



CoExcel Solutions

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Supplier Quality Clauses — Precision Machined Parts

Applicable in Addition to CX-SQ-100 for All RFQs/POs Involving Machined Housings, Structural Components, and Related Special Processes

Document No.	CX-SQ-300
Revision	A

This document establishes the Supplier Quality Clauses (“PM Clauses”) that CoExcel Solutions, LLC (“CoExcel”) flows down for all Requests for Quotation (RFQ) and Purchase Orders (PO) involving precision machined parts, including machined housings, structural components, brackets, and related special processes (heat treatment, plating/finishing, welding, and non-destructive testing). These clauses apply in addition to — and do not replace — the General Supplier Quality Clauses set forth in CX-SQ-100. In the event of any conflict between CX-SQ-100 and CX-SQ-300 with respect to machined-part Product, CX-SQ-300 governs.

Summary Requirements Matrix

Area	Recommended Requirement
Quality Management	AS9100-certified QMS
Dimensional / GD&T Interpretation	ASME Y14.5
First Article Inspection	AS9102, Forms 1–3
Machined Part Acceptance	Drawing/print + supplier inspection report; CMM data for critical/key characteristics
Material Certification & Traceability	Mill/material test report (MTR) traceable to heat/lot; DFARS 252.225-7009 compliance
Heat Treatment (special process)	NADCAP (AC7102) or Customer-approved source
Plating / Anodizing / Chemical Film (special process)	NADCAP (AC7108) or Customer-approved source; applicable spec (e.g., MIL-A-8625, MIL-DTL-5541)
Welding	NADCAP (AC7110) or AWS D17.1, as applicable
Non-Destructive Testing	NADCAP (AC7114) — penetrant/mag particle/X-ray as specified
Surface Finish	Per ASME B46.1; profilometer verification where critical
Cleanliness	Particulate/NVR requirements per drawing
Passivation (stainless steel)	AMS2700
Statistical / In-Process Control	First-piece and in-process inspection for key characteristics



Area	Recommended Requirement
Counterfeit / Unauthorized Material Substitution	SAE AS5553 principles extended to raw material and machining sources
Packaging / Corrosion Protection	VCI packaging or equivalent for uncoated ferrous/machined surfaces

Detailed Clauses

Applicable clause codes will be cited on the RFQ or PO face; where no specific citation is given, PM01 through PM14 apply in full to all precision machined part line items by default.

PM01 Quality Management System

Supplier shall maintain a quality management system certified to AS9100 (current revision). A current copy of Supplier's AS9100 certificate shall be on file with CoExcel prior to award and shall be kept current for the duration of the supplier relationship.

PM02 Dimensional and GD&T Interpretation

Supplier shall interpret and apply geometric dimensioning and tolerancing per ASME Y14.5 (current revision) as invoked on the drawing. Any ambiguity in dimensional or GD&T interpretation shall be submitted to CoExcel in writing for resolution prior to production.

PM03 First Article Inspection

Where required by the PO, Supplier shall perform and submit a First Article Inspection (FAI) report compliant with AS9102 (Forms 1, 2, and 3, as applicable) for the first production unit of each part number, and upon subsequent triggering events, including design change, process or location change, break in production exceeding the period stated on the PO, or change in raw material source or special process supplier.

PM04 Machined Part Acceptance and Inspection Data

Each shipment shall be accompanied by a supplier inspection report identifying actual measured results for all drawing-called dimensions, tolerances, and notes. For critical or key characteristics identified on the drawing or PO, Supplier shall provide Coordinate Measuring Machine (CMM) data or equivalent objective evidence of dimensional conformance.

PM05 Material Certification and Traceability

Supplier shall furnish a mill or material test report (MTR) for all raw material used, traceable to a specific heat and/or lot number, identifying chemical composition and mechanical properties conforming to the applicable material specification. Where DFARS 252.225-7009 (Restriction on Acquisition of Certain Articles Containing Specialty Metals) applies, Supplier shall provide a compliance statement identifying the country of melt and manufacture of specialty metal content.

