry or finishing against retained qualification evidence and document required new demonstration.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP07-R07 — Mission and environment transfer

New implementation detail aligned with ASTRA 62.1–62.2; 63.2–63.6; 64.1–64.6

1. For thermal spray processes, define the qualified or evaluated envelope for thermal-sprayed coating, substrate and finishing route.

UNSET

2. Compare the intended mission, material, site, configuration and phase/mode with the actual evidence.

UNSET

3. Identify material differences and allocate new demonstration before relying on heritage or terrestrial qualification.

UNSET

Verify: Inspect the difference matrix, environmental inputs, owner approvals and requirement-to-method links.

Acceptance: PASS only when every influential difference is either bounded by valid retained evidence or closed by accepted additional demonstration. Missing essential transfer evidence is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP07-R08 — Essential properties and observability

New implementation detail aligned with ASTRA 62.3–62.5; 77.1–77.6

1. Identify the failure and evidence risks specific to this subject: an in-process trace can omit a critical interface property after finishing. UNSET

2. State which critical properties are directly observed, measured, inferred using a validated model or unknown. UNSET

3. Allocate separate child predicates for each hidden property and each essential protective function. UNSET

Verify: Review detection capability, raw observations, model validity and limitations against each claimed property.

Acceptance: A valid observation supports only its demonstrated property and domain. An unobservable essential condition is HOLD, not a favourable default or a proven product defect.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP07-R09 — Configuration and data identity

New implementation detail aligned with ASTRA 33.3–33.4; 56.1–56.5; 62.7; 78.7

1. Bind thermal-sprayed coating, substrate and finishing route to actual configuration, controlled technical data, source/lot or record identity, equipment and software state, authorised performer and actual event time. UNSET

2. Preserve failed runs, changed objects and prior evidence through any digital transfer. UNSET

Verify: Replay one result from original records and verify event-time authority, method version and the evaluated-to-delivered relationship.

Acceptance: PASS requires reproducible identity and valid links for the actual claim. Wrong configuration, stale state, inaccessible evidence or an unverified substituted record is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP07-R10 — Subject-specific adverse demonstration

New implementation detail aligned with ASTRA 62.6–62.7; 77.5–77.8; Annex AP

1. Challenge the following mechanism through a safe authorised test, independent record review or controlled simulation appropriate to this subject: link feedstock, deposition, test locations and post-processing to the final required properties. UNSET

2. Define the expected outcome before execution, retain original failures and repeat the failed case after correction. UNSET

Verify: Compare prospective expectations, actual observations, conditions, evidence, defect disposition and relevant regression.

Acceptance: Every essential adverse scenario must have valid accepted evidence. A scripted teaching example is not actual qualification; unavailable required observation remains HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP07-R11 – Receiving interface and bounded output

New implementation detail aligned with ASTRA 32.5; 48.4–48.6; 63.6; 80.4

1. Deliver the bounded output to deposition owner and final finishing/acceptance function.	UNSET
2. Reconcile identity, configuration, conditions, unresolved limitations, technical eligibility, remaining duties and readable evidence.	UNSET
3. Identify the actual performer and the organisation retaining acceptance responsibility.	UNSET

Verify: Check the sending manifest, actual recipient access, acknowledgement, restrictions and remaining action owners.

Acceptance: Transfer is complete only after the necessary receiving acceptance is authentic. Sending a file, reconciling quantity or generating a certificate does not establish technical eligibility.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP07-R12 – Independent release and continuing validity

New implementation detail aligned with ASTRA 15.1–15.5; 16.1–16.6; 62.4–62.7; 80.1–80.6

1. Evaluate F02-CP07 independently within its declared object and outcome class.	UNSET
2. Reconcile the original R01–R06 controls with R07–R11, applicable source requirements, prospective parameters, findings and actual authority.	UNSET
3. Monitor the subject-specific changes stated in this profile and reopen affected conclusions when the evidence changes.	UNSET

Verify: Independently replay the final predicate and inspect scope, exclusions, competence, conflict clearance, findings closure and event history.

Acceptance: No positive grant, renewal or extension while any applicable mandatory child is FAIL, HOLD or UNSET. N/A requires independent scope justification; technical concessions remain separate from conformity.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP08 – Organic coating processes

Paint, primer and other organic coating systems used for protection, appearance or specified function on declared aerospace materials and assemblies. Control the complete preparation, mixing/application, cure and preservation route.

Claim boundary: A coating-process result is not a universal corrosion life, fire performance or complete aircraft approval.

F02-CP08-R01 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Define the approved substrate-coating system, required functions and compatibility with adjacent materials, markings, seals and later work.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP08-R02 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Verify material identities, component ratios where specified, condition, shelf/pot life and traceable mixing records without inventing universal formulations.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP08-R03 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Qualify surface preparation, application, environment and cure for actual geometry and the required properties.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP08-R04 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Record point-of-use material history, actual application/cure conditions, operator and equipment, including interruptions and expired material holds.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP08-R05 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Inspect required layer condition, thickness, adhesion or performance using appropriate locations and methods; visual appearance does not establish all protection claims.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP08-R06 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Control touch-up, recoat, stripping and substitutions through technical review, preserving original defects and the final as-applied system.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP08-R07 — Mission and environment transfer

New implementation detail aligned with ASTRA 62.1–62.2; 63.2–63.6; 64.1–64.6

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|--|------------------------------------|
| 1. For organic coating processes, define the qualified or evaluated envelope for organic coating system, preparation and cure. | <input type="text" value="UNSET"/> |
| 2. Compare the intended mission, material, site, configuration and phase/mode with the actual evidence. | <input type="text" value="UNSET"/> |
| 3. Identify material differences and allocate new demonstration before relying on heritage or terrestrial qualification. | <input type="text" value="UNSET"/> |

Verify: Inspect the difference matrix, environmental inputs, owner approvals and requirement-to-method links.

Acceptance: PASS only when every influential difference is either bounded by valid retained evidence or closed by accepted additional demonstration. Missing essential transfer evidence is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP08-R08 — Essential properties and observability

New implementation detail aligned with ASTRA 62.3–62.5; 77.1–77.6

- | | |
|---|------------------------------------|
| 1. Identify the failure and evidence risks specific to this subject: a visually acceptable coating can have unsupported cure or environmental durability. | <input type="text" value="UNSET"/> |
| 2. State which critical properties are directly observed, measured, inferred using a validated model or unknown. | <input type="text" value="UNSET"/> |
| 3. Allocate separate child predicates for each hidden property and each essential protective function. | <input type="text" value="UNSET"/> |

Verify: Review detection capability, raw observations, model validity and limitations against each claimed property.

Acceptance: A valid observation supports only its demonstrated property and domain. An unobservable essential condition is HOLD, not a favourable default or a proven product defect.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP08-R09 — Configuration and data identity

New implementation detail aligned with ASTRA 33.3–33.4; 56.1–56.5; 62.7; 78.7

1. Bind organic coating system, preparation and cure to actual configuration, controlled technical data, source/lot or record identity, equipment and software state, authorised performer and actual event time.

UNSET

2. Preserve failed runs, changed objects and prior evidence through any digital transfer.

UNSET

Verify: Replay one result from original records and verify event-time authority, method version and the evaluated-to-delivered relationship.

Acceptance: PASS requires reproducible identity and valid links for the actual claim. Wrong configuration, stale state, inaccessible evidence or an unverified substituted record is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP08-R10 — Subject-specific adverse demonstration

New implementation detail aligned with ASTRA 62.6–62.7; 77.5–77.8; Annex AP

1. Challenge the following mechanism through a safe authorised test, independent record review or controlled simulation appropriate to this subject: reconcile shelf/out-time, mixing history, actual conditions and representative functional evidence.

UNSET

2. Define the expected outcome before execution, retain original failures and repeat the failed case after correction.

UNSET

Verify: Compare prospective expectations, actual observations, conditions, evidence, defect disposition and relevant regression.

Acceptance: Every essential adverse scenario must have valid accepted evidence. A scripted teaching example is not actual qualification; unavailable required observation remains HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP08-R11 — Receiving interface and bounded output

New implementation detail aligned with ASTRA 32.5; 48.4–48.6; 63.6; 80.4

1. Deliver the bounded output to coating authority and delivered-article custodian.

UNSET

2. Reconcile identity, configuration, conditions, unresolved limitations, technical eligibility, remaining duties and readable evidence.

UNSET

3. Identify the actual performer and the organisation retaining acceptance responsibility.

UNSET

Verify: Check the sending manifest, actual recipient access, acknowledgement, restrictions and remaining action owners.

Acceptance: Transfer is complete only after the necessary receiving acceptance is authentic. Sending a file, reconciling quantity or generating a certificate does not establish technical eligibility.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP08-R12 – Independent release and continuing validity

New implementation detail aligned with ASTRA 15.1–15.5; 16.1–16.6; 62.4–62.7; 80.1–80.6

1. Evaluate F02-CP08 independently within its declared object and outcome class.	UNSET
2. Reconcile the original R01–R06 controls with R07–R11, applicable source requirements, prospective parameters, findings and actual authority.	UNSET
3. Monitor the subject-specific changes stated in this profile and reopen affected conclusions when the evidence changes.	UNSET

Verify: Independently replay the final predicate and inspect scope, exclusions, competence, conflict clearance, findings closure and event history.

Acceptance: No positive grant, renewal or extension while any applicable mandatory child is FAIL, HOLD or UNSET. N/A requires independent scope justification; technical concessions remain separate from conformity.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP09 – Composite material processing

Processing of defined fibre/resin systems into laminates or composite structures, including storage, out-time, preparation, lay-up, tooling, compaction, cure and finishing. Preserve constituent-to-laminate evidence and the limits of inspectability.

Claim boundary: Qualified material or cure equipment does not qualify every laminate, geometry or complete structure.

F02-CP09-R01 – Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Identify constituent systems, source lots, specified condition and permitted storage/out-time without erasing earlier use or excursions.	UNSET
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Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP09-R02 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Control the actual lay-up sequence, orientation, geometry, tooling and concealed preparation steps against the approved configuration.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP09-R03 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Qualify compaction/cure and relevant equipment behaviour using representative material, part location and geometry rather than machine capability alone.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP09-R04 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Link actual cure and environmental records to each laminate, preserving interruptions, deviations, sensor limitations and repairs.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP09-R05 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Demonstrate required laminate properties and defect-detection capability using suitable representative evidence; a surface inspection cannot establish all hidden conditions.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP09-R06 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Review material source, tool, lay-up, cure, finishing or receiving-site changes with a retained/new-evidence rationale and appropriate requalification.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP09-R07 — Mission and environment transfer

New implementation detail aligned with ASTRA 62.1–62.2; 63.2–63.6; 64.1–64.6

1. For composite material processing, define the qualified or evaluated envelope for composite constituents, lay-up, cure and laminate identity.

UNSET

2. Compare the intended mission, material, site, configuration and phase/mode with the actual evidence.

UNSET

3. Identify material differences and allocate new demonstration before relying on heritage or terrestrial qualification.

UNSET

Verify: Inspect the difference matrix, environmental inputs, owner approvals and requirement-to-method links.

Acceptance: PASS only when every influential difference is either bounded by valid retained evidence or closed by accepted additional demonstration. Missing essential transfer evidence is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP09-R08 — Essential properties and observability

New implementation detail aligned with ASTRA 62.3–62.5; 77.1–77.6

- | | |
|---|-------|
| 1. Identify the failure and evidence risks specific to this subject: a correct cure trace can coexist with wrong constituent out-time or unverified lay-up. | UNSET |
| 2. State which critical properties are directly observed, measured, inferred using a validated model or unknown. | UNSET |
| 3. Allocate separate child predicates for each hidden property and each essential protective function. | UNSET |

Verify: Review detection capability, raw observations, model validity and limitations against each claimed property.

Acceptance: A valid observation supports only its demonstrated property and domain. An unobservable essential condition is HOLD, not a favourable default or a proven product defect.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP09-R09 — Configuration and data identity

New implementation detail aligned with ASTRA 33.3–33.4; 56.1–56.5; 62.7; 78.7

- | | |
|---|-------|
| 1. Bind composite constituents, lay-up, cure and laminate identity to actual configuration, controlled technical data, source/lot or record identity, equipment and software state, authorised performer and actual event time. | UNSET |
| 2. Preserve failed runs, changed objects and prior evidence through any digital transfer. | UNSET |

Verify: Replay one result from original records and verify event-time authority, method version and the evaluated-to-delivered relationship.

