

AS9100C Ref.	Additional requirements
4.2.3 b)	Corrections to work instructions or documents must be recorded, dated and signed in ink or other permanent marking method with the original data being legible and retrievable after the change.
4.2.3 e)	All quality records (non–electronic) shall be documented in ink or other permanent marking.
4.2.4	<p>a) Electronic imaging/microfilming of records in lieu of storing actual inspection records is permissible. All electronic records must be controlled, retained, and retrievable per the same requirements identified for hard copy records. For electronic records that are transferred from computer files, the storage media must be capable of maintaining the data integrity for the full retention period. Examples of Quality Records to be retained are, but not limited to:</p> <ol style="list-style-type: none"> 1) Deliverable and nondeliverable software verification & validation 2) First article inspection reports 3) In process / final inspection & test records 4) Training records• 5) Manufacturing / fabrication records (e.g., planning sheets, routers, etc.,) 6) Nonconforming material disposition 7) Procurement documents (supplier placed orders) 8) Process control records (used as acceptance criteria) 9) Radiographs, technique sheets and related acceptance reports 10) Receiving inspection <p>b) Retain Quality Management System (QMS) records as identified per AS9100. The following identified quality records shall be maintained for the minimum retention periods specified below.</p> <ol style="list-style-type: none"> 1) 40 years from time of manufacture for: flight safety, critical / major rotor parts (i.e., turbine and compressor disks, hubs, shafts, free turbine couplings and turbine disk side plates), serialized major engine (cast / fabricated) cases (i.e., inlet, fan, compressor, intermediate, diffuser, combustion, turbine and exhaust cases) and main shaft bearing supports, which are not integral to a major case. 2) 10 years for all other parts except off–the–shelf industry standard parts. 3) 7 years for off–the–shelf / industry standard parts (e.g., AN, AS, MS, JAN, etc.).
6.2.2	<p>(a) Unless otherwise specified, procedures shall be implemented to ensure that eye examinations, including visual acuity and color vision, as applicable, are administered by a medically qualified/trained person to all individuals performing visual inspection.</p> <ol style="list-style-type: none"> 1) Intervals shall not exceed one year. 2) Individuals shall be tested in at least one eye, either corrected or uncorrected. 3) Color Perception testing is required one time only. Individuals shall be capable of adequately distinguishing and differentiating colors used in the method for which certification is required, the process being performed or inspection activity. Documentation shall be retained. 4) Records shall be retained for each individual. <p>(b) Individuals performing visual inspection (i.e. calibration, non-weld, in-process, layout, dimensional) shall be compliant with near vision requirements of Snellen 14/18, (20/25), Jaegar 2 at 14 inches, or Ortho-Rater 8.</p> <p>(c) Individuals performing visual inspections on welds shall be compliant with the American Welding Society Standard (AWS) D17.1.</p> <p>(d) Individuals performing nondestructive testing (NDT) shall be compliant with Aerospace Industries Association National Aerospace Standard (AIA/NAS) 410</p> <p>Note: Vision tests may be substituted for the options listed above providing the equivalence is verified and documented by a licensed optometrist.</p>
7.2.3	<p>Changes that may affect quality must be documented and communicated to Nabtesco Quality Assurance and/or Purchasing Representative prior to effectivity of the change.</p> <p>Including:</p> <ol style="list-style-type: none"> 1) An anomaly noted in a drawing or specification that could result in a nonconformance. 2) Clarifications / interpretations of a drawing or specification not requiring formal approval or affecting contractual requirements. 3) A request for an alternate method to a quality system requirement. Any alternate methods to a quality system requirement must receive approval from Nabtesco prior to incorporation. <p>EXAMPLE OF CHANGES: Ownership, Manufacturing location, Process and/or Product Inspection Techniques</p> <p>All communications between the supplier and Nabtesco must be written in the English language. These communications include:</p> <ol style="list-style-type: none"> 1) Quality Systems Manual and Procedures 2) Process documentation which requires approval or source qualification by Nabtesco. <p>In cases where the supplier maintains copies in their native language as well as in English and there is a conflict, the English language document shall take precedence.</p> <p>The supplier shall provide Nabtesco Quality Assurance with a company owned e–mail address to permit communications with the suppliers quality department. The e–mail address and any changes shall be sent to the applicable Nabtesco Quality Assurance (SQA) organization</p>
7.4.1 d)	<p>When specified on the drawing or purchase order, suppliers must use only sources approved by Nabtesco to perform special processes (each special process supplier must obtain initial approval from Nabtesco).</p> <p>Note: The use of directed sources does not relieve the responsibility for subcontractor control (i.e., an approved source for Non-Destructive Testing, Plating, Coating, etc.).</p>
7.4.3 a)	<p>(a) Suppliers must provide raw materials test reports / certification results / laboratory analysis requirements (e.g., tensile strength, stress rupture, hardness, chemical composition, etc.), as defined by the product definition and/or the purchase order.</p>

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7.5.1.3	Control of software shall be in accordance with TSQS-10 clause 7.5.1.3
7.5.2	<p>All members of the supply chain shall use Nabtesco approved suppliers when a specific material or manufacturing special process is identified.</p> <p>Suppliers and all members of their supply chain that only provide special processes (not part manufacturing suppliers) must be Nadcap accredited for the following special processes; Brazing, Chemical Processing, Coatings, Heat Treating, Materials Testing, Nonconventional Machining, Nondestructive Testing, Shot Peening, and Welding.</p> <p>The Nadcap requirements may be further defined by Nabtesco. Note: Nadcap accreditation is not required for materials testing laboratories with American Association for Laboratory Accreditation (A2LA).</p>
7.5.4	Return all documents, records, gaging, stamps, or other customer supplied product upon written notification from Nabtesco or when business with Nabtesco has ceased.
