

# General Dynamics Land Systems

**GENERAL DYNAMICS LAND SYSTEMS (GD or GD LAND SYSTEMS)** is a subsidiary of [General Dynamics Corporation](#)'s Ground Combat Systems (NYSE: GD) and headquartered in Sterling Heights, Michigan. Our primary focus at General Dynamics Land Systems is partnering with those who protect our freedom and ensuring their readiness for tomorrow. General Dynamics Land Systems' innovation has resulted in increased survivability, greater lethality, and enhanced battlefield effectiveness made possible by capabilities and land combat vehicles that are prepared and ready for whatever comes our customer's way.

Each new series of our tracked, wheeled and amphibious vehicles is better than the last. We anticipate the need for innovative solutions that are designed for the future battlefield. GD Land Systems delivers key ground-force machinery with powerful tracked and wheeled military vehicles needed to face sophisticated land forces. The Abrams main battle tank, the family of Stryker and LAV wheeled combat vehicles and the AJAX armored fighting vehicles are at the heart of Land Systems' military-vehicle platforms.



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REVISION RECORD DATE	DESCRIPTION OF CHANGE	Revised by
12/17/2017	Massive update, added table of content	SQA group
2/23/2018	Update inspection delegation section	CFS
3/29/18	Update Quality Clause and FPI section	CFS
4/12/18	Revised layout	cfs
01/31/2020	Revised per new QY11 - FAI process	SJW
5/30/2020	Revised to add new information on QY12	SJW

08/09/2022	Revised supplier rating, add repair, updated introduction, Special process update, add AQL, update Reg Map and QJ21 example	CFS

## *Supply Chain Management – Introduction and Scope*

General Dynamics Land Systems Supply Chain Management organization is dedicated to managing the supply chain to consistently provide on time, quality, and cost effective material and services to our customers. This is achieved through developing best in class supply chain relationships and core processes in collaboration with all General Dynamics Land Systems organizations, customers, and valued supply base, in an environment of open communication, mutual trust, continuous improvement, and with the highest of ethical standards. GDLS and suppliers share the responsibility of providing goods and services that consistently meet contract requirements and customer expectations.

An Initial Purchase Order (PO) and Technical Data Package (TDP) review with all company stake holders (Engineering, Manufacturing, Quality, etc.) is key to assuring contractual obligations are met. It is imperative that GDLS suppliers perform this thorough review to assure they have a sound understanding of the order and that the proper flow down of requirements are made to their sub-tiers. It is also imperative that prior to the start of production any questions or concerns about the TDP be addressed through your GDLS Buyer for clarification.

The PQA 3000 is published to further define and support the quality requirements specified in your PO. The following information is to be used as an aid in helping a supplier fully comprehend each given requirement through a narrative discussion of that requirement and its intent.

This manual is applicable for shipments to General Dynamics Land Systems. These locations may change due to business developments, however, at the time of the release of this document, these sites include Lima’s (Ohio) Joint Systems Manufacturing Center (JSMC), Tallahassee Mfg Plant (TLH), Scranton Plant (SCR), Ft Lewis Washington, Ft. Hood Texas, London ON Canada, Egypt (ETP), Westminster (WBD) and Anniston Operations (ANG). Contact your supply chain representative or

SQA Regional Manager for questions concerning a requirement if the shipment point is other than above.

## **Quality System Requirements**

### **Minimum Quality System Requirement**

Suppliers shall develop, document, implement and maintain a quality system providing the highest degree of confidence that the material and services will conform to contract requirements. The quality system can be patterned after, or in accordance with; ISO-9001, AS-9100, and TS16949. The required level for any/all requirements is governed by and specified in the PO. In the case of special processes being used to produce production components to GDLS, it is recommended that suppliers to be Nadcap Accredited for the special process provided.

Measuring and test equipment used to determine acceptability of product is to be calibrated utilizing traceable standards (e.g., National Institute of Standards and Technology NIST). The calibration system can be patterned after, or in accordance with International Organization for Standards (IS10012-1, ANSI/NCSL z54C-1) or ANSI/ISO standards. The supplier's quality system shall provide for control of purchases and services from sub-contractors to include, but not limited to, conveyance of applicable contract and technical requirements and a method of assessing sub-contractor's capability and performance to contract/technical requirements.

Suppliers approved to the intent of GDLS's Quality System Assessment (QSA) or GDLS minimum requirement shall be scheduled for a system audit periodically. The type of audit may be determined based on the product, application, value and criticality. The GDLS SQA Regional Manager will determine the type of audit based on the above criteria.

"Commercial Supplier", is a supplier of product meeting the producer's own standards and does not differ from the product offered for sale in the commercial market. A supplier categorized as commercial only has PO's for commercial product. No scheduled system audit will be required.

GDLS requires suppliers to provide immediate notification in the event that any certifications have been lost and any notifications of significant changes within the supplier's organization (e.g., changes related to address, ownership, key management, scope of operations).

### **Quality Clause Applications Requirements and Details**

The PO in most cases, will contain coded quality requirements. The detailed language for these quality requirements can be found on the GDLS web site at: [www.gdls.com](http://www.gdls.com). These quality clauses encompass GDLS and GDLS-C PO's.

GDLS purchase orders may contain GDLS Quality Clauses (QX & QW Welding, QY11, QY10, QG3, QK48...etc.). The purpose of these clauses is to bring attention to certain Technical Data Package (TDP) requirements which may require advance planning or special attention. In some cases, the clauses also provide additional instruction regarding applicable GDLS quality standards, or for required deliverables.

## General Requirements

### **QJ-21 Inspection Delegation (ID)**

There are **NO** receiving inspectors in any of our GDLS Receiving Locations. Suppliers' Inspection Delegates are responsible to ensure all PO and TDP requirements are met **before** product is shipped.