Acceptance: PASS requires reproducible identity and valid links for the actual claim. Wrong configuration, stale state, inaccessible evidence or an unverified substituted record is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP09-R10 — Subject-specific adverse demonstration

New implementation detail aligned with ASTRA 62.6–62.7; 77.5–77.8; Annex AP

- | | |
|---|-------|
| 1. Challenge the following mechanism through a safe authorised test, independent record review or controlled simulation appropriate to this subject: follow constituent lots and exposure through concealed lay-up steps into laminate/property verification. | UNSET |
| 2. Define the expected outcome before execution, retain original failures and repeat the failed case after correction. | UNSET |

Verify: Compare prospective expectations, actual observations, conditions, evidence, defect disposition and relevant regression.

Acceptance: Every essential adverse scenario must have valid accepted evidence. A scripted teaching example is not actual qualification; unavailable required observation remains HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP09-R11 — Receiving interface and bounded output

New implementation detail aligned with ASTRA 32.5; 48.4–48.6; 63.6; 80.4

1. Deliver the bounded output to composite process authority and structural acceptance owner.	UNSET
2. Reconcile identity, configuration, conditions, unresolved limitations, technical eligibility, remaining duties and readable evidence.	UNSET
3. Identify the actual performer and the organisation retaining acceptance responsibility.	UNSET

Verify: Check the sending manifest, actual recipient access, acknowledgement, restrictions and remaining action owners.

Acceptance: Transfer is complete only after the necessary receiving acceptance is authentic. Sending a file, reconciling quantity or generating a certificate does not establish technical eligibility.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP09-R12 — Independent release and continuing validity

New implementation detail aligned with ASTRA 15.1–15.5; 16.1–16.6; 62.4–62.7; 80.1–80.6

1. Evaluate F02-CP09 independently within its declared object and outcome class.	UNSET
2. Reconcile the original R01–R06 controls with R07–R11, applicable source requirements, prospective parameters, findings and actual authority.	UNSET
3. Monitor the subject-specific changes stated in this profile and reopen affected conclusions when the evidence changes.	UNSET

Verify: Independently replay the final predicate and inspect scope, exclusions, competence, conflict clearance, findings closure and event history.

Acceptance: No positive grant, renewal or extension while any applicable mandatory child is FAIL, HOLD or UNSET. N/A requires independent scope justification; technical concessions remain separate from conformity.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP10 — Structural bonding

Bonded structural interfaces for specified adherends, adhesives, joint geometries and environments. The process must demonstrate preparation, assembly, cure, durability and the capability to verify or otherwise control hidden bond integrity.

Claim boundary: A passed coupon or nominal adhesive strength does not establish every installed structural bond.

F02-CP10-R01 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Define joint function, adherend materials, service conditions and required properties before selecting the qualification and acceptance strategy.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP10-R02 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Preserve adhesive and adherend identity, storage history, out-time and condition, and verify compatibility of all preparation and processing materials.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP10-R03 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Qualify the actual surface preparation, timing, assembly and cure route; do not assume visible cleanliness proves a bondable surface.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP10-R04 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Record concealed steps, actual process conditions, tooling and assembly configuration contemporaneously for each controlled joint or batch.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP10-R05 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Address durability, representative loading/environment and inspection limitations.

UNSET

2. Where an essential defect cannot be reliably detected, preserve the required process controls rather than claiming detection by default.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP10-R06 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Control repair, disbonding/rebonding, substitutions and geometry/source changes through technical review and necessary requalification.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP10-R07 — Mission and environment transfer

New implementation detail aligned with ASTRA 62.1–62.2; 63.2–63.6; 64.1–64.6

- | | |
|---|-------|
| 1. For structural bonding, define the qualified or evaluated envelope for structural bond preparation, assembly and durability. | UNSET |
| 2. Compare the intended mission, material, site, configuration and phase/mode with the actual evidence. | UNSET |
| 3. Identify material differences and allocate new demonstration before relying on heritage or terrestrial qualification. | UNSET |

Verify: Inspect the difference matrix, environmental inputs, owner approvals and requirement-to-method links.

Acceptance: PASS only when every influential difference is either bounded by valid retained evidence or closed by accepted additional demonstration. Missing essential transfer evidence is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP10-R08 — Essential properties and observability

New implementation detail aligned with ASTRA 62.3–62.5; 77.1–77.6

- | | |
|---|-------|
| 1. Identify the failure and evidence risks specific to this subject: final non-destructive inspection may not establish all adhesion-related hidden properties. | UNSET |
| 2. State which critical properties are directly observed, measured, inferred using a validated model or unknown. | UNSET |
| 3. Allocate separate child predicates for each hidden property and each essential protective function. | UNSET |

Verify: Review detection capability, raw observations, model validity and limitations against each claimed property.

Acceptance: A valid observation supports only its demonstrated property and domain. An unobservable essential condition is HOLD, not a favourable default or a proven product defect.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP10-R09 – Configuration and data identity

New implementation detail aligned with ASTRA 33.3–33.4; 56.1–56.5; 62.7; 78.7

1. Bind structural bond preparation, assembly and durability to actual configuration, controlled technical data, source/lot or record identity, equipment and software state, authorised performer and actual event time.

UNSET

2. Preserve failed runs, changed objects and prior evidence through any digital transfer.

UNSET

Verify: Replay one result from original records and verify event-time authority, method version and the evaluated-to-delivered relationship.

Acceptance: PASS requires reproducible identity and valid links for the actual claim. Wrong configuration, stale state, inaccessible evidence or an unverified substituted record is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP10-R10 – Subject-specific adverse demonstration

New implementation detail aligned with ASTRA 62.6–62.7; 77.5–77.8; Annex AP

1. Challenge the following mechanism through a safe authorised test, independent record review or controlled simulation appropriate to this subject: challenge surface-state evidence, time-to-bond, representative durability and detection limitations.

UNSET

2. Define the expected outcome before execution, retain original failures and repeat the failed case after correction.

UNSET

Verify: Compare prospective expectations, actual observations, conditions, evidence, defect disposition and relevant regression.

Acceptance: Every essential adverse scenario must have valid accepted evidence. A scripted teaching example is not actual qualification; unavailable required observation remains HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP10-R11 – Receiving interface and bounded output

New implementation detail aligned with ASTRA 32.5; 48.4–48.6; 63.6; 80.4

1. Deliver the bounded output to bonding authority and structural design authority.

UNSET

2. Reconcile identity, configuration, conditions, unresolved limitations, technical eligibility, remaining duties and readable evidence.

UNSET

3. Identify the actual performer and the organisation retaining acceptance responsibility.

UNSET

Verify: Check the sending manifest, actual recipient access, acknowledgement, restrictions and remaining action owners.

Acceptance: Transfer is complete only after the necessary receiving acceptance is authentic. Sending a file, reconciling quantity or generating a certificate does not establish technical eligibility.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP10-R12 – Independent release and continuing validity

New implementation detail aligned with ASTRA 15.1–15.5; 16.1–16.6; 62.4–62.7; 80.1–80.6

1. Evaluate F02-CP10 independently within its declared object and outcome class.	UNSET
2. Reconcile the original R01–R06 controls with R07–R11, applicable source requirements, prospective parameters, findings and actual authority.	UNSET
3. Monitor the subject-specific changes stated in this profile and reopen affected conclusions when the evidence changes.	UNSET

Verify: Independently replay the final predicate and inspect scope, exclusions, competence, conflict clearance, findings closure and event history.

Acceptance: No positive grant, renewal or extension while any applicable mandatory child is FAIL, HOLD or UNSET. N/A requires independent scope justification; technical concessions remain separate from conformity.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP11 – Metal additive manufacture

Digitally controlled manufacture of metal products within a defined material-machine-build-post-processing envelope. Qualification addresses the actual component or bounded family, including location, orientation, hidden properties and downstream treatment.

Claim boundary: In-process sensor evidence supports only a validated property/detection boundary and does not automatically replace product acceptance.

F02-CP11-R01 – Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Identify feedstock identity, condition, storage and reuse history, and connect every build to material source and any mixing or replenishment.	UNSET
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Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP11-R02 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Freeze the reviewed digital geometry, build preparation, machine programme and software/toolchain versions that determine the as-built result.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP11-R03 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Qualify representative geometry, orientation and build locations for the intended material and machine envelope; machine or material qualification alone is not component qualification.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP11-R04 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Preserve actual build records, equipment state, essential variables, interruptions and monitoring data with their detection and interpretation limits.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP11-R05 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Include removal, post-treatment, finishing and inspection in the qualified route; demonstrate required properties with suitable representative evidence.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP11-R06 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Assess changed feedstock, parameters, algorithms, machine, geometry or post-processing and verify actual receiving-site capability before retaining a broader claim.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP11-R07 — Mission and environment transfer

New implementation detail aligned with ASTRA 62.1–62.2; 63.2–63.6; 64.1–64.6

1. For metal additive manufacture, define the qualified or evaluated envelope for metal additive feedstock, build configuration and post-treatment.

UNSET

2. Compare the intended mission, material, site, configuration and phase/mode with the actual evidence.

UNSET

3. Identify material differences and allocate new demonstration before relying on heritage or terrestrial qualification.

UNSET

Verify: Inspect the difference matrix, environmental inputs, owner approvals and requirement-to-method links.

Acceptance: PASS only when every influential difference is either bounded by valid retained evidence or closed by accepted additional demonstration. Missing essential transfer evidence is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP11-R08 – Essential properties and observability

New implementation detail aligned with ASTRA 62.3–62.5; 77.1–77.6

- | | |
|--|------------------------------------|
| 1. Identify the failure and evidence risks specific to this subject: a changed build orientation or toolchain can invalidate retained property evidence. | <input type="text" value="UNSET"/> |
| 2. State which critical properties are directly observed, measured, inferred using a validated model or unknown. | <input type="text" value="UNSET"/> |
| 3. Allocate separate child predicates for each hidden property and each essential protective function. | <input type="text" value="UNSET"/> |

Verify: Review detection capability, raw observations, model validity and limitations against each claimed property.

Acceptance: A valid observation supports only its demonstrated property and domain. An unobservable essential condition is HOLD, not a favourable default or a proven product defect.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP11-R09 – Configuration and data identity

New implementation detail aligned with ASTRA 33.3–33.4; 56.1–56.5; 62.7; 78.7

- | | |
|---|------------------------------------|
| 1. Bind metal additive feedstock, build configuration and post-treatment to actual configuration, controlled technical data, source/lot or record identity, equipment and software state, authorised performer and actual event time. | <input type="text" value="UNSET"/> |
| 2. Preserve failed runs, changed objects and prior evidence through any digital transfer. | <input type="text" value="UNSET"/> |

Verify: Replay one result from original records and verify event-time authority, method version and the evaluated-to-delivered relationship.

Acceptance: PASS requires reproducible identity and valid links for the actual claim. Wrong configuration, stale state, inaccessible evidence or an unverified substituted record is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP11-R10 — Subject-specific adverse demonstration

New implementation detail aligned with ASTRA 62.6–62.7; 77.5–77.8; Annex AP

1. Challenge the following mechanism through a safe authorised test, independent record review or controlled simulation appropriate to this subject: reconcile digital build identity, position/orientation, feedstock history and finished-part test locations.

UNSET

2. Define the expected outcome before execution, retain original failures and repeat the failed case after correction.

UNSET

Verify: Compare prospective expectations, actual observations, conditions, evidence, defect disposition and relevant regression.

Acceptance: Every essential adverse scenario must have valid accepted evidence. A scripted teaching example is not actual qualification; unavailable required observation remains HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP11-R11 — Receiving interface and bounded output

New implementation detail aligned with ASTRA 32.5; 48.4–48.6; 63.6; 80.4

1. Deliver the bounded output to additive process owner and product qualification authority.

UNSET

2. Reconcile identity, configuration, conditions, unresolved limitations, technical eligibility, remaining duties and readable evidence.