7.5.5	Preservation of Product shall be in accordance to TSQS-210 clause 7.5.5.
7.6	<p>Calibration Systems shall meet the applicable requirements of ISO 10012, ISO 17025 or ANSI/NC SL Z540-1. If ANSI/NC SL Z540 is applicable, the Handbook shall be used as the interpretive guide.</p> <p>In accordance with the industry standards and guidance referenced above, stated reliability goals, accuracy ratios and Significant-Out-Of-Tolerance condition criteria must be established. The Calibration interval analysis methodology used to maintain the reliability of Measuring and Test Equipment (M&TE) shall have a stated reliability goal to meet a minimum 95% reliability target for M&TE in-tolerance at the end of their interval schedule. Significant-Out-Of-Tolerance conditions are defined as any M&TE out-of-tolerance condition exceeding 25% of the product tolerance. These conditions require documented review of impact on quality and notification to Nabtesco if product received by Nabtesco has been affected.</p>
8.2.2	Audits of the entire Quality Management System must be conducted annually. Alternate plans may be accepted by Nabtesco.
8.2.4	Monitoring and measurement of product shall be in accordance with TSQS-210 clause 8.2.4.
8.2.4.2	<p>First Article Inspections (FAI) shall be performed in accordance with SAE AS 9102 and the additional requirements herein. A full or partial FAI shall be performed for affected characteristics when any of the following changes occur: a) design, b) manufacturing source(s), c) process(s), d) inspection method(s), e) locations of manufacture, f) tooling g) materials, h) numerical control program or translation or other media, i) a natural or man-made event which may adversely affect the process, j) a lapse in production greater than two years.</p> <p>A replication of product part marking (via photograph or sample) that represents production marking must be included within the FAI Report.</p> <p>The Supplier is responsible for assuring completion of the FAI Report for all finished part characteristics generated by Sub-tier Suppliers.</p> <p>At any time, Nabtesco may request a complete FAI to be performed in lieu of a partial (delta) FAI.</p> <p>Additional requirements for AS 9102 FAI Form 1: Field 11, Supplier Code: Record supplier code as directed by Nabtesco; Field 12 Record PO number as directed by Nabtesco; Field 14 record for each characteristic the equipment identification used for inspection and record the inspector identification used to signify the person that accomplished the inspection.</p>
8.3 b)	Suppliers shall coordinate all reports of nonconformances for Nabtesco material in accordance with Nabtesco requirements.
8.3 c)	<p>Articles deemed scrap must be clearly identified and rendered unusable within 30 days of final disposition unless otherwise instructed, in writing, by Nabtesco.</p> <p>Nabtesco must be informed immediately (not to exceed 24 hours or the next business day) of suspect nonconforming product shipped regardless of destination.</p> <p>The supplier shall ensure that related characteristics which may be affected by rework or repair operations are identified and reinspected after these operations are performed.</p>
8.5.2 d)	When requested to provide corrective action, prepare a report documenting the occurrence, findings, and assessment of the affected product and submit to Nabtesco. Provide objective evidence of root cause analysis and implementation of corrective action that eliminates risk of reoccurrence.
8.5.2 e)	To ensure effectiveness of the corrective action, suppliers shall perform 100% inspection of the deviated characteristics for the next (3) three consecutive manufactured lots.