*Note: Each part number shipped under the ID program must have a FAI/FPI reviewed and approved by GDLS SQA prior to the Supplier's Inspection Delegate stamping off GDLS shipments. If QG4 or QY15 are on the PO, a stamped packing list is not necessary.*

Inspection Delegation (ID) is the General Dynamics Land Systems certified supplier program. Suppliers that qualify for the program are issued a GDLS stamp uniquely identified to individual(s) representing the supplier's Quality organization. Material received from an ID supplier accompanied with the Shipper/Packing Slip affixed with a stamp will be processed at GDLS receiving locations without further evaluation. Unless otherwise specified in the PO, a second copy of the stamped Shipper/Packing Slip and all supporting inspection data / objective evidence of product conformance to PO and TDP requirements is to be retained per PO & Terms and Conditions (T's & C's). These documents must be made available for GDLS review within a timely manner if requested.

This program is subject to termination with minimum notice for failure to meet delegate responsibilities defined herein.

The supplier shall identify qualified delegate(s) to perform acceptance activities at their facility. The delegate(s) should have Quality Assurance (QA) responsibilities and be assigned to or have access to GDLS PO(s) and technical information. The delegate(s) selection must be based upon the following:

- Technical competence.
- Quality Assurance background and experience.
- Unrestricted access to GDLS Supplier Quality Assurance Management.
- Access to the manufacturing process for process verification.
- Ability to exercise the responsibility of the position as defined within this document.

A copy of the Inspection Delegate Request Form (QJ21) must be submitted for review and a personal interview conducted by a General Dynamics Land Systems Representative. The form can be found at: <http://www.gdls.com>

A new supplier to GDLS will be required to use the Source Inspection procedure even though the QJ21 Clause appears in the PO. This will continue until the supplier is established and the GDLS SQA Regional Manager can conduct Inspection Delegation Training. This training will consist of the delegate candidate's previewing the PQA 3000 Handbook and online training slide presentation found at: <http://www.gdls.com>. After the review is complete, the GDLS SQA Regional Manager may administer a quiz to verify the Delegate(s) comprehension of the requirements.

A GDLS inspection stamp will be assigned to the approved delegate(s). This individual is responsible for ensuring proper usage, control and maintenance. Only the assigned stamp affixed to the packing slip is acceptable. No substitutions allowed. **The stamp may not be transferred or used by another individual.** In the event an individual's position as a delegate is terminated, position changes or the stamp is lost, GDLS must be notified immediately. Unassigned stamps are to be returned to GDLS. Contact your GDLS SQA Regional Manager for further instruction of returning and/or replacing stamps.

The Suppliers' Inspection Delegate is responsible for assuring all requirements of the PO and TDP are satisfied. This includes but is not limited to assuring the following:

- In-Process and Final Inspection are complete in accordance with GDLS and internal supplier requirements
- Process monitoring to assure items such as settings on weld machines, work instruction compliance, cure times, etc. are followed
- Verification of items such as weld sample approval, material certifications, first article test approval, control test approval are current
- Verify that the manufacturing process flow or source(s) of sub-tier material(s) has not changed since initial GDLS FAI acceptance.

#### Summary

- **GDLS Source Inspection to occur until ID Training/stamp issuance is completed**
- No MRB authority unless stated in the PO
- Stamp use is for authorized assigned delegate only
- Delegate has to have authority to accept/reject product shipment
- Immediately notify GDLS SQA Regional Manager if this stamp is lost, stolen, or damaged
- Stamp impression must be affixed to all copies of the Shipper/Packing Slip, including a retention copy per PO T's & C's
- ID can be terminated at GDLS discretion

Remember the Supplier's products must conform to all GDLS requirements because our customer's life depends on it!

## **Configuration Control (Changes)**

Supplier shall make no change in design, materials, manufacturing location, manufacturing processes, or sources of supply, after buyer's acceptance of the first production test item or after acceptance of the first completed end item, without the written approval of the GDLS Buyer. Go to GDLS Terms and Conditions for further details.

Historically, unauthorized Supplier changes after GDLS First Article Inspection (FAI) acceptance have been a prominent trend in nonconformance's. Undisclosed changes by Suppliers and/or their sub-tiers have caused quality and performance issues at the vehicle level. The GDLS Buyer must be notified in writing of any potential changes and cc: appropriate GDLS SQA Regional Manager.

For Electrical Components:

The **approval of the buyer** will **not** be required for the seller to make changes in the source of supply of component parts which are classified as passive components so long as such supply source changes do not affect form, fit, function, quality, reliability or safety of the end item and follow the Counterfeit Avoidance/Mitigation Requirements.

## **Miscellaneous Additional Technical Data Package (TDP) Documentation**

There are other documents that must be taken into consideration when they appear on either your PO or Print. These documents should be given to the supplier as part of the original TDP transfer from the GDLS Buyer.

### **Ordering Data (OD)**

- Ordering Data is a supplement to the TDP which does not expire as long as it is designated within the GDLS PO.
- Ordering Data will be found in the quality clause section of the PO. It will start with "OD" followed by a number. The PO may also have QP6 designating that an Ordering Data is part of the TDP.
- Part acceptance for all lots must be built, inspected, tested, etc. in accordance with the OD because it is part of the TDP.

### **Quality Assurance Provisions (QAP) / Quality Assurance Requirements (QAR)**

- QAP/QAR is a supplement to the TDP which does not expire.
- A QAP/QAR can be identified by the addition of quality clause QK9 in the PO, a note on the drawing specifying that the part also has a QAP/QAR associated with it.



- Part acceptance for all lots must be built, inspected, tested, etc. in accordance with the QAP/QAR since it is part of the TDP.
- The QAP/QAR number will contain the associated part number.

#### Service Problem Notice (SPN) For GDLS-C

- A SPN is used to update a TDP when ordering non-production parts.
- A SPN is a supplement to the TDP which does not expire until an order is placed for production parts. When a production order is placed an Engineering Change will be done to update the TDP.
- A SPN is always to be used during any type of audit when designated in the TDP for product acceptance.

Contact your GDLS Buyer and/or your GDLS SQA Regional Manager for additional information.