UNSET

3. Identify the actual performer and the organisation retaining acceptance responsibility.

UNSET

Verify: Check the sending manifest, actual recipient access, acknowledgement, restrictions and remaining action owners.

Acceptance: Transfer is complete only after the necessary receiving acceptance is authentic. Sending a file, reconciling quantity or generating a certificate does not establish technical eligibility.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP11-R12 – Independent release and continuing validity

New implementation detail aligned with ASTRA 15.1–15.5; 16.1–16.6; 62.4–62.7; 80.1–80.6

1. Evaluate F02-CP11 independently within its declared object and outcome class.	UNSET
2. Reconcile the original R01–R06 controls with R07–R11, applicable source requirements, prospective parameters, findings and actual authority.	UNSET
3. Monitor the subject-specific changes stated in this profile and reopen affected conclusions when the evidence changes.	UNSET

Verify: Independently replay the final predicate and inspect scope, exclusions, competence, conflict clearance, findings closure and event history.

Acceptance: No positive grant, renewal or extension while any applicable mandatory child is FAIL, HOLD or UNSET. N/A requires independent scope justification; technical concessions remain separate from conformity.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP12 – Polymer additive manufacture

Additive manufacture of polymer or polymer-based composite products within a declared material, process, build and service boundary. Include material preparation, digital identity, environment, post-cure/finishing and intended-use properties.

Claim boundary: Prototype appearance, dimensional fit or a material trade name does not establish full product qualification.

F02-CP12-R01 – Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Define the intended product duty and relevant material properties rather than accepting a printed shape as evidence of aerospace suitability.	UNSET
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Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP12-R02 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Control material identity, storage, condition, preparation and reuse where permitted, with traceable batch history.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP12-R03 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Qualify the actual machine, programme, orientation, geometry and process environment for representative properties and interfaces.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP12-R04 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Retain build file and loaded settings, actual process records, interruptions and any monitoring used in acceptance.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP12-R05 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Verify required mechanical, thermal, dimensional or other specified properties after all post-processing, acknowledging directional or location-related limitations where relevant.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP12-R06 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Review changed material, software, machine, orientation, finishing or duty and complete additional demonstration before extending the qualified envelope.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP12-R07 — Mission and environment transfer

New implementation detail aligned with ASTRA 62.1–62.2; 63.2–63.6; 64.1–64.6

1. For polymer additive manufacture, define the qualified or evaluated envelope for polymer additive material history, build and post-cure.

UNSET

2. Compare the intended mission, material, site, configuration and phase/mode with the actual evidence.

UNSET

3. Identify material differences and allocate new demonstration before relying on heritage or terrestrial qualification.

UNSET

Verify: Inspect the difference matrix, environmental inputs, owner approvals and requirement-to-method links.

Acceptance: PASS only when every influential difference is either bounded by valid retained evidence or closed by accepted additional demonstration. Missing essential transfer evidence is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP12-R08 — Essential properties and observability

New implementation detail aligned with ASTRA 62.3–62.5; 77.1–77.6

- | | |
|--|------------------------------------|
| 1. Identify the failure and evidence risks specific to this subject: dimensional fit can conceal orientation-dependent or environment-sensitive performance. | <input type="text" value="UNSET"/> |
| 2. State which critical properties are directly observed, measured, inferred using a validated model or unknown. | <input type="text" value="UNSET"/> |
| 3. Allocate separate child predicates for each hidden property and each essential protective function. | <input type="text" value="UNSET"/> |

Verify: Review detection capability, raw observations, model validity and limitations against each claimed property.

Acceptance: A valid observation supports only its demonstrated property and domain. An unobservable essential condition is HOLD, not a favourable default or a proven product defect.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP12-R09 — Configuration and data identity

New implementation detail aligned with ASTRA 33.3–33.4; 56.1–56.5; 62.7; 78.7

- | | |
|---|------------------------------------|
| 1. Bind polymer additive material history, build and post-cure to actual configuration, controlled technical data, source/lot or record identity, equipment and software state, authorised performer and actual event time. | <input type="text" value="UNSET"/> |
| 2. Preserve failed runs, changed objects and prior evidence through any digital transfer. | <input type="text" value="UNSET"/> |

Verify: Replay one result from original records and verify event-time authority, method version and the evaluated-to-delivered relationship.

Acceptance: PASS requires reproducible identity and valid links for the actual claim. Wrong configuration, stale state, inaccessible evidence or an unverified substituted record is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP12-R10 — Subject-specific adverse demonstration

New implementation detail aligned with ASTRA 62.6–62.7; 77.5–77.8; Annex AP

- | | |
|--|------------------------------------|
| 1. Challenge the following mechanism through a safe authorised test, independent record review or controlled simulation appropriate to this subject: compare material condition, build direction, post-cure and required service-environment properties. | <input type="text" value="UNSET"/> |
| 2. Define the expected outcome before execution, retain original failures and repeat the failed case after correction. | <input type="text" value="UNSET"/> |

Verify: Compare prospective expectations, actual observations, conditions, evidence, defect disposition and relevant regression.

Acceptance: Every essential adverse scenario must have valid accepted evidence. A scripted teaching example is not actual qualification; unavailable required observation remains HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP12-R11 – Receiving interface and bounded output

New implementation detail aligned with ASTRA 32.5; 48.4–48.6; 63.6; 80.4

1. Deliver the bounded output to polymer process owner and receiving application engineer.	UNSET
2. Reconcile identity, configuration, conditions, unresolved limitations, technical eligibility, remaining duties and readable evidence.	UNSET
3. Identify the actual performer and the organisation retaining acceptance responsibility.	UNSET

Verify: Check the sending manifest, actual recipient access, acknowledgement, restrictions and remaining action owners.

Acceptance: Transfer is complete only after the necessary receiving acceptance is authentic. Sending a file, reconciling quantity or generating a certificate does not establish technical eligibility.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP12-R12 – Independent release and continuing validity

New implementation detail aligned with ASTRA 15.1–15.5; 16.1–16.6; 62.4–62.7; 80.1–80.6

1. Evaluate F02-CP12 independently within its declared object and outcome class.	UNSET
2. Reconcile the original R01–R06 controls with R07–R11, applicable source requirements, prospective parameters, findings and actual authority.	UNSET
3. Monitor the subject-specific changes stated in this profile and reopen affected conclusions when the evidence changes.	UNSET

Verify: Independently replay the final predicate and inspect scope, exclusions, competence, conflict clearance, findings closure and event history.

Acceptance: No positive grant, renewal or extension while any applicable mandatory child is FAIL, HOLD or UNSET. N/A requires independent scope justification; technical concessions remain separate from conformity.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP13 – Casting

Casting of specified material and product families, including source material, mould/tooling, process history, subsequent treatment and representative property/defect verification. Maintain traceability through lots, repairs and final machining.

Claim boundary: Lot test values support only the justified parent-material and processing relationship, not every unrepresented casting.

F02-CP13-R01 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Define the material, product geometry and intended properties, including the casting-to-finished-product route and its technical acceptance responsibilities.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP13-R02 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Preserve source, charge, lot and consumable identity with actual process and article genealogy; a generic chemistry certificate is not proof of each required property.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP13-R03 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Qualify mould/tooling, controlled processing and relevant post-treatment for representative geometry and critical sections.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP13-R04 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Record actual production history, deviations, interruptions and identified defect populations, not only accepted final castings.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP13-R05 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Use representative property specimens and suitable defect-detection methods with stated location, preparation and inference limits.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP13-R06 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Control repair, blending, repeat treatment and changed material/tooling/process route through authorised review and required requalification.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP13-R07 — Mission and environment transfer

New implementation detail aligned with ASTRA 62.1–62.2; 63.2–63.6; 64.1–64.6

- | | |
|---|------------------------------------|
| 1. For casting, define the qualified or evaluated envelope for casting material, geometry and process-to-specimen relationship. | <input type="text" value="UNSET"/> |
| 2. Compare the intended mission, material, site, configuration and phase/mode with the actual evidence. | <input type="text" value="UNSET"/> |
| 3. Identify material differences and allocate new demonstration before relying on heritage or terrestrial qualification. | <input type="text" value="UNSET"/> |

Verify: Inspect the difference matrix, environmental inputs, owner approvals and requirement-to-method links.

Acceptance: PASS only when every influential difference is either bounded by valid retained evidence or closed by accepted additional demonstration. Missing essential transfer evidence is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP13-R08 — Essential properties and observability

New implementation detail aligned with ASTRA 62.3–62.5; 77.1–77.6

- | | |
|---|------------------------------------|
| 1. Identify the failure and evidence risks specific to this subject: a favourable detached specimen can fail to represent a critical article section. | <input type="text" value="UNSET"/> |
| 2. State which critical properties are directly observed, measured, inferred using a validated model or unknown. | <input type="text" value="UNSET"/> |
| 3. Allocate separate child predicates for each hidden property and each essential protective function. | <input type="text" value="UNSET"/> |

Verify: Review detection capability, raw observations, model validity and limitations against each claimed property.

Acceptance: A valid observation supports only its demonstrated property and domain. An unobservable essential condition is HOLD, not a favourable default or a proven product defect.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP13-R09 – Configuration and data identity

New implementation detail aligned with ASTRA 33.3–33.4; 56.1–56.5; 62.7; 78.7

1. Bind casting material, geometry and process-to-specimen relationship to actual configuration, controlled technical data, source/lot or record identity, equipment and software state, authorised performer and actual event time.

UNSET

2. Preserve failed runs, changed objects and prior evidence through any digital transfer.

UNSET

Verify: Replay one result from original records and verify event-time authority, method version and the evaluated-to-delivered relationship.

Acceptance: PASS requires reproducible identity and valid links for the actual claim. Wrong configuration, stale state, inaccessible evidence or an unverified substituted record is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP13-R10 – Subject-specific adverse demonstration

New implementation detail aligned with ASTRA 62.6–62.7; 77.5–77.8; Annex AP

1. Challenge the following mechanism through a safe authorised test, independent record review or controlled simulation appropriate to this subject: trace charge, process history, specimen location and section-specific inspection into lot disposition.

UNSET

2. Define the expected outcome before execution, retain original failures and repeat the failed case after correction.

UNSET

Verify: Compare prospective expectations, actual observations, conditions, evidence, defect disposition and relevant regression.

Acceptance: Every essential adverse scenario must have valid accepted evidence. A scripted teaching example is not actual qualification; unavailable required observation remains HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP13-R11 – Receiving interface and bounded output

New implementation detail aligned with ASTRA 32.5; 48.4–48.6; 63.6; 80.4

1. Deliver the bounded output to foundry technical authority and final article acceptance function.	UNSET
2. Reconcile identity, configuration, conditions, unresolved limitations, technical eligibility, remaining duties and readable evidence.	UNSET
3. Identify the actual performer and the organisation retaining acceptance responsibility.	UNSET

Verify: Check the sending manifest, actual recipient access, acknowledgement, restrictions and remaining action owners.

Acceptance: Transfer is complete only after the necessary receiving acceptance is authentic. Sending a file, reconciling quantity or generating a certificate does not establish technical eligibility.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP13-R12 – Independent release and continuing validity

New implementation detail aligned with ASTRA 15.1–15.5; 16.1–16.6; 62.4–62.7; 80.1–80.6

1. Evaluate F02-CP13 independently within its declared object and outcome class.	UNSET
2. Reconcile the original R01–R06 controls with R07–R11, applicable source requirements, prospective parameters, findings and actual authority.	UNSET
3. Monitor the subject-specific changes stated in this profile and reopen affected conclusions when the evidence changes.	UNSET

Verify: Independently replay the final predicate and inspect scope, exclusions, competence, conflict clearance, findings closure and event history.

Acceptance: No positive grant, renewal or extension while any applicable mandatory child is FAIL, HOLD or UNSET. N/A requires independent scope justification; technical concessions remain separate from conformity.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP14 – Forging and forming

Controlled deformation/forming of specified materials and geometry families, including incoming state, tooling, process sequence, thermal history and downstream treatment or machining. Qualification is tied to resulting geometry and properties.

Claim boundary: A dimensionally correct formed part is not proof that all material and through-life properties are satisfied.

