

Title:

QUALITY CLAUSE CODES

Document #: **QF-04-07**

Rev.: 23

1 of 12

Instructions to Rolls-Royce Canada Limited, Naval Marine Suppliers

The following table lists the Quality Clause Codes (QCC) that are used to communicate specific quality requirements to those who supply products to Rolls-Royce Canada Limited, Naval Marine (RRNMC).

RRNMC will add the applicable QCC's to the purchase order line item to identify quality requirements.

The documentation provided by the supplier will cover the total number of items that are listed in the quantity column of the line item. The supplier is not required to supply separate documents for each individual item; one document may be used to confirm that the requirement has been met for all of the parts inspected.

Unless indicated otherwise, each shipment of parts will be accompanied by the documents required for the parts that are delivered (for example: partially completed orders that are delivered in separate shipments will each contain the documents that apply to the parts shipped).

Where practical, the supplier may provide one document that confirms the fulfillment of different Quality Clause Code requirements.

NOTE: If a specification or (other document) is referred to in a QCC, use the revision of the specification that is in effect at the time the purchase order is issued.

QCC Number	QCC Name	Requirement Description
QCC 01	Minimum Inspection System Requirements	The supplier is responsible for ensuring that all inspections and tests have been performed that are necessary to substantiate that the supplies or services furnished under this purchase order conform to the specification requirements and comply to any quality clause codes called out on the purchase order. Upon acceptance of this purchase order, the supplier agrees to meet all requirements. Parts shall be made of new material only. All repair to out-of-specification conditions or requests for deviation must be submitted to RRNMC QA or technical contact using form QF-10-06 (supplier request for deviation) prior to shipment. During procurement of this order, the vendor's inspection system and manufacturing processes may be subject to review, verification, and analysis by RRNMC and/or customer representatives. RRNMC / customer inspection or release of product before shipment is not required, unless otherwise noted. The supplier shall retain all records associated with this PO for a minimum of six years or for the life of the project as requested by RRNMC. All US Government contractors and suppliers are responsible for understanding and acting on all applicable regulations (FARS/DFARS).
QCC 02	Inspection System Requirements	Deleted



Title:

QUALITY CLAUSE CODES

Document #: **QF-04-07**

Rev.: 23 Page #: 2 of 12

QCC 03	Source Surveillance	Surveillance by RRNMC and/or customer personnel is required at the supplier's facility. The supplier shall provide all necessary facilities, inspection data, equipment and personnel to successfully complete the surveillance. RRNMC shall be notified at least one week before the inspection point denoted in the purchase order, statement of work or inspection and test plan. If the surveillance is waived, a copy of the waiver shall be submitted with the product. QF-05-46 Source Inspection form.docx
	•	uired after the completion of fabrication and NDT.
		uired during the completion of the Dimensional Report.
	•	uired at final inspection and prior to shipment.
QCC 04	Certification of Conformance	A Certificate of Conformance that includes the following shall be included with each shipment: RRNMC purchase order number Specification or drawing number (including revision) Item description and quantity of each item furnished A statement that the material and/or product conforms to the applicable purchase order requirements. Date, signature and title of authorized representative QF-04-04-4 Vendor C of C form.docx
QCC 05	Acceptance Test Procedures	The supplier shall prepare and submit an Acceptance Test Procedure (ATP) for RRNMC review and approval before the first shipment of parts. As a minimum the ATP shall include: • ATP Title and revision • Part name and number of the item to be tested • Test conditions • Issued date and/or revision date • Test equipment to be used (including calibration data) • Indication/description of tests to be performed • Test parameters and limits • Preparation and approval signatures • Page numbers and total number of pages Each test data sheet shall include: • Objective evidence of compliance • Part name, number, and serial number • Test document paragraph correlation • Date of test, final acceptance, and acceptor identification



Title:

QUALITY CLAUSE CODES

Document #: **QF-04-07**

Rev.: **23**

Page #: 3 of 12

QCC 06	Tost Poports	Test reports shall contain the results of tests indicating conformance to the
QCC 06	Test Reports	requirements detailed in the RRNMC specifications. These reports shall be traceable to the materials furnished. Copies of the test reports shall be included with each applicable shipment.
QCC 07	First Article Inspection	The supplier shall perform first article inspection (100%) on the first part produced for all items and subassemblies supplied (including effective thread, basic dimensions and all notes). RRNMC requires that FAI include a copy of a bubbled drawing referencing item numbers on an inspection report. The inspection report shall include in the title block the name of supplier, drawing number and revision, drawing title, RRNMC purchase order number, signature of the person performing the inspection and the date. The inspection report shall include columns for item number, dimension required, tolerance, actual measurement, method of inspection and Acc/Rej. If the supplier's inspection report does not include the above requirements, RRNMC has a blank form that may be utilized.
		NOTE: First article inspection data shall be provided to RRNMC with the first shipment from the vendor. All out of specification requirements shall be reported to RRNMC prior to shipment using form QF-10-06 (supplier waiver form). QF-05-37-3 First Article Inspection Reg
QCC 08	Hazardous Material	The supplier is required to submit Material Safety Data Sheets with each shipment. Shipping containers shall be identified with the appropriate warning labels.
QCC 09	Configuration of Parts	The supplier shall notify RRNMC purchasing department of any changes to their original design that will affect component form/fit/function, material or finish. This requirement will apply only if original component number does not change with the design.
QCC 10	Certified Material Test Report (CMTR)	The supplier shall furnish certified material test reports for each line item identified on the PO and include them with the first shipment. The RRNMC part number that each CMTR pertains to will be identified on the CMTR. Subsequent shipments from the same lot, manufactured from the same lot of materials, may reference that the certifications were sent with the first shipment, that they are on file and that they are available upon request. Multiple CMTRs may be required if more than one lot of material is used per purchase order. Heat treat certificates are required with the CMTR when material is to be treated as per the applicable part drawing. All CMTRs must be legible. Yield stress, ultimate tensile stress and elongation in a 2" or 4" sample must be included in the CMTR for all metallic raw material. For some plain carbon steels, and for heat treated alloy steels where yield, tensile and elongation are not typically reported, these may be omitted with approval. If extra testing is required on the drawing, test reports must be supplied to RRNMC (ie. Charpy)
	10.1 - All CMTR's as no manufacturing.	ted above must be supplied to the RRNMC buyer prior to commencement of



Title:

QUALITY CLAUSE CODES

Document #: **QF-04-07**

Rev.: **23**

Page #: 4 of 12

QCC 11	Special Process	Deleted
Q00 11	(Nuclear)	
QCC 12	MIL-STD, AMS/ASTM Specifications/ Revision Status	Unless otherwise specified on the purchase order, MIL-STD and/or AMS/ASTM specifications shall conform to the latest revision of the applicable military specifications at time of manufacture.
QCC 13	In-process Surveillance	Deleted
QCC 14	Final Surveillance	Deleted
QCC 15	Final Tests	Deleted
QCC 16	Identification	Package Identification: The supplier shall mark package(s) with part number, revision number if applicable, and supplier identification. A Packing List shall be included with the shipment that identifies RRNMC's purchase order number and date, shipped item(s) identification and quantity furnished, and any items back ordered. Part Identification shall be in accordance with the RRNMC drawings /
		specifications.
QCC 17	Vendor Items Used On RRNMC Assembly Drawings	Unless otherwise specified, the supplier shall procure vendor items listed on the RRNMC drawings from the sources indicated, or from another RRNMC authorized distributor. The supplier shall provide evidence with each shipment that the correct parts were used. NOTE: If the RRNMC drawings denote the manufacturer as a "suggested" source of supply, then any equivalent part meeting the requirements of the original manufacturer's part may be used.
QCC 18	Inspection And Test Plan	The supplier is required to prepare and submit an Inspection and Test Plan to RRNMC for approval prior to commencement of work. The plan will indicate the sequence of manufacturing and the relative location of planned inspection and test points, including incoming inspection, in-process inspection, and final inspection. Referenced inspection and test procedures shall be provided upon request. RRNMC will designate on the ITP, any points for source inspection.
QCC 19	Nuclear Quality Program Requirements	Deleted



