



**G&N RUBICON**

High Performance Gear Solutions

**Supplier Quality Requirement  
Manual**

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# **G&N Rubicon Gear**

1550 E. McFadden Ave

Santa Ana, CA 92705

Tel 714-835-0326

Fax 714-973-0559

[www.gnrubicon.com](http://www.gnrubicon.com)

ISO9001/AS9100 Registered



## Supplier Quality Requirement Manual

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### INTRODUCTION

G&N Rubicon Gear is responsible for assuring the quality of products we deliver to our customers. We are required to establish procedures for selecting suppliers and for periodic review and assessment of the effectiveness of the control of purchased materials or services. Therefore it is extremely important that we select suppliers who can consistently deliver high quality products and services.

This manual contains the contractual Quality Assurance Requirements that appear on G&N Rubicon Gear Purchase Orders. The **general** quality assurance requirements in **Section I** apply to all purchase orders. The **specific** quality assurance requirements in **Section II** apply when reference by code on the applicable purchase orders. Questions and comments regarding these requirements should be directed to G&N Rubicon Gear purchasing representative.

MEL EDWARDS  
MEL EDWARDS  
Quality Assurance Manager

03/24/2006  
Date 3/24/06

STEVE KISSEL  
STEVE KISSEL  
DIRECTOR ENGINEERING

01/23/2006  
Date 1/24/07

Jennifer Niles  
Jennifer Niles  
Purchasing Manager

01/23/2006  
Date 1/24/2007



## **SECTION I**

### **1. RIGHT OF ENTRY**

Receipt of this purchase order affords G&N Rubicon, its customers and/or regulatory agencies the right of entry to verify product quality and documentation.

### **2. SUB-TIER CONTROL**

The supplier shall be responsible for flow down of all the requirements and provisions of G&N Rubicon Gear purchase order applicable to the supplier's subcontractors.

### **3. DRAWING, SPECIFICATIONS & QUALITY REQUIREMENTS**

Suppliers system shall assure that the latest applicable drawings, specifications and quality requirements are in agreement with current purchase order requirements. Unless otherwise specified, specifications utilized shall be the latest revision in effect on the date of the purchase order.

### **4. NON-CONFORMING MATERIALS**

Upon notification from G&N Rubicon buyer that the material furnished by the supplier is found discrepant, the supplier shall promptly notify the buyer, in writing, of adequate and acceptable corrective action taken to eliminate the cause of discrepancy. The supplier response shall include: (a) Root Cause of Defect, (b) Corrective Action Taken, (c) Preventive Action Taken, (d) Effectivity.

### **5. SUPPLIER DEVIATION REQUEST**

For consideration by G&N Rubicon and/or its customers, variations from drawings, specifications, or other purchase order requirements must be recorded and submitted on a vendor generated "Supplier Deviation Request".

### **6. REPAIR**

Under no circumstances shall a supplier or a supplier's sub-tier perform any repair without specific written authorization from G&N Rubicon Gear.

### **7. CALIBRATION**

Supplier shall maintain a metrological calibration system in accordance with MIL-STD-45662.

### **8. INSPECTION**

Supplier shall maintain an inspection system in accordance with MIL-I-45208.

### **9. RECORD RETENTION**

Supplier shall maintain quality records on file as objective evidence of conforming material furnished per purchase order requirements and the records shall be available upon request by G&N Rubicon, its customers and/or regulatory agencies during 10 years after shipment.

## SECTION II

### QC1 PROCESS CERTIFICATION

Certifications are required with each shipment. All certifications shall be traceable to the parts submitted and shall contain the signature and title of the authorized representative.

**When parts are serialized, serial number must appear on the certification.**

### QC1A RAW MATERIAL CERTIFICATION

Each shipment shall be accompanied by with legible copies of the material certifications as furnished by the raw material supplier or an independent test laboratory. Material certifications must agree in all respect with the raw material requirements of their applicable specifications. Unless otherwise specified, all certifications shall state as a minimum, the latest revision of the specification is being certified to.

### QC2 CERTIFICATION OF CONFORMANCE

A legible and reproductive copy of a Certificate of Conformance must accompany each shipment. The certificate must contain the signature and title of an authorized representative.

### QC2A RAW MATERIAL REMNANTS

Material remnants produced after saw-cut shall be visually identified by paint and/or tag.

### QC3 INTENTIONALLY LEFT BLANK

### QC4A FIRST ARTICLE INSPECTION

The seller shall conduct a first article inspection on the first fabricated part. First Article part shall be identified by tag, paint or other suitable method.