F02-CP14-R01 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Identify incoming material state and intended final geometry/properties with the actual design and process authority.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP14-R02 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Qualify tooling, sequence and essential-variable combinations for representative sections, orientations and material conditions.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP14-R03 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Preserve actual material and process history through intermediate shapes, treatments, splits and subcontracted stages.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP14-R04 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Control equipment/tool condition and point-of-use instructions; deviations and interrupted sequences need technical review.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP14-R05 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Verify geometry, surface and relevant internal/material properties using representative methods and specimens after the complete route.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP14-R06 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Review changed stock, geometry, tool, sequence, thermal state or receiving-site implementation and justify retained evidence before new acceptance.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP14-R07 — Mission and environment transfer

New implementation detail aligned with ASTRA 62.1–62.2; 63.2–63.6; 64.1–64.6

- | | |
|---|-------|
| 1. For forging and forming, define the qualified or evaluated envelope for forging or forming route, material state and downstream treatment. | UNSET |
| 2. Compare the intended mission, material, site, configuration and phase/mode with the actual evidence. | UNSET |
| 3. Identify material differences and allocate new demonstration before relying on heritage or terrestrial qualification. | UNSET |

Verify: Inspect the difference matrix, environmental inputs, owner approvals and requirement-to-method links.

Acceptance: PASS only when every influential difference is either bounded by valid retained evidence or closed by accepted additional demonstration. Missing essential transfer evidence is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP14-R08 — Essential properties and observability

New implementation detail aligned with ASTRA 62.3–62.5; 77.1–77.6

- | | |
|---|-------|
| 1. Identify the failure and evidence risks specific to this subject: final geometry can conceal an unacceptable local material or strain-history condition. | UNSET |
| 2. State which critical properties are directly observed, measured, inferred using a validated model or unknown. | UNSET |
| 3. Allocate separate child predicates for each hidden property and each essential protective function. | UNSET |

Verify: Review detection capability, raw observations, model validity and limitations against each claimed property.

Acceptance: A valid observation supports only its demonstrated property and domain. An unobservable essential condition is HOLD, not a favourable default or a proven product defect.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP14-R09 – Configuration and data identity

New implementation detail aligned with ASTRA 33.3–33.4; 56.1–56.5; 62.7; 78.7

1. Bind forging or forming route, material state and downstream treatment to actual configuration, controlled technical data, source/lot or record identity, equipment and software state, authorised performer and actual event time.

UNSET

2. Preserve failed runs, changed objects and prior evidence through any digital transfer.

UNSET

Verify: Replay one result from original records and verify event-time authority, method version and the evaluated-to-delivered relationship.

Acceptance: PASS requires reproducible identity and valid links for the actual claim. Wrong configuration, stale state, inaccessible evidence or an unverified substituted record is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP14-R10 – Subject-specific adverse demonstration

New implementation detail aligned with ASTRA 62.6–62.7; 77.5–77.8; Annex AP

1. Challenge the following mechanism through a safe authorised test, independent record review or controlled simulation appropriate to this subject: reconcile starting condition, forming sequence, representative property locations and finishing effects.

UNSET

2. Define the expected outcome before execution, retain original failures and repeat the failed case after correction.

UNSET

Verify: Compare prospective expectations, actual observations, conditions, evidence, defect disposition and relevant regression.

Acceptance: Every essential adverse scenario must have valid accepted evidence. A scripted teaching example is not actual qualification; unavailable required observation remains HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP14-R11 – Receiving interface and bounded output

New implementation detail aligned with ASTRA 32.5; 48.4–48.6; 63.6; 80.4

- | | |
|--|-------|
| 1. Deliver the bounded output to forming authority and material/product acceptance owner. | UNSET |
| 2. Reconcile identity, configuration, conditions, unresolved limitations, technical eligibility, remaining duties and readable evidence. | UNSET |
| 3. Identify the actual performer and the organisation retaining acceptance responsibility. | UNSET |

Verify: Check the sending manifest, actual recipient access, acknowledgement, restrictions and remaining action owners.

Acceptance: Transfer is complete only after the necessary receiving acceptance is authentic. Sending a file, reconciling quantity or generating a certificate does not establish technical eligibility.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP14-R12 – Independent release and continuing validity

New implementation detail aligned with ASTRA 15.1–15.5; 16.1–16.6; 62.4–62.7; 80.1–80.6

- | | |
|---|-------|
| 1. Evaluate F02-CP14 independently within its declared object and outcome class. | UNSET |
| 2. Reconcile the original R01–R06 controls with R07–R11, applicable source requirements, prospective parameters, findings and actual authority. | UNSET |
| 3. Monitor the subject-specific changes stated in this profile and reopen affected conclusions when the evidence changes. | UNSET |

Verify: Independently replay the final predicate and inspect scope, exclusions, competence, conflict clearance, findings closure and event history.

Acceptance: No positive grant, renewal or extension while any applicable mandatory child is FAIL, HOLD or UNSET. N/A requires independent scope justification; technical concessions remain separate from conformity.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP15 – Precision machining

Machining of specified critical geometries and surface conditions using controlled machines, tools, fixtures, programmes and measurement. Define where geometry, surface integrity and hidden machining effects affect the intended product.

Claim boundary: A capability index or successful first article does not approve every future unit or untested configuration.

F02-CP15-R01 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Freeze the product definition, datums, material state and critical characteristics before programming or acceptance.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP15-R02 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Control machine, fixture, tool and programme identity, including authorised changes and setup verification.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP15-R03 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Demonstrate capability for representative geometry and surface requirements with suitable measurement uncertainty and a justified production/low-volume strategy.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP15-R04 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Record actual setup, tool condition, in-process checks, offsets where relevant, interruptions and deviations against the article or lot.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP15-R05 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Assess surface integrity, edge condition and other specified effects with suitable methods; passing nominal dimensions is not complete acceptance.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP15-R06 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Control rework, programme changes, new tools or relocated equipment and reconcile full/partial first-article and requalification requirements.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP15-R07 — Mission and environment transfer

New implementation detail aligned with ASTRA 62.1–62.2; 63.2–63.6; 64.1–64.6

1. For precision machining, define the qualified or evaluated envelope for precision-machined geometry, datums and surface integrity. UNSET

2. Compare the intended mission, material, site, configuration and phase/mode with the actual evidence. UNSET

3. Identify material differences and allocate new demonstration before relying on heritage or terrestrial qualification. UNSET

Verify: Inspect the difference matrix, environmental inputs, owner approvals and requirement-to-method links.

Acceptance: PASS only when every influential difference is either bounded by valid retained evidence or closed by accepted additional demonstration. Missing essential transfer evidence is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP15-R08 — Essential properties and observability

New implementation detail aligned with ASTRA 62.3–62.5; 77.1–77.6

1. Identify the failure and evidence risks specific to this subject: a numerical programme name can conceal a changed toolpath, datum or surface condition. UNSET

2. State which critical properties are directly observed, measured, inferred using a validated model or unknown. UNSET

3. Allocate separate child predicates for each hidden property and each essential protective function. UNSET

Verify: Review detection capability, raw observations, model validity and limitations against each claimed property.

Acceptance: A valid observation supports only its demonstrated property and domain. An unobservable essential condition is HOLD, not a favourable default or a proven product defect.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP15-R09 – Configuration and data identity

New implementation detail aligned with ASTRA 33.3–33.4; 56.1–56.5; 62.7; 78.7

1. Bind precision-machined geometry, datums and surface integrity to actual configuration, controlled technical data, source/lot or record identity, equipment and software state, authorised performer and actual event time.

UNSET

2. Preserve failed runs, changed objects and prior evidence through any digital transfer.

UNSET

Verify: Replay one result from original records and verify event-time authority, method version and the evaluated-to-delivered relationship.

Acceptance: PASS requires reproducible identity and valid links for the actual claim. Wrong configuration, stale state, inaccessible evidence or an unverified substituted record is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP15-R10 – Subject-specific adverse demonstration

New implementation detail aligned with ASTRA 62.6–62.7; 77.5–77.8; Annex AP

1. Challenge the following mechanism through a safe authorised test, independent record review or controlled simulation appropriate to this subject: replay a critical characteristic from authorised digital programme through measurement uncertainty.

UNSET

2. Define the expected outcome before execution, retain original failures and repeat the failed case after correction.

UNSET

Verify: Compare prospective expectations, actual observations, conditions, evidence, defect disposition and relevant regression.

Acceptance: Every essential adverse scenario must have valid accepted evidence. A scripted teaching example is not actual qualification; unavailable required observation remains HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP15-R11 – Receiving interface and bounded output

New implementation detail aligned with ASTRA 32.5; 48.4–48.6; 63.6; 80.4

1. Deliver the bounded output to machining owner and independent characteristic acceptance function.

UNSET

2. Reconcile identity, configuration, conditions, unresolved limitations, technical eligibility, remaining duties and readable evidence.

UNSET

3. Identify the actual performer and the organisation retaining acceptance responsibility.

UNSET

Verify: Check the sending manifest, actual recipient access, acknowledgement, restrictions and remaining action owners.

Acceptance: Transfer is complete only after the necessary receiving acceptance is authentic. Sending a file, reconciling quantity or generating a certificate does not establish technical eligibility.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP15-R12 – Independent release and continuing validity

New implementation detail aligned with ASTRA 15.1–15.5; 16.1–16.6; 62.4–62.7; 80.1–80.6

1. Evaluate F02-CP15 independently within its declared object and outcome class.	UNSET
2. Reconcile the original R01–R06 controls with R07–R11, applicable source requirements, prospective parameters, findings and actual authority.	UNSET
3. Monitor the subject-specific changes stated in this profile and reopen affected conclusions when the evidence changes.	UNSET

Verify: Independently replay the final predicate and inspect scope, exclusions, competence, conflict clearance, findings closure and event history.

Acceptance: No positive grant, renewal or extension while any applicable mandatory child is FAIL, HOLD or UNSET. N/A requires independent scope justification; technical concessions remain separate from conformity.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP16 – Non-conventional machining

Non-conventional material-removal routes applied to defined materials, geometries and product duties. Qualification addresses the relevant thermal, electrical, chemical, erosion or other process effects without prescribing operational energy or chemical settings.

Claim boundary: No universal energy settings or process recipes are supplied; apparently correct geometry does not establish hidden material integrity.

F02-CP16-R01 – Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Define the removal mechanism, intended geometry and potentially affected surface or hidden properties in the actual application.	UNSET
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Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP16-R02 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Qualify material, equipment, programme, geometry and essential-variable combinations rather than infer suitability from a machine specification.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP16-R03 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Control source/condition of relevant media and consumables, equipment condition and authorised point-of-use instructions.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP16-R04 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Preserve actual process records and deviations; identify last valid state after interruption, abnormal indication or equipment failure.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP16-R05 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Verify required dimensions and surface/near-surface integrity through appropriate methods and post-processing evidence, with explicit detection limitations.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP16-R06 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Review changed method, media, material, geometry, software or finishing and define additional demonstration before scope extension.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP16-R07 — Mission and environment transfer

New implementation detail aligned with ASTRA 62.1–62.2; 63.2–63.6; 64.1–64.6

1. For non-conventional machining, define the qualified or evaluated envelope for non-conventional machining and affected surface layers.

UNSET

2. Compare the intended mission, material, site, configuration and phase/mode with the actual evidence.

UNSET

3. Identify material differences and allocate new demonstration before relying on heritage or terrestrial qualification.

UNSET

Verify: Inspect the difference matrix, environmental inputs, owner approvals and requirement-to-method links.

Acceptance: PASS only when every influential difference is either bounded by valid retained evidence or closed by accepted additional demonstration. Missing essential transfer evidence is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP16-R08 — Essential properties and observability

New implementation detail aligned with ASTRA 62.3–62.5; 77.1–77.6

1. Identify the failure and evidence risks specific to this subject: a dimensionally conforming feature can retain unverified altered-layer effects. UNSET

2. State which critical properties are directly observed, measured, inferred using a validated model or unknown. UNSET

3. Allocate separate child predicates for each hidden property and each essential protective function. UNSET

Verify: Review detection capability, raw observations, model validity and limitations against each claimed property.