#### QY-10 Flowchart/Control Plan (FC/CP)

The FC/CP can be used as an aid in preparing for an FAI or Corrective Action. However, it is required if quality clause QY-10 appears on the Purchase Order. The GDLS-approved FC/CP must be submitted to [sqa@gdls.com](mailto:sqa@gdls.com) at the time the First Article Inspection audit request is made.

The purpose of FC/CP is to provide a logical pictorial representation of the manufacturing process flow and process control points. The Supplier develops and updates FC/CP as needed if changes occur. This document can be used as an aid for work station and value stream mapping development, identifying process control points, defining the methods being used at these control points, and should include all Key Product Characteristics (KPCs), QARs/QAPs and all out sourcing identification.

A walk through of the manufacturing process to include a review of the FC/CP and work instructions is a good way to validate processes and requirements. The FC/CP can be used as part of the Process/Product Validation at FAI and on future GDLS audits.

#### Summary

- FC/CP should contain sufficient detail to depict the Manufacturing Process
- Aid in developing appropriate Work & Inspection Instructions
- Supplier ensures that the FC/CP is accurate
- Supplier evaluation of FC/CP to actual process
- Requires updates when Process Flow changes

## Supplier Approval Process

General Dynamics Land System requires all Suppliers to be approved prior to the issuance of a Purchase Order. All Suppliers must be approved by GDLS, regardless of approvals by customers or other entities. Approvals are site specific and each site will require an individual approval. For further information on how to start this process, go to [www.gdls.com](http://www.gdls.com) and click on Doing Business With Land Systems.



## Supplier Assessments

The Supplier Approval Process may include the following:

- a) Supplier Initial Assessment (Quality System Assessment)  
GDLS may request the Supplier to provide a copy of its quality management system certificate.
- b) On-Site Assessment  
Regardless of the supplier's Quality Management System (QMS) certification status, GDLS may elect to conduct on-site assessments of a supplier.
- c) Self-Assessment  
GDLS may accomplish audits by having the supplier complete a self-assessment periodically. The GDLS SQA Regional Manager will advise if this type of audit is appropriate for the supplier.

## Control of Sub-Tier Suppliers

GDLS Suppliers are responsible for meeting all requirements, including work performed by the Supplier's sub-tier part and process sources. When the Supplier uses sub-tier sources to perform work on products and/or services to be delivered to GDLS, the Supplier shall include flow down of requirements on contracts, to its sub-tier sources, all of the applicable technical and quality requirements contained in the GDLS contract. GDLS reserves the right-of-entry to suppliers and all sub-tier supplier facilities, subject to proprietary considerations.

## **Special Processes**

Special processes (painting, plating, heat treating, welding, etc.) are a vital component of manufacturing and can introduce vulnerability on the overall process. Realizing this, GDLS strongly recommends that supplier of special process to be Accredited to Nadcap and only outsource special processes to providers that are Nadcap Accredited.

If special processes are involved in the production of the supplied product, Nadcap Accreditation is accepted for the special process. Soldering must meet the appropriate IPC standard. The supplier will provide all documentation indicating accreditation upon request or if not accredited, compliance to specification during FAI/FPI.

Definition of Special Processing: A special process is any production or service process which generates products or services which cannot be measured, monitored, or verified prior to delivery and use. Therefore, the processes must show compliance via confirmation of compliance to the industry standard or specification listed on drawing while fulfilling the process. For example, if CARC paint is the process, certification is needed to show the process followed the drawing specification via Certificate of Conformance and/or any testing data that is required by the noted drawing specification.

## **High Strength Fastener Requirement**

High strength fasteners (Grade 5 and 8 and metric classes 8.8, 9.8, 10.9, and 12.9) are used in specific assembly applications for various reasons. When the application is critical as determined by engineering, the purchase order will contain a unique requirement indicating so. Review the Purchase Order for specific Quality Clauses relative to High Strength Fasteners such as: QL-22 Screws/Fasteners, QP-41 Traceability MS Fasteners (CAD), QP-43 Traceability - MS Fasteners (Zinc), QP-44 North American High Strength Fasteners including Form 4496 for GDLS - Canada. All Quality Clauses can be found at: [www.gdls.com](http://www.gdls.com).

If imposed, the clauses require direct procurement from manufacturers approved by GDLS. It must be noted that distributors are required to buy products only from these approved sources (exception: QP-44 follow form 4496). A copy of the list is available from your GDLS SQA Regional Manager. Actual test results such as Physical, Chemical and Plating requirements must be provided upon request.

## **Weld Approval Letters (QW & QX Quality Clause Requirements)**

Where applicable, when welding is incorporated into the manufacturing process a GDLS weld approval letter is required prior to the start of production. A welding sample may be required to be sent to the accepting GDLS facility depending on the applicable welding quality clause listed on the GDLS PO. The GDLS PO quality clauses will indicate which documents and sample pieces are required and where to submit them when approval is required. Refer to [www.gdls.com](http://www.gdls.com) for the quality clause requirements.

The supplier will be required to have a copy of the GDLS weld approval letter for the First Article Inspection audit.

Weld approvals letters expire after 3 years from the issuance of the weld approval letter from the applicable GDLS facility. Exceptions are: 1 year break in production shipments and London Weld Lab approvals prior to **September 22, 2017**. Please contact your GDLS SQA Regional Manager for further clarification.

*Note: It is the supplier's responsibility to understand specified weld processes, codes and inspections required on the print and/or PO prior to the start of production.*

### **Certificate of Conformance (COC)**

Acceptable statements of quality should completely identify the material and be traceable by lot, production run, heat number, production date, and item serial number, where applicable. The certification must be available for review during a FAI or Source inspection audit. The COC must also be available within a reasonable amount of time when requested for review by GDLS.

Certifications where applicable must contain the following information as a minimum:

- The heat/lot number/batch/date codes
- Applicable part number/specification and revision
- Inspection data, Chemical, Ballistic, etc. as applicable
- Signature & Date performed/tested, where applicable
- CoCs are only accepted from the manufacturer of the part or from an authorized distributor
- *Note: COCs are not required to be sent with the shipment unless directed to by the PO.*

Certifications for protective coatings, such as anodizing or cadmium plating, must specify the class, type and/or grade to which the finished product conforms to. In addition to the specification number/revision, any special testing of the material such as corrosion resistance testing, salt spray and adhesion must include test results.