Title:

QUALITY CLAUSE CODES

Document #: **QF-04-07**

Rev.: 23

Page #: 5 of 12

QCC 20	Inspection of Critical
	Dimensions

All drawing dimensions which are designated as critical shall be inspected for all parts. RRNMC requires that inspection of critical dimensions include a copy of a bubbled drawing referencing item numbers on the inspection report. A completed inspection report detailing these dimensions is to be provided with the shipment. The inspection report shall include in the title block the name of supplier, drawing number and revision, drawing title, purchase order number, signature of the person performing the inspection and the date. The inspection report shall include columns for item number, dimension required, tolerance, actual measurement, method of inspection and Acc/Rej. If the supplier's inspection report does not include the above requirements, RRNMC's blank inspection report form can be located on our website at www.odimspectrum.com/supplier_info.php

Note: If RRNMC provides a populated inspection report with the PO, a bubbled drawing is not required.

All out of specification requirements shall be reported to RRNMC prior to shipment using form QF-10-06 (supplier waiver form).



QF-05-38-11 Inspection Report.do



Title:

QUALITY CLAUSE CODES

Document #:

QF-04-07

Rev.: 23

Page #: 6 of 12

QCC 21

Welding Requirements

RRNMC requires a welding certificate of conformance which indicates that the work performed complies with all drawing weld specifications. The C of C will include the RRNMC PO number, RRNMC drawing number, a statement that the weld conforms to the applicable specification, visual inspection, date, signature and the title of the authorized representative. Welds to be finished as per QF-04-21, Weld Finishing Requirement (see below).



QF-04-21-0 Weld Finishing Requirement

21.0- All welds for the product described on this line item must comply with drawing specifications.

21.1- All welds for the product described on this line item must comply with drawing specifications and be performed by qualified (AWS) and/ or certified (CWB) welders using approved procedures to the standard referenced on the drawing. Objective evidence of compliance (weld procedures, welder qualifications/certifications, relevant data sheets) must be maintained.

21.2- delete

21.3- All welds for the product described on this line item must comply with drawing specifications and be performed by qualified (AWS) and/ or certified (CWB) welders using approved procedures to the standard referenced on the drawing. Objective evidence of compliance (weld procedures, welder qualifications/certifications, relevant data sheets) must be supplied to RRNMC for approval prior to the commencement of fabrication.

21.4- delete

21.5- delete

21.6- All welds for the product described on this line item must comply with drawing specifications and be performed by qualified (AWS) and/ or certified (CWB) welders using approved procedures to the standard referenced on the drawing. Objective evidence of compliance (weld procedures, welder qualifications/certifications, weld consumable certificate, relevant data sheets) must be supplied to RRNMC for approval prior to the commencement of fabrication. A weld map must be utilized to track each weld (joint type, qualification, weld consumable, inspection) throughout fabrication.



QF-04-22 R.1 weld map report.xlsx

21.7 All welds for the product described on this line item must comply with drawing specifications and be performed by qualified (AWS) and/ or certified (CWB) welders using approved procedures to the standard referenced on the drawing. Objective evidence of compliance (weld procedures, welder qualifications/certifications, weld consumable certificate, weld map, relevant data sheets) must be supplied to RRNMC for approval **prior to the commencement of fabrication**. The weld map that is supplied prior to fabrication must be utilized to track each weld (joint type, qualification, weld consumable, inspection) throughout fabrication.



QF-04-22 R.1 weld map report.xlsx

QCC 22

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Title:

QUALITY CLAUSE CODES

Document #: **QF-04-07**

Rev.: 23

Page #: 7 of 12

QCC 23	Synthetic Rubber Products		ble portions of this o		
		The cure date for marked on the u	or synthetic rubber punit packages in acc	lucts delivered as end it products delivered as el cordance with MIL-STD receipt unless otherwis	nd items shall be -1523. At least 75% of
			individually packag	ged and shall conform to her requirements (i.e. d	
		Synthetic rubbe shall meet the a General Specifi addition, all ass rubber part in the	r products installed age requirements of cation) and shall be emblies shall be ma	g synthetic rubber prode in assemblies supplied MIL-STD-1523 (Age Constalled before their examples arked with the cure date as the date of assembling, or metal tag.	on this purchase order ontrol of Rubber, xpiration date. In of the oldest synthetic
QCC 24	Toxic Substances	toxic substance The supplier sh Certificate of Co substances with be approved (us	s. This requirement all provide certificat onformance) stating n each shipment. Ar sing QF-10-06) by F	order shall not contain a must be passed on to a ion (it could be an addit that material is free from my deviation requests to RRNMC prior to shipme adividual substance the	all subcontractors. ional statement on the m the identified toxic this requirement must nt of the product. The
	24.1-Methylene	24.2 - Carbon	24.3 - Xylene	24.4- Benzene	24.5-Trichloroethylene
	chloride, 24.6- Mercury	Tetrachloride 24.7- Beryllium	24.8- Cadmium	24.9-Chromium	24.10- Chloroform
	24.11 - Asbestos	24.12 - PCBs	24.13 - Lithium	24.14 - Magnesium	24.15 - PVC
	24.16 – Zinc or Zinc Alloys	24.17 – Ozone Depleting Chemicals (ODCs)			
QCC 25	Qualified Products List Item	It is required that order be certified or in the case of	d and the product b f microcircuits, be lis	of the product supplied be listed on the Qualified sted in MIL-HDBK-103 a supplied is a certified, C	d Products List (QPL), at time of manufacture.
QCC 26	Process Specificatio – BOPS 1.044	n The requiremen order.	The requirements of the process specification BOPS 1.044 are applicable to this order.		
QCC 27	Shelf Life	shall be identified and name of ma	ed with the part num anufacturer as appli me of receipt by RR	or labelling shelf life iten nber, date of manufactu cable. At least 75% of NMC unless otherwise	re, storage expiration, the shelf life must
QCC 28	Process Specificatio – BOPS 1.040	n The requiremen order.	its of the process sp	pecification BOPS 1.040	are applicable to this



Title:

QUALITY CLAUSE CODES

Document #: **QF-04-07**

Rev.: **23**

8 of 12

QCC 29	Printed Wiring Boards/ Multiwire Boards	Printed Wiring Boards (PWBs) – Each lot of PWBs shall meet the requirements of MIL-PRF-31032 or MIL-P-50884, as applicable. PWBs shall be forwarded to RRNMC with microsection reports and other quality reports as applicable. Multiwire Boards – Multiwire boards shall be manufactured and tested in accordance with IPC-DW-425. Boards shall be forwarded to RRNMC with microsection reports and other quality reports as applicable. Shelf Life – Shelf life shall be established as one (1) year from date of manufacture (date code). At least ¾ (nine months) of the shelf life must remain at the time of receipt by RRNMC. Suppliers releasing boards to RRNMC that are over three months old will restore them by reflowing or alternative method (prior to shipment) to assure their solerability and to re-establish their shelf life. Boards with re-established shelf life shall be identified on certification papers by serial number, lot number, or other traceable identification. PWB Material For Type I And Type II Boards – Where epoxy resin construction is used (e.g. GF material) on Type I and Type II boards, the requirements of Ocean Systems material specification, BOMS 5062 apply. Metal Core Boards – For metal core boards, the requirements of Ocean Systems material specification, BOMS 1.031 applies. Packaging – All boards shall be packaged in Type II or Type III material in accordance with MIL-B-81705 before being placed in their shipping containers.
QCC 30	J-STD-001	Parts supplied on this purchase order shall conform to the applicable requirements of J-STD-001 as specified by the drawing, specification, or purchase order. If the class is not specified, Class 3 will apply. Suppliers may use a higher standard, such as MIL-STD-2000 if appropriate. RRNMC shall receive a deliverable (may be a statement on the C of C) that this requirement has been fulfilled.
QCC 31	Electrostatic Discharge (ESD) Protection	ESD sensitive devices shall be packaged and marked in accordance with the applicable requirements of Electronics Industries Association EIA-625, and handled in a manner that will prevent mechanical or electrical damage and maintain the leads and terminals in the manufactured condition. The ESD sensitive devices shall be packaged in static shielding materials. The intermediate and exterior packages shall be identified.
QCC 32	Solderability	Parts that are to be soldered to surfaces at the next assembly level, shall be solderable upon receipt at RRNMC, and meet the solderability requirements of the governing specification. Where possible, the supplier shall provide solderability test results with the shipment. For connectors with solderable pins, sample pins shall be provided when possible.