Acceptance: A valid observation supports only its demonstrated property and domain. An unobservable essential condition is HOLD, not a favourable default or a proven product defect.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP16-R09 — Configuration and data identity

New implementation detail aligned with ASTRA 33.3–33.4; 56.1–56.5; 62.7; 78.7

1. Bind non-conventional machining and affected surface layers to actual configuration, controlled technical data, source/lot or record identity, equipment and software state, authorised performer and actual event time. UNSET

2. Preserve failed runs, changed objects and prior evidence through any digital transfer. UNSET

Verify: Replay one result from original records and verify event-time authority, method version and the evaluated-to-delivered relationship.

Acceptance: PASS requires reproducible identity and valid links for the actual claim. Wrong configuration, stale state, inaccessible evidence or an unverified substituted record is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP16-R10 — Subject-specific adverse demonstration

New implementation detail aligned with ASTRA 62.6–62.7; 77.5–77.8; Annex AP

1. Challenge the following mechanism through a safe authorised test, independent record review or controlled simulation appropriate to this subject: link actual process state and media to relevant surface and hidden-property verification. UNSET

2. Define the expected outcome before execution, retain original failures and repeat the failed case after correction. UNSET

Verify: Compare prospective expectations, actual observations, conditions, evidence, defect disposition and relevant regression.

Acceptance: Every essential adverse scenario must have valid accepted evidence. A scripted teaching example is not actual qualification; unavailable required observation remains HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP16-R11 – Receiving interface and bounded output

New implementation detail aligned with ASTRA 32.5; 48.4–48.6; 63.6; 80.4

1. Deliver the bounded output to process specialist and product integrity authority.	UNSET
2. Reconcile identity, configuration, conditions, unresolved limitations, technical eligibility, remaining duties and readable evidence.	UNSET
3. Identify the actual performer and the organisation retaining acceptance responsibility.	UNSET

Verify: Check the sending manifest, actual recipient access, acknowledgement, restrictions and remaining action owners.

Acceptance: Transfer is complete only after the necessary receiving acceptance is authentic. Sending a file, reconciling quantity or generating a certificate does not establish technical eligibility.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP16-R12 – Independent release and continuing validity

New implementation detail aligned with ASTRA 15.1–15.5; 16.1–16.6; 62.4–62.7; 80.1–80.6

1. Evaluate F02-CP16 independently within its declared object and outcome class.	UNSET
2. Reconcile the original R01–R06 controls with R07–R11, applicable source requirements, prospective parameters, findings and actual authority.	UNSET
3. Monitor the subject-specific changes stated in this profile and reopen affected conclusions when the evidence changes.	UNSET

Verify: Independently replay the final predicate and inspect scope, exclusions, competence, conflict clearance, findings closure and event history.

Acceptance: No positive grant, renewal or extension while any applicable mandatory child is FAIL, HOLD or UNSET. N/A requires independent scope justification; technical concessions remain separate from conformity.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP17 – Mechanical surface enhancement

Mechanical surface-treatment routes intended to alter specified surface or near-surface properties, including relevant media/tools, coverage, process control and consequential product performance.

Claim boundary: A qualified surface process does not by itself establish a universal fatigue-life improvement or unrestricted retreatment allowance.

F02-CP17-R01 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

 1. Define the intended surface change and the product property or duty it supports, together with the approved technical basis. UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP17-R02 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

 1. Qualify media/tool, equipment, coverage and essential-variable combinations for representative geometry and access. UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP17-R03 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

 1. Control consumable identity/condition and equipment/programme status, with suitable reference or process-monitoring checks. UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP17-R04 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Preserve actual treatment history and coverage evidence linked to article identity; an average process measure must not hide untreated critical locations.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP17-R05 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Verify relevant surface and consequential properties with appropriate methods, distinguishing process indicators from demonstrated service-life claims.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP17-R06 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Assess retreatment, changed substrate/media/tooling, geometry or downstream processing and obtain additional qualification where required.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP17-R07 — Mission and environment transfer

New implementation detail aligned with ASTRA 62.1–62.2; 63.2–63.6; 64.1–64.6

- | | |
|--|------------------------------------|
| 1. For mechanical surface enhancement, define the qualified or evaluated envelope for mechanical surface enhancement and local coverage. | <input type="text" value="UNSET"/> |
| 2. Compare the intended mission, material, site, configuration and phase/mode with the actual evidence. | <input type="text" value="UNSET"/> |
| 3. Identify material differences and allocate new demonstration before relying on heritage or terrestrial qualification. | <input type="text" value="UNSET"/> |

Verify: Inspect the difference matrix, environmental inputs, owner approvals and requirement-to-method links.

Acceptance: PASS only when every influential difference is either bounded by valid retained evidence or closed by accepted additional demonstration. Missing essential transfer evidence is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP17-R08 — Essential properties and observability

New implementation detail aligned with ASTRA 62.3–62.5; 77.1–77.6

- | | |
|--|------------------------------------|
| 1. Identify the failure and evidence risks specific to this subject: nominal equipment output can conceal incomplete coverage on difficult geometry. | <input type="text" value="UNSET"/> |
| 2. State which critical properties are directly observed, measured, inferred using a validated model or unknown. | <input type="text" value="UNSET"/> |
| 3. Allocate separate child predicates for each hidden property and each essential protective function. | <input type="text" value="UNSET"/> |

Verify: Review detection capability, raw observations, model validity and limitations against each claimed property.

Acceptance: A valid observation supports only its demonstrated property and domain. An unobservable essential condition is HOLD, not a favourable default or a proven product defect.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP17-R09 – Configuration and data identity

New implementation detail aligned with ASTRA 33.3–33.4; 56.1–56.5; 62.7; 78.7

1. Bind mechanical surface enhancement and local coverage to actual configuration, controlled technical data, source/lot or record identity, equipment and software state, authorised performer and actual event time.

UNSET

2. Preserve failed runs, changed objects and prior evidence through any digital transfer.

UNSET

Verify: Replay one result from original records and verify event-time authority, method version and the evaluated-to-delivered relationship.

Acceptance: PASS requires reproducible identity and valid links for the actual claim. Wrong configuration, stale state, inaccessible evidence or an unverified substituted record is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP17-R10 – Subject-specific adverse demonstration

New implementation detail aligned with ASTRA 62.6–62.7; 77.5–77.8; Annex AP

1. Challenge the following mechanism through a safe authorised test, independent record review or controlled simulation appropriate to this subject: compare local access/coverage evidence and process variables with the claimed fatigue or surface effect.

UNSET

2. Define the expected outcome before execution, retain original failures and repeat the failed case after correction.

UNSET

Verify: Compare prospective expectations, actual observations, conditions, evidence, defect disposition and relevant regression.

Acceptance: Every essential adverse scenario must have valid accepted evidence. A scripted teaching example is not actual qualification; unavailable required observation remains HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP17-R11 – Receiving interface and bounded output

New implementation detail aligned with ASTRA 32.5; 48.4–48.6; 63.6; 80.4

1. Deliver the bounded output to surface specialist and structural life authority.

UNSET

2. Reconcile identity, configuration, conditions, unresolved limitations, technical eligibility, remaining duties and readable evidence.

UNSET

3. Identify the actual performer and the organisation retaining acceptance responsibility.

UNSET

Verify: Check the sending manifest, actual recipient access, acknowledgement, restrictions and remaining action owners.

Acceptance: Transfer is complete only after the necessary receiving acceptance is authentic. Sending a file, reconciling quantity or generating a certificate does not establish technical eligibility.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP17-R12 – Independent release and continuing validity

New implementation detail aligned with ASTRA 15.1–15.5; 16.1–16.6; 62.4–62.7; 80.1–80.6

1. Evaluate F02-CP17 independently within its declared object and outcome class.	UNSET
2. Reconcile the original R01–R06 controls with R07–R11, applicable source requirements, prospective parameters, findings and actual authority.	UNSET
3. Monitor the subject-specific changes stated in this profile and reopen affected conclusions when the evidence changes.	UNSET

Verify: Independently replay the final predicate and inspect scope, exclusions, competence, conflict clearance, findings closure and event history.

Acceptance: No positive grant, renewal or extension while any applicable mandatory child is FAIL, HOLD or UNSET. N/A requires independent scope justification; technical concessions remain separate from conformity.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP18 – Electronics assembly

Assembly of electronic boards, modules and equipment with controlled parts, interconnections, coatings, handling and loaded configuration. Separate workmanship, electrical function, environmental suitability and installed-system acceptance.

Claim boundary: A successful bench test or workmanship inspection does not establish complete aircraft/spacecraft installation suitability.

F02-CP18-R01 – Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Verify parts authenticity, eligibility, condition and configuration, including actual programmed devices and controlled component substitutions.	UNSET
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Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP18-R02 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Qualify critical interconnection, bonding, coating and assembly operations with actual equipment, materials and competent personnel.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP18-R03 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Control handling, moisture/ESD-sensitive and contamination-related conditions appropriate to the components and application.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP18-R04 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Record concealed steps, material genealogy, process history and loaded software/logic identity against the delivered unit.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP18-R05 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Verify workmanship and functional performance with suitable methods and keep environmental/installation suitability as separately demonstrated characteristics.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP18-R06 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Preserve rework and failure history and assess changed components, processes, software or testing before accepting the altered assembly.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP18-R07 — Mission and environment transfer

New implementation detail aligned with ASTRA 62.1–62.2; 63.2–63.6; 64.1–64.6

1. For electronics assembly, define the qualified or evaluated envelope for electronics assembly and loaded digital configuration.

UNSET

2. Compare the intended mission, material, site, configuration and phase/mode with the actual evidence.

UNSET

3. Identify material differences and allocate new demonstration before relying on heritage or terrestrial qualification.

UNSET

Verify: Inspect the difference matrix, environmental inputs, owner approvals and requirement-to-method links.

Acceptance: PASS only when every influential difference is either bounded by valid retained evidence or closed by accepted additional demonstration. Missing essential transfer evidence is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP18-R08 — Essential properties and observability

New implementation detail aligned with ASTRA 62.3–62.5; 77.1–77.6

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|--|-------|
| 1. Identify the failure and evidence risks specific to this subject: a passing board test can use different logic or parameters from the delivered assembly. | UNSET |
| 2. State which critical properties are directly observed, measured, inferred using a validated model or unknown. | UNSET |
| 3. Allocate separate child predicates for each hidden property and each essential protective function. | UNSET |

Verify: Review detection capability, raw observations, model validity and limitations against each claimed property.

Acceptance: A valid observation supports only its demonstrated property and domain. An unobservable essential condition is HOLD, not a favourable default or a proven product defect.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP18-R09 — Configuration and data identity

New implementation detail aligned with ASTRA 33.3–33.4; 56.1–56.5; 62.7; 78.7

- | | |
|--|-------|
| 1. Bind electronics assembly and loaded digital configuration to actual configuration, controlled technical data, source/lot or record identity, equipment and software state, authorised performer and actual event time. | UNSET |
| 2. Preserve failed runs, changed objects and prior evidence through any digital transfer. | UNSET |

Verify: Replay one result from original records and verify event-time authority, method version and the evaluated-to-delivered relationship.

Acceptance: PASS requires reproducible identity and valid links for the actual claim. Wrong configuration, stale state, inaccessible evidence or an unverified substituted record is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP18-R10 — Subject-specific adverse demonstration

New implementation detail aligned with ASTRA 62.6–62.7; 77.5–77.8; Annex AP

- | | |
|---|-------|
| 1. Challenge the following mechanism through a safe authorised test, independent record review or controlled simulation appropriate to this subject: reconcile component genealogy, interconnections, rework and verified loaded target identity. | UNSET |
| 2. Define the expected outcome before execution, retain original failures and repeat the failed case after correction. | UNSET |

Verify: Compare prospective expectations, actual observations, conditions, evidence, defect disposition and relevant regression.

Acceptance: Every essential adverse scenario must have valid accepted evidence. A scripted teaching example is not actual qualification; unavailable required observation remains HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP18-R11 – Receiving interface and bounded output

New implementation detail aligned with ASTRA 32.5; 48.4–48.6; 63.6; 80.4

1. Deliver the bounded output to electronics authority and integration test owner.	UNSET
2. Reconcile identity, configuration, conditions, unresolved limitations, technical eligibility, remaining duties and readable evidence.	UNSET
3. Identify the actual performer and the organisation retaining acceptance responsibility.	UNSET

Verify: Check the sending manifest, actual recipient access, acknowledgement, restrictions and remaining action owners.