Proper planning and review of all Purchase Order (PO) & Technical Data Package (TDP) requirements and applicable specifications will enable suppliers to provide adequate statements of quality. The review and verification of this information upon receipt by the supplier will prevent unnecessary delay of acceptance of supplies, parts, processes, and/or materials.

### **Supplier Developed Software**

If supplier-developed test software is used as a means of functional product acceptance, the test software must be approved by GDLS Quality Engineering and Test (QE&T). The test software shall be submitted to GDLS QE&T for review to facilitate

software approval prior to the scheduled FAI. Contact your GDLS SQA Regional Manager or GDLS Buyer if you have any questions regarding this matter. Go to [gdls.com](http://gdls.com) for the proper form (QCS-5).

If the supplier has a software driven test stand/end of the line test station that they utilize to validate the production specification final test parameters, then they must have the Automatic Test Equipment (ATE) software code (not firmware code or source code - which is validated by Engineering) validated by GDLS QE&T Software Evaluation. It does not matter if the test gives only a pass/fail or not, each software communicates a result in its own way, the issue is if the software uses buy-off specification tolerance that the vendor has input in the software to communicate if the production product is within the contract specified tolerance. The test unit can be manually stepped through with operator intervention or it can run and produce any numerous type resultants that lets the operator know if the product is within production performance tolerance.

### **Counterfeit Avoidance/Mitigation Requirements for Electronic Components & Assemblies**

General Dynamics Land Systems flows down Counterfeit Avoidance/Mitigation requirements to its suppliers as part of the Terms and Conditions on the purchase orders. The Terms and Conditions are located on the General Dynamics Land Systems' web page.

The General Dynamics Land Systems Purchase Order Terms & Conditions require that only new and authentic materials are used in products unless approved in advance in writing by the GDLS Buyer. To further mitigate the possibility of the inadvertent use of Counterfeit Parts, the Supplier shall only purchase authentic parts/components directly from the Original Equipment Manufacturers ("OEMs"), Original Component Manufacturers ("OCMs") or through the OEM's/OCM's authorized dealers. The Supplier shall also ensure that all parts/components delivered to GDLS are traceable back to the OEM/OCM. The supplier must maintain and make available to GDLS OEM/OCM documentation that authenticates traceability of the parts/components to the applicable OEM/OCM.

Purchase of parts/components from Non-Franchised Sources is not authorized unless first approved in writing by the GDLS Buyer.

- The Supplier must present complete and compelling support for its request and include in its request all actions to ensure the parts/components thus procured are legitimate parts.

### **Repair vs Rework**

In the performance of fulfilling GDLS Purchase Orders for production and/or spare parts orders, it is imperative to confirm that the parts manufactured for shipment to GDLS have not had any repairs completed without prior approval from GDLS.

Any repairs done without prior approval from GDLS may be subject to scrap. Please be sure to flow this requirement down to all sub-tier manufacturers.

### **Know the difference between repair and rework.**

**REPAIR** – the action of taking a nonconforming product and modifying it to make it acceptable for the parts intended use but is not 100% to the technical data package requirements (e.g., performing weld fill on a hole that was originally cut oversize and then drilled again to meet specification, drilling and tapping holes in a part to use in a jig during machining and then weld filling those holes, any/all fixture(s)/manufacturing process(es) requiring removal of parent part material would also be considered a repair)

Repairs **CANNOT** be done without prior approval from GDLS.

**REWORK** – the action of taking a nonconforming product and performing the same processing or equivalent processing to bring a part within the specification of the technical data package, (e.g., performing an additional drilling or reaming process to bring a hole into specification that was originally undersize).

Rework is acceptable to perform without approval from GDLS.

## **Product Qualification**

### **QY11 & QY14 First Article Inspection (FAI)**

If a first article inspection (FAI) is required as part of your purchase order (QY-11) & (QY-14) it is the supplier's responsibility to conduct an internal FAI on One (1) of the first five (5) pieces for the (QY-11) Clause and Five (5) pieces for the (QY-14) Clause. The purpose of the requirement is to assure the Supplier/Delegate has reviewed the product against the Purchase Order and all supporting documentation for all characteristics and found conforming. It is also the supplier's responsibility to verify and document 100% conformance of all Dimensional, Physical, Chemical, Process and Test requirements specified as part of the order. The FAI forms QCS-16, QCS-16-1, QCS-16-2, and QCS-16-3 will be used to document the First Article Inspection Report (FAIR). Copies of the FAI forms, and FAI guide are available at [www.gdls.com](http://www.gdls.com).

*Note: The Supplier's FAI submission must be reviewed and approved by a GDLS SQA Regional Manager or GDLS SQA Field Representative prior to shipping product to any GDLS facility if QY-11 or QY-14 is listed on the PO.*

### **The use of Emails as a means of product changes or for acceptance**

Please contact your GDLS SQA Regional Manager if your company is provided an email from GDLS which is to be used as a means of product/process acceptance. A decision will be made by the GDLS SQA Regional Manager on whether or not the email is the proper document to use for product/process acceptance.

### **QY15 Material Compliance**

QY15 submissions require a first article inspection request. QY15 shall be listed in the quality clause section of the FAI request form alerting the GDLS SQA Regional Manager of the requirement. The supplier should send their GDLS SQA Regional Manager a copy of the C of C from the manufacturer of the part, and a copy of the GDLS PO. The GDLS SQA Regional Manager will send notification of acceptance (or rejection) back to the supplier representative which authorizes the supplier to ship the parts. If the supplier has other FAI's scheduled during the same week the GDLS Field Rep. can complete the QY15 part requirements when they complete the other FAI audits. Please go to [www.gdls.com](http://www.gdls.com) for full listing and explanation of this quality clause.