### QC4B FIRST ARTICLE APPROVAL

First Article shall be submitted and accepted by G&N prior to product shipment.

The activity for verification performed by G&N Rubicon cannot be used as supplier control, and shall not preclude subsequent rejection by G&N Rubicon inspection.

### QC4C SOURCE INSPECTION / FIRST ARTICLE APPROVAL

Source inspection / First Article Approval is required prior to shipment from your facility. Please promptly notify G&N Rubicon Purchasing within 48 hours.

The activity for verification performed by G&N Rubicon cannot be used as supplier control, and shall not preclude subsequent rejection by G&N Rubicon inspection.

**QC5 INSPECTION REPORT**

The supplier shall provide with each shipment a detailed written inspection report. Each characteristic inspected shall be listed as a single line entry and shall indicate the acceptability of that characteristic. Inspection report shall, as minimum includes the following information:

- Supplier name
- PO number
- Drawing revision
- Quantity inspected
- Quantity Accepted
- Quantity Rejected

**QC6 SPLINE DATA**

An annotated C of C stating shall accompany each shipment of splines: Spline data verified with functional gage no: \_\_\_\_\_, or equivalent.

**QC7 GEAR DATA**

Legible gear charts with increment designation shall be accompanied each shipment of gears.

**QC8 APPROVED SOURCES**

Only sources approved by G&N Rubicon customers shall be used for all processes such as heat treating, plating, NDT, etc. Failure to use the approved sources will be subjected to material rejections. It is forbidden to use customer approval and verification in lieu of internal receiving inspection and acceptance.

**QC9 CORROSION PROTECTION**

Parts shall be dipped or sprayed in suitable corrosion preventive oil during process and prior to shipment to G&N Rubicon.

**QC10 INTENTIONALLY LEFT BLANK****QC11 PACKAGING AND HANDLING**

In performance of purchase order requirements, suppliers shall provide sufficient packaging of parts during manufacture, processing, handling or transportation as necessary to prevent damage or deterioration.

**QC12 SERIALIZATION REQUIRED**

Each part shall be identified with a unique lot serial number provided by purchasing. A lot shall consist of all parts manufactured or processed as a group.



**QC13 G&N RUBICON FURNISHED DOCUMENTS**

All G&N Rubicon furnished drawings, sketches, specifications and/or related data shall be returned to G&N Rubicon upon completion of the Purchase Order.

**QC14 FLOWDOWN OF SPECIAL QUALITY REQUIREMENTS**

Special quality requirements are hereby imposed as attached per Purchase Order.

**QC15 MATERIAL LAB TEST SAMPLE**

Supplier shall furnish a material sample cut from the same material as furnished by G&N Rubicon. All lab sample remnants shall be returned to G&N Rubicon unless otherwise authorize by G&N Rubicon Quality Assurance to be retained at supplier site.



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Table 1 – Process Quality Code Matrix

Code	Raw Material	Saw-cut	Center-less grind,	Initial Heat Treat/ Copper Plate	Turn, Grind, Lap, Mill, Drill	Thread grind, Balance, Trepan	Shape, Hob, Gear Grind	Broach	Ident, Debur	Carburize, Nitride, Case harden	Other Special processes	NDT processes
	RM	SC	CG	IHTCP	TGLMD	THGBT	SHGG	BR	IDDB	CNCH	OSP	NDT
QC1				X						X	X	X
QC1A	X											
QC2		X	X		X	X	X	X	X			
QC2A		X										
QC3												
QC4A					X	X	X	X	X			
QC4B												
QC4C												
QC5					X	X	X	X				
QC6							X	X				
QC7							X					
QC8												
QC9					X	X	X	X	X	X	X	X
QC10												
QC11				X	X	X	X	X	X	X	X	X
QC12												
QC13					X	X	X	X	X	X	X	X
QC14												
QC15										X		

X – Required, unless otherwise specified



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### Revision History

Revision	By	Date	Revision summary
A	E. Pham	0701//2002	Initial issue
B	E. Pham	03/15/2003	Revised per Internal audit 2003-1.3
C	E. Pham	05/08/2003	Revised supplier PO requirements
D	E. Pham	11/06/2003	Revised per AS9100 audit finding no 7,
E	R. Rendon	5/02/2005	Personnel signatures. Section 1 #5 and #9
F	G. Perez	1/23/2006	Revised document introduction approval personnel and dates
G	MEI	3/23/2006	Revised document