Acceptance: Transfer is complete only after the necessary receiving acceptance is authentic. Sending a file, reconciling quantity or generating a certificate does not establish technical eligibility.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP18-R12 – Independent release and continuing validity

New implementation detail aligned with ASTRA 15.1–15.5; 16.1–16.6; 62.4–62.7; 80.1–80.6

1. Evaluate F02-CP18 independently within its declared object and outcome class.	UNSET
2. Reconcile the original R01–R06 controls with R07–R11, applicable source requirements, prospective parameters, findings and actual authority.	UNSET
3. Monitor the subject-specific changes stated in this profile and reopen affected conclusions when the evidence changes.	UNSET

Verify: Independently replay the final predicate and inspect scope, exclusions, competence, conflict clearance, findings closure and event history.

Acceptance: No positive grant, renewal or extension while any applicable mandatory child is FAIL, HOLD or UNSET. N/A requires independent scope justification; technical concessions remain separate from conformity.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP19 – Wire and harness assembly

Fabrication and assembly of circuits, wires, cables, connectors, shielding, terminations and harnesses for defined electrical and installation functions. Preserve circuit identity and final routing/protective configuration.

Claim boundary: Continuity alone does not establish insulation, shielding, grounding, mechanical integrity or suitability for every installation.

F02-CP19-R01 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Control circuit identity, pin or connection definitions, component eligibility and applicable drawing/configuration before assembly.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP19-R02 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Verify wire, cable, connector, contact and protective-material source/condition and trace them to the actual harness.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP19-R03 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Qualify termination and critical assembly methods with suitable tools, personnel and representative verification of required properties.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP19-R04 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Record concealed connections, routing, identification, strain/protection and shielding/bonding features before they become inaccessible.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP19-R05 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Perform required electrical and functional checks under a defined method, configuration and decision rule; retain original readings and test limitations.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP19-R06 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Assess repair, rerouting, component substitution, tooling or test changes and preserve the relationship between bench and installed evidence.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP19-R07 — Mission and environment transfer

New implementation detail aligned with ASTRA 62.1–62.2; 63.2–63.6; 64.1–64.6

- | | |
|---|------------------------------------|
| 1. For wire and harness assembly, define the qualified or evaluated envelope for wire and harness circuit identity, terminations and shielding. | <input type="text" value="UNSET"/> |
| 2. Compare the intended mission, material, site, configuration and phase/mode with the actual evidence. | <input type="text" value="UNSET"/> |
| 3. Identify material differences and allocate new demonstration before relying on heritage or terrestrial qualification. | <input type="text" value="UNSET"/> |

Verify: Inspect the difference matrix, environmental inputs, owner approvals and requirement-to-method links.

Acceptance: PASS only when every influential difference is either bounded by valid retained evidence or closed by accepted additional demonstration. Missing essential transfer evidence is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP19-R08 — Essential properties and observability

New implementation detail aligned with ASTRA 62.3–62.5; 77.1–77.6

- | | |
|---|------------------------------------|
| 1. Identify the failure and evidence risks specific to this subject: continuity alone can conceal wrong pin assignment or inadequate installed bonding/shielding. | <input type="text" value="UNSET"/> |
| 2. State which critical properties are directly observed, measured, inferred using a validated model or unknown. | <input type="text" value="UNSET"/> |
| 3. Allocate separate child predicates for each hidden property and each essential protective function. | <input type="text" value="UNSET"/> |

Verify: Review detection capability, raw observations, model validity and limitations against each claimed property.

Acceptance: A valid observation supports only its demonstrated property and domain. An unobservable essential condition is HOLD, not a favourable default or a proven product defect.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP19-R09 – Configuration and data identity

New implementation detail aligned with ASTRA 33.3–33.4; 56.1–56.5; 62.7; 78.7

1. Bind wire and harness circuit identity, terminations and shielding to actual configuration, controlled technical data, source/lot or record identity, equipment and software state, authorised performer and actual event time. UNSET

2. Preserve failed runs, changed objects and prior evidence through any digital transfer. UNSET

Verify: Replay one result from original records and verify event-time authority, method version and the evaluated-to-delivered relationship.

Acceptance: PASS requires reproducible identity and valid links for the actual claim. Wrong configuration, stale state, inaccessible evidence or an unverified substituted record is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP19-R10 – Subject-specific adverse demonstration

New implementation detail aligned with ASTRA 62.6–62.7; 77.5–77.8; Annex AP

1. Challenge the following mechanism through a safe authorised test, independent record review or controlled simulation appropriate to this subject: trace drawing-to-pin identity, termination evidence and installation-relevant electrical predicates. UNSET

2. Define the expected outcome before execution, retain original failures and repeat the failed case after correction. UNSET

Verify: Compare prospective expectations, actual observations, conditions, evidence, defect disposition and relevant regression.

Acceptance: Every essential adverse scenario must have valid accepted evidence. A scripted teaching example is not actual qualification; unavailable required observation remains HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP19-R11 – Receiving interface and bounded output

New implementation detail aligned with ASTRA 32.5; 48.4–48.6; 63.6; 80.4

1. Deliver the bounded output to harness authority and installed-system integrator. UNSET

2. Reconcile identity, configuration, conditions, unresolved limitations, technical eligibility, remaining duties and readable evidence. UNSET

3. Identify the actual performer and the organisation retaining acceptance responsibility. UNSET

Verify: Check the sending manifest, actual recipient access, acknowledgement, restrictions and remaining action owners.

Acceptance: Transfer is complete only after the necessary receiving acceptance is authentic. Sending a file, reconciling quantity or generating a certificate does not establish technical eligibility.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP19-R12 – Independent release and continuing validity

New implementation detail aligned with ASTRA 15.1–15.5; 16.1–16.6; 62.4–62.7; 80.1–80.6

1. Evaluate F02-CP19 independently within its declared object and outcome class.	UNSET
2. Reconcile the original R01–R06 controls with R07–R11, applicable source requirements, prospective parameters, findings and actual authority.	UNSET
3. Monitor the subject-specific changes stated in this profile and reopen affected conclusions when the evidence changes.	UNSET

Verify: Independently replay the final predicate and inspect scope, exclusions, competence, conflict clearance, findings closure and event history.

Acceptance: No positive grant, renewal or extension while any applicable mandatory child is FAIL, HOLD or UNSET. N/A requires independent scope justification; technical concessions remain separate from conformity.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP20 – Optical assembly

Assembly of optical components, sensors or subsystems requiring controlled identity, alignment, cleanliness, bonding/mounting and measured function in a defined environment.

Claim boundary: Assembly qualification is configuration- and environment-specific and does not establish every optical or mission-performance characteristic.

F02-CP20-R01 – Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Identify optical components, coatings, surfaces and configuration together with the intended measured or transmitted function.	UNSET
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Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP20-R02 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Control handling, cleanliness, storage and exposure of sensitive surfaces with a defined acceptance and preservation basis.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP20-R03 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Qualify mounting, bonding, alignment and related equipment/methods for representative configuration and environmental effects.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP20-R04 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Retain actual assembly, alignment, material and concealed-step records, including reference systems and instrumentation status.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP20-R05 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Measure specified optical and functional performance using suitable uncertainty, reference conditions and range; visual clarity is not a complete technical result.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP20-R06 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Review component, adhesive, surface, alignment, environment or verification changes and preserve limits on inherited qualification evidence.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP20-R07 — Mission and environment transfer

New implementation detail aligned with ASTRA 62.1–62.2; 63.2–63.6; 64.1–64.6

1. For optical assembly, define the qualified or evaluated envelope for optical assembly, alignment and contamination state.

UNSET

2. Compare the intended mission, material, site, configuration and phase/mode with the actual evidence.

UNSET

3. Identify material differences and allocate new demonstration before relying on heritage or terrestrial qualification.

UNSET

Verify: Inspect the difference matrix, environmental inputs, owner approvals and requirement-to-method links.

Acceptance: PASS only when every influential difference is either bounded by valid retained evidence or closed by accepted additional demonstration. Missing essential transfer evidence is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP20-R08 — Essential properties and observability

New implementation detail aligned with ASTRA 62.3–62.5; 77.1–77.6

1. Identify the failure and evidence risks specific to this subject: an alignment measurement can lose relevance after handling or a changed processing correction. UNSET

2. State which critical properties are directly observed, measured, inferred using a validated model or unknown. UNSET

3. Allocate separate child predicates for each hidden property and each essential protective function. UNSET

Verify: Review detection capability, raw observations, model validity and limitations against each claimed property.

Acceptance: A valid observation supports only its demonstrated property and domain. An unobservable essential condition is HOLD, not a favourable default or a proven product defect.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP20-R09 — Configuration and data identity

New implementation detail aligned with ASTRA 33.3–33.4; 56.1–56.5; 62.7; 78.7

1. Bind optical assembly, alignment and contamination state to actual configuration, controlled technical data, source/lot or record identity, equipment and software state, authorised performer and actual event time. UNSET

2. Preserve failed runs, changed objects and prior evidence through any digital transfer. UNSET

Verify: Replay one result from original records and verify event-time authority, method version and the evaluated-to-delivered relationship.

Acceptance: PASS requires reproducible identity and valid links for the actual claim. Wrong configuration, stale state, inaccessible evidence or an unverified substituted record is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP20-R10 — Subject-specific adverse demonstration

New implementation detail aligned with ASTRA 62.6–62.7; 77.5–77.8; Annex AP

1. Challenge the following mechanism through a safe authorised test, independent record review or controlled simulation appropriate to this subject: retain optical identity, cleanliness, alignment basis and post-handover functional verification. UNSET

2. Define the expected outcome before execution, retain original failures and repeat the failed case after correction. UNSET

Verify: Compare prospective expectations, actual observations, conditions, evidence, defect disposition and relevant regression.

Acceptance: Every essential adverse scenario must have valid accepted evidence. A scripted teaching example is not actual qualification; unavailable required observation remains HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP20-R11 – Receiving interface and bounded output

New implementation detail aligned with ASTRA 32.5; 48.4–48.6; 63.6; 80.4

1. Deliver the bounded output to optical technical authority and payload acceptance owner.	UNSET
2. Reconcile identity, configuration, conditions, unresolved limitations, technical eligibility, remaining duties and readable evidence.	UNSET
3. Identify the actual performer and the organisation retaining acceptance responsibility.	UNSET

Verify: Check the sending manifest, actual recipient access, acknowledgement, restrictions and remaining action owners.

Acceptance: Transfer is complete only after the necessary receiving acceptance is authentic. Sending a file, reconciling quantity or generating a certificate does not establish technical eligibility.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP20-R12 – Independent release and continuing validity

New implementation detail aligned with ASTRA 15.1–15.5; 16.1–16.6; 62.4–62.7; 80.1–80.6

1. Evaluate F02-CP20 independently within its declared object and outcome class.	UNSET
2. Reconcile the original R01–R06 controls with R07–R11, applicable source requirements, prospective parameters, findings and actual authority.	UNSET
3. Monitor the subject-specific changes stated in this profile and reopen affected conclusions when the evidence changes.	UNSET

Verify: Independently replay the final predicate and inspect scope, exclusions, competence, conflict clearance, findings closure and event history.

Acceptance: No positive grant, renewal or extension while any applicable mandatory child is FAIL, HOLD or UNSET. N/A requires independent scope justification; technical concessions remain separate from conformity.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP21 – Critical mechanical assembly

Assembly of mechanically critical products with defined fit, fastening, alignment, lubrication, interfaces and protective features. Qualification concerns the complete sequence and hidden characteristics supporting the actual function.

Claim boundary: A completed checklist or qualified torque tool does not prove that every hidden assembly requirement was satisfied.