### **First Article Inspection (FAI) Submission for Quality Clauses QY11 & QY14**

As part of the initial production run, the documentation & inspection package is prepared for review by the supplier's ID delegate or a quality representative. Once completed, the supplier is required to request FAI via [gdls.com](http://gdls.com). The request for FAI can be found at [gdls.com](http://gdls.com). A FAI verification audit will be arranged within **five (5)** days of the request for QY-11 and **30 days** for QY-14.

A FAI is considered extended by GDLS from one purchase order to the next providing that:

- No part configuration changes have occurred
- Part is manufactured at the same facility
- Manufacturing process has remained the same
- No more than (1) year lapse in production shipments
- The sub-tier suppliers and/or special processors have not changed
- No formal corrective action has been required

***GDLS SQA Regional Manager must be notified if any of the above conditions cannot be met. A delta FAI will need to be requested.***

Summary of necessary supplier actions for FAI:

- 1) Submit FAI request.

- a. Complete the online “First Article Inspection / Source Inspection Request” form and press the “Submit Request” button to send it to us electronically.
  - b. Once SQA receives the audit request the will be scheduled as required.
  - c. The FAI forms QCS-16, QCS-16-1, QCS-16-2, and QCS-16-3 forms will be used to document the FAI’s and Source Inspection audits. Copies of the FAI forms, and FAI guide are available at [www.gdls.com](http://www.gdls.com)
- 2) FAI approval is required prior to the first shipment.
  - 3) FAI package shall be reviewed by the supplier’s quality delegate(s) for completeness prior to GDLS audit request notification.
  - 4) Allow/plan for a five (5) day lead time for GDLS to schedule a QY11 FAI or (30) days lead time for a QY14 FAI.
  - 5) Notify the GDLS SQA Regional Manager prior to the audit visit if a nonconformance exists. The GDLS SQA Regional Manager can help to determine what course of action will be required. (e.g., waiver/deviation, SQMR, rework, etc.)
  - 6) Notify the GDLS Buyer and GDLS SQA Regional Manager of any changes pursuant to the No Change Clause. (See No Change Clause section in this document)
  - 7) Suppliers will retain all approved FAI documentation on file unless contractually required to be supplied with parts.

#### **FAI Data Package at a Minimum for Quality Clauses QY11 & QY14**

- Copy of GDLS Purchase Order and any included copies of referenced QARs, QAPs and/or Ordering Data (OD)
- QCS-16 FAIR Cover Sheet
- A Balloon Drawing and associated QCS-16-1 FAI inspection data report
  - 100% Dimensional with inclusion of print note verification
  - Final Inspection/Test Reports
- QCS-16-2 Nonconformance Summary form
- Certifications for materials and processes with QCS-16-3 Materials & Process form
- Weld approval letter as applicable
- Software approval letter as applicable
- Product available to be reviewed & evaluated
- Copy of work instructions as needed
- 2 copies of stamped Shipper/Packing Slips for shipment and record retention
- A list of applicable calibrated measurement tools

If you have any questions call your GDLS SQA Regional Manager. The Regional Map is located at [www.gdls.com](http://www.gdls.com) and will contain their names and contact information.



## **QY2 First Article Inspection (FAI), First Article Test (FAT) and First Article Approval (FAA)**

The First Article requirements are selectively applied based on negotiations between GDLS and the customer. All items subject to First Article Approvals (FAA) have a Quality Requirement flow down in the purchase order designating them as candidates for FAA. The actual requirement applies only if there is a line item for a deliverable within the PO. The absence of this line item indicates no FAA is required on a given PO.

### **QY2 First Article Inspection (FAI)**

A comparison of parts produced within the initial manufacturing run to the Technical Data Package (TDP) requirements as defined in the purchase order. The first five (5) parts will be fully inspected and serialized as to retain traceability of the parts to each of the five (5) inspection reports. All subassemblies and detail parts within an assembled part will be inspected and kept with the applicable serialized part inspection reports. After the FAI audit has been conducted and approved, a GDLS representative will choose 2 out of the 5 parts to be used for FAT. FAI will be performed in accordance with QCS-83-4 and QCS-4. The request for FAI audit will be done at [www.gdls.com](http://www.gdls.com). The supplier making the request should add a comment in the audit request that states this audit is for FAI audit

### **First Article Test (FAT)**

Supplier shall conduct First Article Test (FAT) examinations on the chosen item(s) or its sub-component(s) in accordance with the requirements of the Technical Data Package (TDP) and only required when an active line item exists in the Purchase Order. First Article Tests are primarily tests of an environmental or durability type and are conducted in laboratory conditions.

**FAT requirements will be defined in one of the following (2) conditions:**

#### **1) First Article Test (QY2) Quality Clause Requirements as a Line Item (cost or No cost) on the Purchase Order**

When included as a deliverable line item on a purchase order, certification attesting to the successful completion of the FAT will be submitted via the GDLS Buyer as scheduled. Deviation / extension from the scheduled due date must be approved by GDLS Quality Engineering and Test (QE&T) prior to the due date.

#### **2) First Article Test as Cited in the Technical Data Package Only**

The Supplier must provide objective evidence that the material meets all of the TDP requirements. Such evidence will be required during the First Article Inspection.

### **QY2 First Article Approval (FAA)**

Once the FAT is submitted through the GDLS Buyer on the purchase order, GDLS Quality Engineering and Test (QE&T) will review the test data and if deemed complete

and compliant to all TDP requirements, will issue a First Article Approval letter. This letter must be obtained or waived with a pending approval date prior to parts being shipped. Refer to the QCS-4, QCS-5 and QCS-83-4 for detailed FAI and FAA requirements (all documents are available on [www.gdls.com](http://www.gdls.com)).