PM06 Heat Treatment

Heat treatment shall be performed only by sources holding NADCAP accreditation (AC7102) or a Customer-approved special process source, in accordance with the specification called out on the drawing. Supplier shall retain and, upon request, furnish heat treat certifications including furnace load records, time/temperature data, and hardness/mechanical test results.

PM07 Plating, Anodizing, and Chemical Film

Plating, anodizing, and chemical film/conversion coating processes shall be performed only by sources holding NADCAP accreditation (AC7108) or a Customer-approved special process source, in accordance with the applicable specification (e.g.,



MIL-A-8625 for anodize, MIL-DTL-5541 for chemical film). Supplier shall retain and furnish process certifications including coating thickness verification and salt-spray/corrosion test data where required by the drawing.

PM08 Welding

Welding, where applicable, shall be performed only by sources holding NADCAP accreditation (AC7110) or in accordance with AWS D17.1, as applicable, by welders holding current qualification records for the applicable weld process and material.

PM09 Non-Destructive Testing

Non-destructive testing (penetrant, magnetic particle, radiographic/X-ray, ultrasonic, or eddy current, as specified on the drawing) shall be performed only by sources holding applicable NADCAP accreditation (AC7114) or a Customer-approved source, by personnel certified per the applicable NAS410/SNT-TC-1A level required for the method performed.

PM10 Surface Finish

Surface finish shall conform to the roughness requirements called out on the drawing, measured and reported in accordance with ASME B46.1. Where critical surface finish is identified, Supplier shall verify and record results using a calibrated profilometer or equivalent instrument.

PM11 Cleanliness

Where the drawing or PO specifies particulate or non-volatile residue (NVR) cleanliness requirements (e.g., for hydraulic, optical, or sealed housings), Supplier shall clean, verify, and package parts to meet the specified cleanliness level and shall furnish supporting verification records upon request.

PM12 Passivation

Stainless steel machined parts shall be passivated in accordance with AMS2700 (or the specification called out on the drawing), and Supplier shall retain and furnish passivation process certification upon request.

PM13 Statistical and In-Process Control

For key characteristics identified on the drawing or PO, Supplier shall perform first-piece inspection prior to running production quantities and shall maintain in-process inspection sufficient to detect process drift. Where required by the PO, Supplier shall retain statistical process control (SPC) data and make it available to CoExcel upon request.

PM14 Counterfeit and Unauthorized Material Substitution Prevention

Supplier shall procure all raw material from Original Manufacturers, mill-direct sources, or franchised/authorized distribution with full heat/lot traceability, consistent with the counterfeit-prevention principles of SAE AS5553. Supplier shall not substitute raw material, heat/lot source, or special process supplier from that used to produce any approved First Article without CoExcel's prior written authorization.

Packaging and Corrosion Protection

In addition to the packaging requirements of CX-SQ-100, uncoated or unfinished ferrous and machined surfaces susceptible to corrosion shall be protected with volatile corrosion inhibitor (VCI) packaging, rust-preventive coating, or equivalent method sufficient to prevent corrosion or surface damage during shipment and storage, unless the drawing or PO specifies otherwise.

Supporting Objective Quality Evidence



Upon request, Supplier shall provide the following in support of PM01–PM14 compliance:

- Current AS9100 certificate of registration
- AS9102 First Article Inspection reports (Forms 1, 2, and 3), when invoked
- Dimensional inspection reports and CMM data for critical/key characteristics
- Mill/material test reports (MTRs) with heat/lot traceability and specialty metals compliance statement
- NADCAP certificates and process certifications for heat treatment, plating/finishing, welding, and NDT special process sources
- Surface finish (profilometer) verification records
- Cleanliness verification records, where applicable
- Passivation process certification, where applicable
- SPC/first-piece and in-process inspection records for key characteristics
- Raw material and special process source traceability records