F02-CP21-R01 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Freeze the assembly design and required interfaces, identifying critical components, concealed features and authorised technical acceptance roles.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP21-R02 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Verify component source, condition, life status and compatibility before assembly; do not treat a matching external shape as technical equivalence.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP21-R03 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Qualify tools, fixtures, sequence and essential assembly controls for the required fit, alignment and fastening characteristics.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP21-R04 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Record actual concealed steps and independent checks where required, including interruptions, temporary devices and final restoration.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP21-R05 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Verify required mechanical and functional performance on the final configuration; separate individual component acceptance from system integration.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP21-R06 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Control disassembly, repair, replacement or sequence changes with traceable history and necessary renewed inspection or qualification.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP21-R07 — Mission and environment transfer

New implementation detail aligned with ASTRA 62.1–62.2; 63.2–63.6; 64.1–64.6

- | | |
|--|------------------------------------|
| 1. For critical mechanical assembly, define the qualified or evaluated envelope for critical mechanical assembly and concealed operations. | <input type="text" value="UNSET"/> |
| 2. Compare the intended mission, material, site, configuration and phase/mode with the actual evidence. | <input type="text" value="UNSET"/> |
| 3. Identify material differences and allocate new demonstration before relying on heritage or terrestrial qualification. | <input type="text" value="UNSET"/> |

Verify: Inspect the difference matrix, environmental inputs, owner approvals and requirement-to-method links.

Acceptance: PASS only when every influential difference is either bounded by valid retained evidence or closed by accepted additional demonstration. Missing essential transfer evidence is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP21-R08 — Essential properties and observability

New implementation detail aligned with ASTRA 62.3–62.5; 77.1–77.6

- | | |
|---|------------------------------------|
| 1. Identify the failure and evidence risks specific to this subject: final function can conceal a missing independent check at an irreversible assembly step. | <input type="text" value="UNSET"/> |
| 2. State which critical properties are directly observed, measured, inferred using a validated model or unknown. | <input type="text" value="UNSET"/> |
| 3. Allocate separate child predicates for each hidden property and each essential protective function. | <input type="text" value="UNSET"/> |

Verify: Review detection capability, raw observations, model validity and limitations against each claimed property.

Acceptance: A valid observation supports only its demonstrated property and domain. An unobservable essential condition is HOLD, not a favourable default or a proven product defect.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP21-R09 – Configuration and data identity

New implementation detail aligned with ASTRA 33.3–33.4; 56.1–56.5; 62.7; 78.7

1. Bind critical mechanical assembly and concealed operations to actual configuration, controlled technical data, source/lot or record identity, equipment and software state, authorised performer and actual event time. UNSET

2. Preserve failed runs, changed objects and prior evidence through any digital transfer. UNSET

Verify: Replay one result from original records and verify event-time authority, method version and the evaluated-to-delivered relationship.

Acceptance: PASS requires reproducible identity and valid links for the actual claim. Wrong configuration, stale state, inaccessible evidence or an unverified substituted record is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP21-R10 – Subject-specific adverse demonstration

New implementation detail aligned with ASTRA 62.6–62.7; 77.5–77.8; Annex AP

1. Challenge the following mechanism through a safe authorised test, independent record review or controlled simulation appropriate to this subject: trace critical fits, fastener/tool identity, concealed-step evidence and restoration of protections. UNSET

2. Define the expected outcome before execution, retain original failures and repeat the failed case after correction. UNSET

Verify: Compare prospective expectations, actual observations, conditions, evidence, defect disposition and relevant regression.

Acceptance: Every essential adverse scenario must have valid accepted evidence. A scripted teaching example is not actual qualification; unavailable required observation remains HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP21-R11 – Receiving interface and bounded output

New implementation detail aligned with ASTRA 32.5; 48.4–48.6; 63.6; 80.4

1. Deliver the bounded output to assembly authority and independent product release function. UNSET

2. Reconcile identity, configuration, conditions, unresolved limitations, technical eligibility, remaining duties and readable evidence. UNSET

3. Identify the actual performer and the organisation retaining acceptance responsibility. UNSET

Verify: Check the sending manifest, actual recipient access, acknowledgement, restrictions and remaining action owners.

Acceptance: Transfer is complete only after the necessary receiving acceptance is authentic. Sending a file, reconciling quantity or generating a certificate does not establish technical eligibility.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP21-R12 – Independent release and continuing validity

New implementation detail aligned with ASTRA 15.1–15.5; 16.1–16.6; 62.4–62.7; 80.1–80.6

1. Evaluate F02-CP21 independently within its declared object and outcome class.	UNSET
2. Reconcile the original R01–R06 controls with R07–R11, applicable source requirements, prospective parameters, findings and actual authority.	UNSET
3. Monitor the subject-specific changes stated in this profile and reopen affected conclusions when the evidence changes.	UNSET

Verify: Independently replay the final predicate and inspect scope, exclusions, competence, conflict clearance, findings closure and event history.

Acceptance: No positive grant, renewal or extension while any applicable mandatory child is FAIL, HOLD or UNSET. N/A requires independent scope justification; technical concessions remain separate from conformity.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP22 – Cleanliness and contamination-sensitive processing

Cleaning, handling, conditioning, controlled-environment processing and packaging of contamination-sensitive materials and products.

Acceptance relates to defined particulate, molecular or other relevant contamination criteria and preservation of that condition.

Claim boundary: Cleanliness acceptance is limited to the defined contaminants, surfaces, method and time/condition boundary.

F02-CP22-R01 – Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Define the sensitive function and applicable contamination type, criterion, units and technical basis; the word clean is not an acceptance limit.	UNSET
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Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP22-R02 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Qualify cleaning and handling for the actual material, geometry and contaminant mechanisms without damaging required properties.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP22-R03 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Control facility conditions, consumables, equipment and incompatible activities that can alter the accepted condition.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP22-R04 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Validate sample/collection and measurement methods, including blanks, recovery and relevant detection/uncertainty limits.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP22-R05 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Preserve actual exposure, handling, cleaning and acceptance history through transport, storage, integration and packaging.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP22-R06 — Retained subject control

Retained operating subject control; latest core 18; 62 and Annex AL.

1. Review contamination excursions, new materials, methods, facilities or packaging and verify recleaning/acceptance before restoring the affected condition.

UNSET

Verify: Trace each independently testable condition to its actual criterion, method, evidence, responsible performer and independent reviewer.

Acceptance: Every mandatory child predicate is satisfied by valid evidence. Unresolved applicability or evidence is HOLD; demonstrated unmet criteria are FAIL.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP22-R07 — Mission and environment transfer

New implementation detail aligned with ASTRA 62.1–62.2; 63.2–63.6; 64.1–64.6

1. For cleanliness and contamination-sensitive processing, define the qualified or evaluated envelope for contamination-sensitive processing and preserved condition.

UNSET

2. Compare the intended mission, material, site, configuration and phase/mode with the actual evidence.

UNSET

3. Identify material differences and allocate new demonstration before relying on heritage or terrestrial qualification.

UNSET

Verify: Inspect the difference matrix, environmental inputs, owner approvals and requirement-to-method links.

Acceptance: PASS only when every influential difference is either bounded by valid retained evidence or closed by accepted additional demonstration. Missing essential transfer evidence is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP22-R08 — Essential properties and observability

New implementation detail aligned with ASTRA 62.3–62.5; 77.1–77.6

- | | |
|--|-------|
| 1. Identify the failure and evidence risks specific to this subject: a generic cleanliness statement can use the wrong species, particle range or sampling location. | UNSET |
| 2. State which critical properties are directly observed, measured, inferred using a validated model or unknown. | UNSET |
| 3. Allocate separate child predicates for each hidden property and each essential protective function. | UNSET |

Verify: Review detection capability, raw observations, model validity and limitations against each claimed property.

Acceptance: A valid observation supports only its demonstrated property and domain. An unobservable essential condition is HOLD, not a favourable default or a proven product defect.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP22-R09 — Configuration and data identity

New implementation detail aligned with ASTRA 33.3–33.4; 56.1–56.5; 62.7; 78.7

- | | |
|---|-------|
| 1. Bind contamination-sensitive processing and preserved condition to actual configuration, controlled technical data, source/lot or record identity, equipment and software state, authorised performer and actual event time. | UNSET |
| 2. Preserve failed runs, changed objects and prior evidence through any digital transfer. | UNSET |

Verify: Replay one result from original records and verify event-time authority, method version and the evaluated-to-delivered relationship.

Acceptance: PASS requires reproducible identity and valid links for the actual claim. Wrong configuration, stale state, inaccessible evidence or an unverified substituted record is HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP22-R10 — Subject-specific adverse demonstration

New implementation detail aligned with ASTRA 62.6–62.7; 77.5–77.8; Annex AP

- | | |
|--|-------|
| 1. Challenge the following mechanism through a safe authorised test, independent record review or controlled simulation appropriate to this subject: challenge actual limit, detection capability, blanks, exposure history and protected packaging. | UNSET |
| 2. Define the expected outcome before execution, retain original failures and repeat the failed case after correction. | UNSET |

Verify: Compare prospective expectations, actual observations, conditions, evidence, defect disposition and relevant regression.

Acceptance: Every essential adverse scenario must have valid accepted evidence. A scripted teaching example is not actual qualification; unavailable required observation remains HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP22-R11 – Receiving interface and bounded output

New implementation detail aligned with ASTRA 32.5; 48.4–48.6; 63.6; 80.4

1. Deliver the bounded output to cleanliness authority and accepting sensitive-system owner.	UNSET
2. Reconcile identity, configuration, conditions, unresolved limitations, technical eligibility, remaining duties and readable evidence.	UNSET
3. Identify the actual performer and the organisation retaining acceptance responsibility.	UNSET

Verify: Check the sending manifest, actual recipient access, acknowledgement, restrictions and remaining action owners.

Acceptance: Transfer is complete only after the necessary receiving acceptance is authentic. Sending a file, reconciling quantity or generating a certificate does not establish technical eligibility.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

F02-CP22-R12 – Independent release and continuing validity

New implementation detail aligned with ASTRA 15.1–15.5; 16.1–16.6; 62.4–62.7; 80.1–80.6

1. Evaluate F02-CP22 independently within its declared object and outcome class.	UNSET
2. Reconcile the original R01–R06 controls with R07–R11, applicable source requirements, prospective parameters, findings and actual authority.	UNSET
3. Monitor the subject-specific changes stated in this profile and reopen affected conclusions when the evidence changes.	UNSET

Verify: Independently replay the final predicate and inspect scope, exclusions, competence, conflict clearance, findings closure and event history.

Acceptance: No positive grant, renewal or extension while any applicable mandatory child is FAIL, HOLD or UNSET. N/A requires independent scope justification; technical concessions remain separate from conformity.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

5 Triggered domain and parameter selection

AK01 – Terrestrial engineering and supply

ASTRA Annex AK; apply when relevant to actual family responsibility.

1. Actual site, source, configuration, delegated responsibilities and released technical data.

UNSET

Verify: Check domain, phase/mode, exact object and source-to-receiver responsibility.

Acceptance: Every delivered characteristic and essential supplier interface is traceable to accepted evidence.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

AK04 – Launch and deployment interfaces

ASTRA Annex AK; apply when relevant to actual family responsibility.

1. Article pedigree, qualification envelope, interfaces and distinct readiness/permission decisions.

UNSET

Verify: Check domain, phase/mode, exact object and source-to-receiver responsibility.

Acceptance: Every required integration and protective condition is met before the actual commitment.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

AK05 – Reusable launch and return articles

ASTRA Annex AK; apply when relevant to actual family responsibility.

1. Serial identity, use history, inspection detectability, qualified repair and current limits.

UNSET

Verify: Check domain, phase/mode, exact object and source-to-receiver responsibility.

Acceptance: Reuse is based on actual history and accepted condition, never a reset life.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

AK06 – Low Earth orbit systems

ASTRA Annex AK; apply when relevant to actual family responsibility.

1. Actual orbit and duration, drag/atmosphere, atomic oxygen where material, radiation and terminal duties.

UNSET

Verify: Check domain, phase/mode, exact object and source-to-receiver responsibility.

Acceptance: Environment-specific qualification and end-of-life capability support the bounded mission.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

AK07 – Medium, geosynchronous and high Earth orbits

ASTRA Annex AK; apply when relevant to actual family responsibility.