### **FAI Supplemental Documents to the TDP (QY11, QY12, QY14, QY2, EQD2A)**

Suppliers are expected to ship compliant parts, however there may be the need to ship parts that do not meet the current Technical Data Package (TDP). These TDP variances may be for various reasons including but not limited to Engineering Change Order (ECO) that has not yet been released, weld approval letters not signed off, print errors which require an ECO, or a dimensional non-conformance due to a processing error. These are the different types of documents for different scenarios:

- Temporary Release Authorization (TRA) /Ship Prior to Test (SPT) can be used for issues like:
  - Missing Quality Acceptance/Verification Documentation.
  - Open/Unresolved Control Test or First Article Test (FAT) incidents.
  - Pending approval of Engineering Change Order (ECO) documents (ECP, CR, CCR, SCR, Waiver/Deviation/Variance).
  - Nonconforming material to be used as a Temporary Production Aid pending availability of conforming material. TRA should specify “Remove and Replace”
  - If a TRA waives FAI/FPI, then the TRA must specifically say that the part is to be shipped prior to FAI/FPI approval. The part is shipped with:
    - the approved TRA number on a Quality Alert and a stamped packing slip (London only).
    - the approved TRA letter itself and a stamped packing slip (US locations).
  - The approved TRA/SPT number must be listed in the P.O.
  - These documents are good for a specific quantity of parts. Contact your GDLS SQA Regional Manager for direction if you’ve shipped the full quantity of parts listed and another shipment is due.
- FAI/FPI must be completed for all items not specifically waived in the TRA \*
- GDLS SQA Regional Manager may require delta FAI after the TRA letter expires. \*\*
- Waivers / Deviations / Variances
  - An approved change to the print and/or TDP by GDLS Engineering.
  - It is to establish a configuration control process that permits a temporary departure from the Technical Data Package (TDP).
  - The approved Waiver/Deviation/Variance number must be listed in the P.O.
  - These documents are good for a specific quantity of parts. Contact your GDLS SQA Regional Manager for direction if you’ve shipped the full quantity of parts listed and another shipment is due.
- Supplier Quality Material Report (SQMR)
  - A onetime approval to ship minor nonconforming material due to a Supplier’s manufacturing issue.

- It is a Suppliers request for a GDLS's Material Review Board (MRB) to determine whether the nonconformance can be designated Use As Is (UAI).
- The approved SQMR number must be listed in the P.O.
- This document is good for a specific quantity of parts. Contact your GDLS SQA Regional Manager for direction if you've shipped the full quantity of parts listed and another shipment is due.

**Note:**

**\*TRA letter does not waive the FAI/FPI requirement unless is specifically states this within the TRA document. If you have any question, contact your GDLS SQA Regional Manager.**

*\*\*If a FAI/FPI is shipped under one of these scenarios a Delta or Full FAI may need to be conducted on the corrected issue. Your GDLS SQA Regional Manager can make that determination.*

Contact your GDLS Buyer and/or your GDLS SQA Regional Manager for additional information.

**QY12 First Piece Inspection**

If a first piece inspection (FPI) is required as part of your purchase order (QY-12) it is the supplier's responsibility to conduct an internal FPI on One (1) of the first five (5) pieces for the (QY-12) Clause. The purpose of the requirement is to assure the Supplier/Delegate has reviewed the product against the Purchase Order and all supporting documentation for all characteristics and found conforming. It is also the supplier's responsibility to verify and document 100% conformance of all Dimensional, Physical, Chemical, Process and Test requirements specified as part of the order. The requirement may be satisfied by objective evidence available in the supplier's normal system such as in-process operational process controls, final inspection records, test reports, certifications, SPC data, etc.

The FPI is considered satisfied if a First Article Inspection (FAI) has been completed in accordance with QY-2.

*Note: The Supplier's FPI submission must be reviewed and approved by a GD SQA or GD SQA Field Representative prior to shipping product to any GD facility if QY-11 or QY-14 is on the PO*

**The use of Emails as a means of product changes or for acceptance**

If the supplier is provided an email from GD which is to be used as a means of acceptance, please contact your SQA GD Regional Manager. A decision will be made by the SQA GD Regional Manager on whether or not the email is the proper document to use for product acceptance.

## **First Piece Inspection Submission**

As part of the initial production run, the Documentation & Inspection Package is prepared for review by the supplier's ID delegate or a quality representative. Once completed, the supplier is required to request FPI via gdls.com. The request for FPI can be found at gdls.com. An FPI verification audit will be arranged within **five (5)** days of the request for (QY-11) and **30 days** for (QY-14).

A FPI is considered extended by GDLS from one purchase order to the next providing that:

- No part configuration changes have occurred
- Part is manufactured at the same facility
- Manufacturing process has remained the same
- No more than (1) year break in production
- The sub-tier suppliers and special processors have not changed
- No formal corrective action has been required

## **SQA must be notified if any of the above conditions cannot be met.**

Summary of necessary supplier action for FPI:

- 1) Submit FPI request.
  - a. Complete the online "First Piece Inspection / Source Inspection Request form and press the "Submit Request" key to send it to us electronically.
  - b. Once we receive your request the audit will be scheduled as required.
  - c. A QCS-16 Coversheet form will be used as a checklist for FPI's. A copy is available at gdls.com
- 2) FPI required prior to first shipment.
- 3) FPI package reviewed for completeness prior to GDLS notification.
- 4) Allow/plan for five (5) day lead time for GDLS to schedule a (QY12) FPI.
- 5) Notify SQA Regional Manager prior to visit if a nonconformance exists.
- 6) Notify GDLS of any changes pursuant to the No Change Clause.
- 7) Retain all approved FPI Documentation on file.

## **FPI Data Package at a Minimum**

- Copy of GDLS Purchase Order, includes copies of any referenced QARs, QAPs and Ordering Data (OD)
- A Balloon Drawing and associated paperwork
  - 100% Dimensional with inclusion of print note verification
- Product to be evaluated
- Certifications for materials and processes
- Weld approval Letter as applicable
- Final Inspection/Test Reports
- If software is utilized, provide a copy of GDLS Software Approval letter
- Copy of work instructions as needed

- 2 copies of Shipper/Packing Slip for stamping
- A list of applicable measurement tools

If you have any questions call your Regional Manager. The Regional Map located at [www.gdls.com](http://www.gdls.com) will contain their names and contact information

### **QY-3 Control Test (CT)**

The Supplier shall conduct Control Test (CT) examinations on this item or its sub-components in accordance with the requirements of the Technical Data Package (TDP). CT(s) are primarily tests of environmental and/or durability type conducted in laboratory conditions. The test requirements and frequency are defined in the TDP.