Title:

QUALITY CLAUSE CODES

Document #: **QF-04-07**

Rev.: **23**

Page #: 9 of 12

QCC 33	Documentation for Processing (non-nuclear)		The supplier must provide certificates of conformance, travelers and test data for all processes specified on the drawing/purchase order. The RRNMC part number that each certificate pertains to will be identified on the cert. The supplier shall furnish this documentation with the first shipment. Subsequent shipments from the same processing lots may reference the documents shipped with the first lot. The point numbers below indicate the individual process the documentation is required for.				
	33.1-anodizing	33.2 -p	assivation	33.3-conversion coating	33.4-nickel plate	33.5-chrome plate	33.6-ion nitrite
	33.7-acid treat	33.8 -u inspec	Itrasonic tion	33.9 – liquid penetrant insp.	33.10- magnetic particle insp.	33.11-deleted	33.12-runout tolerance
	33.13-carburize	33.14- tolerar	pitch	33.15-lead tolerance	33.16-tooth profile	33.17-tooth surface	33.18 -paint
	33.19-surface temper inspection	33.20- harder		33.21-core hardening	33.22-acid etching	33.23- brazing	33.24- zinc plating
	33.25- powder coating	33.26 -radiog	raphic insp.	33.27-stress relief	33.28-de- magnetize to 2 gauss max		
QCC 34	Machining and/or cutting method restrictions		Machining and/or cutting methods, using heat or thermal energy for metal removal such as laser, electro-discharge machining (EDM), or plasma are prohibited. This restriction also applies to marking methods using heat or thermal energy.				
QCC 35	Control of OSL Drawings		The supplier must destroy all copies of RRNMC drawings or return to RRNMC upon completion of work. A letter must be sent with the product stating that drawings have been destroyed or the drawings may be returned with the final shipment.				
QCC 36	Source Control Drawings Provided with Products		Suppliers must provide an As-Built drawing/parts list of the product supplied that specifies overall dimensions and any interface dimensions. The drawing will include material coating and hardware specifications.				
QCC 37	Sub-Tier Suppliers		All sub-tie to approve Managem	All sub-tier suppliers shall be ISO9001 approved. It is the supplier's responsibility to approve, maintain and control sub-tier suppliers within their own Quality Management System. The supplier is responsible for the delivery, performance and flow down of all contractual requirements to the sub-tier suppliers.			wn Quality ry, performance
	37.1-Project Specific Subcontractor Appro				nust be included or e obtained via the		
QCC 38	Phytosanitary C		document Agriculture	that the product se e Organizations, li	th a statement incl supplied is in accor nternational Plant I Phytosanitary Mea	dance with the U. Protection conven	N. Food and tion document
QCC 39	Travellers		to Rolls-R assembly	oyce with the prod	ers shall be initialle duct. If there is a C I an RRNMC QA ro on.	QA hold point withi	n the traveller,



Title:

QUALITY CLAUSE CODES

Document #: **QF-04-07**

Rev.: 23

Page #: 10 of 12

QCC 40	Certificate of Origin	A Certificate of Origin (or NAFTA Certificate of Origin) must accompany all shipments to Rolls-Royce where the parts originate outside of Canada. The Certificate must identify all parts specified on the purchase order. Instructions can be found at the following link: http://www.canadabusiness.ca/servlet/ContentServer?cid=1081944203567&pagename=CBSC_ON%2Fdisplay⟨=en&c=Regs . Sample Certificate of Origin forms or NAFTA Certificate of Origin forms can be provided by contacting the RRNMC purchaser.
QCC 41	HS&G Toxic Substances	Deleted
QCC 42	ROHS Compliant	Certification must be forwarded with the product (may be a statement on a C of C) that the product is ROHS compliant.
QCC 43	ORCA Toxic Substances	Deleted
QCC 44	AWD Toxic Substances	Deleted
QCC 45	Restriction of purchased material from China	The material, goods or services supplied on this purchase order must not be purchased <u>directly</u> from China. The supplier will endeavour to source material from alternate sources as much as possible. If this clause cannot be complied with, the supplier will submit a supplier waiver to RRNMC for disposition of the material.
		For COTS components (eg fasteners, electrical components), the supplier will make an effort to source material not produced in China. If the supplier has any questions with regards to these requirements, they should be directed to the purchaser listed on the RRNMC purchase order.
QCC 46	DFARS	The material, goods or services supplied on this purchase order must meet the requirements of Defence Federal Acquisition Regulations Supplement 252.225-7014 (specialty metals provision).



Title:

QUALITY CLAUSE CODES

Document #: **QF-04-07**

Rev.: **23**

Page #: 11 of 12

QCC 47	47.1- All Materials (hardness test)	The supplier must provide certificates of conformance and test data (heat treatment charts) for each component. The RRNMC part number that each certificate pertains to will be identified on the cert. The supplier shall furnish this documentation with the first shipment. The supplier must provide certificates of conformance (C of C) and test data (heat treatment charts) for each component. The RRNMC part number that each certificate pertains to will be identified on the cert. The supplier shall furnish this documentation with the first shipment. This part is to be heat treated with extra material (a coupon) from the same heat in which it was fabricated. The thickness shall be representative of that of the heat treated part. If part material sections include thicknesses of both 0.5" and below as well as 1.5" and above, then two coupons are to be tested for both the thickest and the thinnest section to be treated. After heat treatment, coupons are to be tested for hardness with a calibrated hardness tester. Results to be reported on the above mentioned C of C as well as sent to the RRNMC buyer as soon as possible. Coupons shall be suitable to perform tensile, yield and elongation as per ASTM B557 if required. Coupons are to be stored at the heat treater's facility for no less than 1 year from time of heat treatment.
	47.2 - All materials (mechanical tests)	The supplier must provide certificates of conformance and test data (heat treatment charts) for each component. The RRNMC part number that each certificate pertains to will be identified on the cert. The supplier shall furnish this documentation with the first shipment. This part is to be heat treated with extra material (a coupon) from the same heat in which it was fabricated. The thickness shall be representative of that of the heat treated part. If part material sections include thicknesses of both 0.5" and below as well as 1.5" and above, then two coupons are to be tested for both the thickest and the thinnest section to be treated. After heat treatment, coupons are to be tested per ASTM B557 or RRNMC approved equivalent to determine tensile strength, yield strength (as measured with extensometer) and elongation of heat treated material. Test coupons shall comply with minimum values required by the aluminum specification stipulated on drawing. Results to be reported on the above mentioned C of C as well as sent to the RRNMC buyer as soon as possible.
QCC 48	Counterfeit Parts	Coupons are to be stored at the heat treater's facility for no less than 1 year from time of heat treatment. Vendor shall not deliver Counterfeit or suspect-Counterfeit work to RRNMC. "Counterfeit Work" means work that is or contains items which imitate authentic items. "Counterfeit Work" also means work that is altered in such a way that it is non-compliant to the required specifications. Suppliers shall only purchase products directly from the OCM/OEM, or through an OCM/OEM authorized distributor chain and if requested be able to provide documentation that authenticates traceability of the items to the applicable OCM/OEM. Supplier shall include this clause or equivalent provision in lower tier orders for delivery of items that will be included in or furnished as work to this component.



Title:

QUALITY CLAUSE CODES

Document #: **QF-04-07**

Rev.: 23

Page #: 12 of 12

QCC 49	Lloyd's Procurement Plan	The supplier is required to follow Lloyd's Procurement Plan. The suppliers will be responsible for liasoning with LR and RR in order to schedule all necessary surveys/inspections required by this document as well as the RR approved product Inspection and Test Plan (ITP). The plan will indicate procurement of material, weld qualifications, NDT testing, machinery and COTS components. This document can be obtained via the Rolls-Royce purchasing agent.
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