1. Actual geometry, radiation/charging, links, clocks, service bounds and disposal assumptions.

UNSET

Verify: Check domain, phase/mode, exact object and source-to-receiver responsibility.

Acceptance: No lower-orbit or nominal-link evidence automatically covers a different environment.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

AK09 – Cislunar and libration-region systems

ASTRA Annex AK; apply when relevant to actual family responsibility.

1. Reference frames, communication constraints, resources, users and external support.

UNSET

Verify: Check domain, phase/mode, exact object and source-to-receiver responsibility.

Acceptance: The exact operating domain and service dependencies are technically complete.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

AK12 – Cooperative docking and servicing

ASTRA Annex AK; apply when relevant to actual family responsibility.

1. Consent, actual assets, relative-state evidence, compatible interfaces and protected states.

UNSET

Verify: Check domain, phase/mode, exact object and source-to-receiver responsibility.

Acceptance: All essential interface and completion states are independently supported.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

AK13 – On-orbit assembly and manufacture

ASTRA Annex AK; apply when relevant to actual family responsibility.

1. Inputs, essential variables, environment, sensor/model validity and product acceptance.

UNSET

Verify: Check domain, phase/mode, exact object and source-to-receiver responsibility.

Acceptance: Process execution is not substituted for evidence of required output properties.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

AK16 – Lunar surface systems

ASTRA Annex AK; apply when relevant to actual family responsibility.

1. Dust, local terrain, illumination, temperature, gravity, radiation and communication assumptions.

UNSET

Verify: Check domain, phase/mode, exact object and source-to-receiver responsibility.

Acceptance: Destination-specific evidence bounds the actual region, phase and operating mode.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

AK17 – Planetary landers and surface vehicles

ASTRA Annex AK; apply when relevant to actual family responsibility.

1. Environment/region, terrain, access, autonomy, supportability and contamination control.

UNSET

Verify: Check domain, phase/mode, exact object and source-to-receiver responsibility.

Acceptance: Terrestrial analogy is justified; unknown critical surface conditions remain restricted.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

AK18 – Atmospheric and buoyant exploration

ASTRA Annex AK; apply when relevant to actual family responsibility.

1. Atmosphere, pressure, chemistry, thermal conditions, flight/buoyancy functions and terminal state.

UNSET

Verify: Check domain, phase/mode, exact object and source-to-receiver responsibility.

Acceptance: All relevant environment-specific structural and functional predicates pass.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

AK19 – Small-body and comet operations

ASTRA Annex AK; apply when relevant to actual family responsibility.

1. Body uncertainty, surface interaction, contamination, autonomy and sample custody.

UNSET

Verify: Check domain, phase/mode, exact object and source-to-receiver responsibility.

Acceptance: Uncertain body/interaction properties are not treated as established terrestrial conditions.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

AK20 — Subsurface and ocean-world exploration

ASTRA Annex AK; apply when relevant to actual family responsibility.

1. Pressure/chemistry, thermal state, containment, access, communication and protection duties.

UNSET

Verify: Check domain, phase/mode, exact object and source-to-receiver responsibility.

Acceptance: Specialist boundary and contamination evidence precedes dependent use.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

AK26 — Planetary protection and sample return

ASTRA Annex AK; apply when relevant to actual family responsibility.

1. Destination, pathway, applicable protection duties, containment, custody and receiving readiness.

UNSET

Verify: Check domain, phase/mode, exact object and source-to-receiver responsibility.

Acceptance: No dependent commitment precedes complete protection and receiving evidence.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

AK27 — Resource utilisation and remote processing

ASTRA Annex AK; apply when relevant to actual family responsibility.

1. Input variability, environmental qualification, quantity/quality, rights and disposition.

UNSET

Verify: Check domain, phase/mode, exact object and source-to-receiver responsibility.

Acceptance: Resource yield, product eligibility and permission remain distinct.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

AK28 — Space logistics and distributed supply

ASTRA Annex AK; apply when relevant to actual family responsibility.

1. Actual items, life, environment, compatible interfaces and arrival/acceptance states.

UNSET

Verify: Check domain, phase/mode, exact object and source-to-receiver responsibility.

Acceptance: Only physically or otherwise validly confirmed accepted usable inventory supports mission budgets.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

AK29 — Specialised energy infrastructure

ASTRA Annex AK; apply when relevant to actual family responsibility.

1. Architecture, margins, protection, specialist permissions, heat rejection and terminal inventory.

UNSET

Verify: Check domain, phase/mode, exact object and source-to-receiver responsibility.

Acceptance: Performance never substitutes for safety, source authority or terminal accountability.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

AK31 — Digital and autonomous space systems

ASTRA Annex AK; apply when relevant to actual family responsibility.

1. Intended use, domain, source/build/model identity, data, validation, human authority and support.

UNSET

Verify: Check domain, phase/mode, exact object and source-to-receiver responsibility.

Acceptance: All essential behaviours and prohibited transitions are verified for the actual deployment.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

AK32 – Retirement and long-term stewardship

ASTRA Annex AK; apply when relevant to actual family responsibility.

1. Terminal criteria, actual evidence, unknowns, remaining inventories, notifications and custody.

UNSET

Verify: Check domain, phase/mode, exact object and source-to-receiver responsibility.

Acceptance: Final-state claims are truthful and every unresolved duty has an accepted owner.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

P01 – Mission and scope

ASTRA Annex AO; P01

1. Legal owner, performer, family/module, object, domain, configuration, location, duration and modes.

UNSET

Verify: Review prospective derivation: Scope tuple and mission concept; approved applicability matrix.

Acceptance: No undefined essential object, duty, phase or exclusion.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

P02 – Environment and exposure

ASTRA Annex AO; P02

1. Quantity, spatial/temporal boundary, distribution or bound, source/model, uncertainty and coupled effects.

UNSET

Verify: Review prospective derivation: Mission environment baseline and qualified specialist rationale.

Acceptance: Selected conditions bound each claimed use; unknown critical mechanisms remain HOLD.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

P03 — Requirements and acceptance

ASTRA Annex AO; P03

1. Stable ID, owner, characteristic, units, bound inclusivity, predicate, observation and essential-step marker.

UNSET

Verify: Review prospective derivation: Requirement baseline and Annex AL decision rule.

Acceptance: Every condition is evaluable before observations are judged.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

P05 — Materials and process qualification

ASTRA Annex AO; P05

1. Material type/condition, geometry, sources, variables, qualified window, machine/tool state and hidden properties.

UNSET

Verify: Review prospective derivation: Actual representative qualification; lot/build genealogy.

Acceptance: All influential variables and required product properties are supported.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

P06 — Test article and fixtures

ASTRA Annex AO; P06

1. Article pedigree, differences from delivered object, mounting, boundary conditions, operating state and exposure history.

UNSET

Verify: Review prospective derivation: Approved representativeness and cumulative-test analysis.

Acceptance: No material difference or prior damage invalidates the intended inference.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

P07 – Measurement and uncertainty

ASTRA Annex AO; P07

1. Measurand, instrument/range, corrections, sensitivity, covariance, coverage, time/space sampling and calibration.

UNSET

Verify: Review prospective derivation: Complete measurement model; valid raw data.

Acceptance: Uncertainty and detection capability are fit for the approved decision rule.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

P08 – Structure, life and mechanisms

ASTRA Annex AO; P08

1. Loads, allowables, factors, life, geometry, material state, mechanisms, detectability and approved reserve.

UNSET

Verify: Review prospective derivation: Qualified structural/life model and representative evidence.

Acceptance: Each prospectively defined margin and essential mechanism predicate passes.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

P09 – Power and energy

ASTRA Annex AO; P09

1. End-of-life generation, peak load, usable storage, efficiency, outage/eclipses, mode durations and terminal reserve.

UNSET

Verify: Review prospective derivation: Configuration-specific phase budget and protection tests.

Acceptance: Power and energy limits both pass without duplicate reserve credit.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

P10 – Thermal and environmental control

ASTRA Annex AO; P10

1. Node/location, mode, temperatures/gradients, heat inputs, sink/view factors, properties, uncertainty and transient cases.

UNSET

Verify: Review prospective derivation: Correlated thermal model and applicable environment tests.

Acceptance: All required hot, cold and transition conditions meet approved limits.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

P13 – Contamination and samples

ASTRA Annex AO; P13

1. Relevant substances/particles, pathway, limit, method/detection, custody, cleanliness, containment and receiving.

UNSET

Verify: Review prospective derivation: Mission-specific technical/protection basis.

Acceptance: Required integrity and scientific cleanliness are demonstrated for the actual sample/use.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

P14 – Software, AI and models

ASTRA Annex AO; P14

1. Purpose/domain, source/build/weights/data, dependencies, target, errors, uncertainty, prohibited behaviour and change limits.

UNSET

Verify: Review prospective derivation: Independent verification and model/use validation.

Acceptance: Essential scenarios and target conditions pass; experimental outputs remain separate.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

P17 – Logistics and environmental claims

ASTRA Annex AO; P17

1. Identity, amount, units, condition, losses, allocation, lifecycle boundary, factor provenance and exclusive attributes.

UNSET

Verify: Review prospective derivation: Reconciled custody/quantity records and separate suitability/statement evaluation.

Acceptance: Quantity and claim integrity pass independently of technical eligibility.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

P18 – Decision, continuity and terminal duties

ASTRA Annex AO; P18

1. Closed findings, reviewer competence, independence, authority, status clocks, final-state criteria, custody and open obligations.

UNSET

Verify: Review prospective derivation: Authenticated decisions and verified terminal/transfer evidence.

Acceptance: Every mandatory gate is complete; incomplete or unknown terminal state remains explicit.

Evidence / method / parameter / sample references and limits

Reviewer / actual event time

Finding / action / child-condition ledger

Final independent closure and continuing duties

Closure element	Required conclusion
Requirement population	All applicable source and annex child conditions reconciled; no missing test, station, phase or outcome hidden by counts.
Results and findings	Mandatory PASS and independently approved N/A only; every in-scope nonconformity verified closed before grant, renewal or extension.
Authority and independence	Current competent evaluator, reviewer and decision roles; conflict clearance; all required panel participation.
Claim and receiving duty	Exact permitted scope, configuration, domain, dates and limitations; authentic recipient acknowledgement and custody.

Full child ledger and population reconciliation

References to all source clauses, normative annex rows, selected technical subjects, domains, parameters and complete instantiated child predicates.

Independent result and rejected / held scope

Record the reasoned decision, unmet conditions, restrictions and preserved adverse evidence; separate technical release from ASTRA outcome.

Actual authority and approval record

Named function, authentic approval instrument, panel participants and genuine decision time; no pre-filled approval.

Continuing monitoring and receiving custody

Original surveillance / expiry clocks, change triggers, open terminal duties, recipient notices and accepted record custodian.

Appendix B — Local adoption, validation and receiving acceptance

Gate	Required evidence	Outcome when incomplete
Authority and identity	Actual operator, scoped mandate, permissible result class, named owner, independent decision and remedy functions.	No live scope release.
Requirement population	All applicable clauses and annexes mapped to child conditions, with reasons and independent approval for exclusions.	HOLD the affected conclusion.
Parameters and methods	Prospective values/attributes; technical basis; valid methods; representativeness; calibration, uncertainty and approved predicates.	No dependent acceptance.
People and evidence	Current demonstrated competence; conflict clearance; original usable source evidence; actual configuration and event times.	Reassign or obtain sufficient evidence.
Local tools and tests	Actual deployment tested with positive, boundary, missing, invalid and prohibited inputs; original failed cases retested.	No consequential reliance on unaccepted tools.
Independent closure	Every mandatory requirement PASS, approved N/A, all in-scope nonconformities verified closed, panel rules where required.	No grant, renewal or extension.
Claims and continuity	Decision-linked scope/status; source history; genuine custody, receiving access, retention, urgent notices and terminal duties.	Restrict publication or transfer until resolved.

Record authentic approval and activation in AF-AST-FR-001 and AF-AST-SC-004 or an equivalent controlled record. The edition label is not an effective date for a particular case. Preserve historical decisions under their actual controlling basis; a newer document does not retroactively create missing competence or evidence. Source: Clauses 4, 31, 61, 62 and 80; Annexes P and AR.

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