**CT requirements will be defined in one of the following (2) conditions:**

#### **Control Test (QY3) Quality Clause Requirements as a Line Item (cost or No cost) on the Purchase Order**

When included as a deliverable line item on a purchase order, certification attesting to the successful completion of the CT shall be submitted via the GDLS Buyer as scheduled. Deviation / extension from the scheduled due date must be approved by GDLS Quality Engineering and Test (QE&T) prior to the due date. Hardware shipment prior to CT acceptance and approval in writing by GDLS QE&T is not allowed. Specific instructions for CT(s) are contained in QCS-4A (available at [www.gdls.com](http://www.gdls.com)).

#### **Control Test as Cited in the Technical Data Package Only**

The Supplier must provide objective evidence that the material meets all of the TDP requirements. Such evidence will be required during the First Article Inspection (QY11) and frequency requirements will be addressed during the scheduled Quality System audits.

#### **Source Inspection**

Source Inspection can be imposed on a supplier as decided by GDLS SQA Management for various reasons and is not necessarily to be construed as punitive. A new Supplier to GDLS will be required to utilize the Source Inspection procedure even though the QJ-21 Inspection Delegation Clause appears on the purchase order. This will continue until the supplier is established and the GDLS SQA Regional Manager can conduct Inspection Delegation Training.

Source Inspection is not the desired state and is to be considered an exception to the rule until resolution of a quality issue occurs or a new supplier is established.

Continued source inspection driven by supplier related quality issues will be taken into consideration during sourcing decisions and can lead to removal from the GDLS Approved Supplier List.

### **EQD2A Production or EQD2C Engineering GDLS Source Inspection (SI)**

It is the supplier's responsibility to have all the supporting data needed to verify conformance to the PO & TDP. The FAI forms QCS-16, QCS-16-1, QCS-16-2, and QCS-16-3 will be used to document the Source Inspection audits. Copies of the FAI forms, and FAI guide are available at [www.gdls.com](http://www.gdls.com). The supplier will perform the inspections on the quantity of parts as dictated by the supplier's lot sampling plan. The supplier will document the inspection data for one (1) from the lot on the FAI forms QCS-16, QCS-16-1, QCS-16-2, and QCS-16-3. If the lot size and the suppliers lot sampling plan calls for additional parts to be inspected above one (1) then the supplier can use the FAI QCS documents or use their own inspection documentation format for the remaining in the lot sampling plan. The initial First Article Inspection data packet should be available and a walk through of the manufacturing process to include a review of work instructions/travelers should be anticipated as a means to validate any special process requirements.

### **The use of Emails as a means of product changes or for acceptance**

Please contact your GDLS SQA Regional Manager if your company is provided an email from GDLS which is to be used as a means of product/process acceptance. A decision will be made by the GDLS SQA Regional Manager on whether or not the email is the proper document to use for product/process acceptance.

### **Source Inspection Submission Process**

- The supplier shall notify GDLS SQA utilizing the FAI / Source Inspection request form which can be found at [www.gdls.com](http://www.gdls.com). A five (5) day minimum notification is required for this request in accordance with GDLS PO requirements. Notify the GDLS SQA Regional Manager prior to the audit visit if a nonconformance exists. The GDLS SQA Regional Manager can help to determine what course of action will be required prior to the product review. (e.g., waiver/deviation, SQMR, rework, etc.)
  1. Complete the online "First Article Inspection / Source Inspection Request form and press the "Submit Request" key to send it to us electronically. Be sure to select the audit type being requested is Source Inspection.
  2. Once SQA receives the audit request, the GDLS SQA Regional Manager will process request as needed.

*See the section on Miscellaneous Additional Technical Data Package (TDP) Documentation (OD, SQMR, QAP/QAR, etc.).*

## Summary

- Complete Source Inspection Request Form (**See above**) and submit
- Incomplete Forms will not be processed
- Allow for five (5) day lead time for GDLS to schedule source inspection audit review
- Ensure Technical Data Package is ready before GDLS is notified
- Notify the GDLS SQA Regional Manager prior to the audit visit if a nonconformance exists. The GDLS SQA Regional Manager can help to determine what course of action will be required. (e.g., waiver/deviation, SQMR, rework, etc.)
- Make available the initial FAI Package
- Provide 2 copies of the packing slips for GDLS stamp after acceptance (one shipped with product, other kept for supplier's records).
- Retain approved Source Inspection Documentation on file per P.O. requirements

## EQD2A Clause – Source Inspection Data Package at a Minimum

- Copy of GDLS Purchase Order and any included copies of referenced QARs, QAPs and/or Ordering Data (OD)
- QCS-16 FAIR Cover Sheet
- A Balloon Drawing and associated QCS-16-1 FAI inspection data report for 5 pieces at the top level part number and 1 piece for lower level sub-assemblies and detail parts
  - 100% Dimensional with inclusion of print note verification
  - Final Inspection/Test Reports
- QCS-16-2 Nonconformance summary form
- Certifications for materials and processes with QCS-16-3 Materials & Process form
- Weld approval Letter (Per PO QW & QX Quality Clause where applicable)
- If software is utilized as a means of end item functional acceptance, provide a copy of the GDLS Software Approval letter
- Copy of Work Instructions if needed
- 2 copies of the Shipper/Packing Slip for stamping
- A list of applicable calibrated measurement tools

If you have any questions call your GDLS SQA Regional Manager who can be found at [gdls.com](http://gdls.com) and click on the Regional Map.

## Supplier Without GDLS ID Stamps- Source Inspection Data Package at a Minimum

There are many reasons a supplier may not have GDLS ID stamps (i.e., new supplier, stamp holders retire / leave company, quality issues resulting in stamp removal,)

- Since the reasons a supplier doesn't have stamp vary widely you shall notify your GDLS SQA Regional Manager to determine what the inspection criteria will be for the applicable source inspection.

