Aerospace Quality & Special-Process Readiness: AS9100D, AS9102, Nadcap & AS5553

Pillar: Supplier-Ask & Audit Readiness | **Basis:** Batch 4 Quality Asks & Batch 6 Quality Briefs | **Primary Source:** SAE / PRI Nadcap / DoD DFARS / NASA | **As Of:** 2026-11-16

Shop-floor readiness for Washington space hardware manufacturers hinges on six recurring quality and origin gates: AS9100D QMS, AS9102 FAIR, Nadcap special-process accreditation, AS5553 counterfeit avoidance, DFARS Specialty Metals, and NASA-STD-8739 workmanship.

Readiness Checklist & Corpus Traceability

• **AS9100D / IA9100 QMS:** Maintain OASIS-listed certification and internal audit logs per AS9100D Quality Gate.

• **AS9102 First Article Inspection:** Pre-stage ballooned drawings and Form 1/2/3 templates per AS9102 First Article Inspection.

• **Nadcap Special Processes:** Verify sub-tier heat-treat, NDT, welding, and chemical processing per Nadcap Special Processes.

• **AS5553 & DFARS Specialty Metals:** Lock authorized-distributor traceability and domestic melt certs per AS5553 Counterfeit Parts and DFARS Specialty Metals.

• **NASA-STD-8739 Workmanship:** Certify soldering, crimping, and harnessing operators per NASA-STD-8739 Workmanship.

Shop-Floor Quality & Traceability Readiness Matrix

Quality Gate	Audit Artifact	Corpus Source
AS9100D / IA9100	OASIS cert, NCR/CAPA log & management review	#1822 AS9100D
AS9102 FAIR	Forms 1–3 + material/process certs	#1825 AS9102 FAIR
Nadcap	Active PRI accreditation for special processes	#1828 Nadcap
AS5553 Counterfeit	OCM/OEM chain of custody & test screening	#1831 AS5553
DFARS 252.225-7009	Qualifying-country / domestic melt certs	#1834 Specialty Metals

Operator Execution & Boundary Notes

• Route shop-floor execution through the Quality Manager (Quality Manager Desk Brief and Quality: AS9100, FAI & Nadcap).

• Coordinate Quality: Counterfeit & Metals with Procurement before issuing POs to non-franchised brokers.

• Include Radiation Hardening & SEE Test Reports in mission-assurance packets when bidding LEO/MEO/GEO avionics.

Corpus Source Pieces & Primary Authorities

• **AS9100D / IA9100 Quality Gate:** https://bcesg.org/wa-space-ask-as9100d-ia9100-quality-gate/

• **AS9102 First Article Inspection:** https://bcesg.org/wa-space-ask-as9102-first-article-inspection/

• **Nadcap Special Processes:** https://bcesg.org/wa-space-ask-nadcap-special-processes/

• **Quality Manager Desk Brief:** https://bcesg.org/wa-space-role-quality-manager-desk-brief/

• **Quality: Counterfeit & Metals:** https://bcesg.org/wa-space-role-quality-counterfeit-metals-workmanship/

• **SAE AS9100D Standard:** https://www.sae.org/standards/content/as9100d/

• **SAE AS9102C Standard:** https://www.sae.org/standards/content/as9102c/

• **SAE AS5553 Standard:** https://www.sae.org/standards/content/as5553/

• **48 CFR Part 252 (DFARS, eCFR):** https://www.ecfr.gov/current/title-48/chapter-2/subchapter-H/part-252

Provenance Note: Synthesized from BC ESG Batch 4 (#1822–#1837, #1900) and Batch 6 (#2034–#2040). No invented audit criteria.