## **QG5 – C=0 Lot Sampling Plans / Acceptable Quality Level (AQL)**

Suppliers shall utilize a quality inspection plan that includes quality inspections on random samplings of production lots, batches, production intervals that are manufactured for GDLS. Suppliers and all sub-tiers will perform lot sampling per the AQL referenced in the **PQA3000** and the **GDLS** quality clause QG5 unless a more stringent lot sampling plan is defined within the Technical Data Package (TDP) (e.g., QAP/QAR/SQAP, Industry Standards, Military Standards, etc.). If there are no other lot sampling requirements within the TDP then the maximum allowed AQL will be 4.0. Suppliers are encouraged to use a tighter AQL (e.g., 2.5, 1.5, 1.0) to reduce the opportunities for escapes of nonconforming parts.

Suppliers and all sub-tier suppliers are required to inspect parts for conformance using a C=0 lot acceptance plan. If one defect is found the entire lot is to be quarantined and inspected 100% for conformance. Suppliers will continue performing 100% inspection until the issue has been corrected and verified the correction is effective. (Any rework done on parts is to be inspected 100% for conformance prior to release from quarantine. Any repair processing needed must be pre-approved by GDLS Engineering and inspected 100% for conformance prior to release from quarantine.)

All features will be inspected from the TDP during the lot sampling inspections. The data is to be stored at the supplier site and shall be made available to GDLS upon request within a reasonable time frame.

Selection of samples from a lot shall be done at random without regard to their appearance, quality, etc. Random sampling requires that each unit in the lot, batch, or production interval has the same probability of being selected as a sample.

When a supplier is first sourced a new part from GDLS the following process will add heightened AQL inspections. Suppliers will be required to institute an AQL of 2.5 for the first five (5) production lots produced. If there is no defect(s) found after the first five (5) lots produced suppliers may ease the AQL to 4.0.

Lot acceptance is still C=0 with any AQL that is being used during this process.

If a defect is found during lot sampling, then the supplier will move to the previous AQL of 2.5 and begin the process again. Suppliers can always use a tighter AQL to reduce the opportunity for defects to make it through the production and inspection processes.

As stated above if there are more stringent lot sampling requirements found within the TDP (e.g., QAP/QAR/SQAP, Industry Standards, Military Standard, etc.), the supplier must perform their inspection levels to the most stringent requirement. **GDLS SQA Regional Managers may adjust the AQL as needed to best fit the requirements of the TDP and supplier process capabilities.**



VICD parts purchased from the recommended source of supply will adhere to their manufacturers sampling plans unless otherwise dictated by the TDP. VICD parts 'NOT' purchased from the recommended source of supply will need to follow these lot sampling plan requirements.

COTS parts will have lot sampling performed to the manufacturers lot sampling standard.

## GDLS C = 0 Lot Acceptance Sampling Plan

Lot Size	Acceptable Quality Levels											
	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5
2 to 8	*	*	*	*	*	*	*	*	*	5	3	3
9 to 15	*	*	*	*	*	*	*	13	8	5	3	3
16 to 25	*	*	*	*	*	*	20	13	8	5	3	3
26 to 50	*	*	*	*	*	32	20	13	8	7	7	5
51 to 90	*	*	*	80	50	32	20	13	13	11	8	5
91 to 150	*	*	125	80	50	32	20	19	19	11	9	6
151 to 280	*	200	125	80	50	32	20	29	19	13	10	7
281 to 500	315	200	125	80	50	48	47	29	21	16	11	9
501 to 1200	315	200	125	80	75	73	47	34	27	18	15	11
1201 to 3200	315	200	125	120	116	73	53	42	35	23	18	13
3201 to 10000	315	200	192	189	116	86	68	50	38	29	22	15
10001 to 35000	315	300	294	189	135	108	77	60	46	35	29	15
35001 to 150000	490	476	294	218	179	123	96	74	56	40	29	15
150001 to 500000	715	476	345	270	200	156	119	90	64	40	29	15
500001 and over	715	556	435	303	244	189	143	102	64	40	29	15

\* Indicates the entire lot must be inspected.

1. The chart above represents lot sampling acceptance of C=0.

2. If not specified within the Technical Data Package an AQL of 4.0 would be the standard AQL.

## Control of Nonconforming Product

### Returned Non-Conforming Parts

Cause code "SUP" in the NC document indicates that the nonconformance is due to a supplier quality issue. It is crucial a supplier reacts to returned product and notifies GDLS of their root cause analysis. If the analysis determines a supplier is at fault, immediate permanent corrective action must be implemented and documented. If the analysis reveals the defect is not the supplier's responsibility, immediate formal notification should be sent to the GDLS Buyer and their GDLS SQA Regional Manager stating their findings.

## **Supplier Quality Material Report (SQMR)**

Supplier Quality Material Reports (SQMR's) are intended to address minor nonconformance's discovered on GDLS product located in the supplier's facility. Suppliers cannot conduct Material Review Board (MRB) activities or dispositions on GDLS material unless specifically given authority in writing on the PO.

Submission of an SQMR is permitted when non-conformances are minor in nature and the material is held in the supplier's facility pending the GDLS MRB response to the SQMR. The form is available at [gdls.com](http://gdls.com). Suppliers may be allowed the use of a SQMR for a maximum of one (1) lot of material during the life of a purchase order for a specific minor non-conformance. Suppliers shall notify their GDLS Buyer, complete the SQMR form and submit the form to ([sqa@gdls.com](mailto:sqa@gdls.com)) when MRB action is being requested.

Upon completion of the GDLS MRB action and processing, the supplier will be notified by email of the result of that review.

If the final disposition is "use-as-is" or "repair", the supplier will be emailed a copy of the completed SQMR for inclusion with the shipping documentation. If the disposition requires additional action, it must be completed prior to shipment of the material.

If the final disposition is "rework", "return to supplier (RTS)," or "scrap," the supplier will be forwarded a copy of the SQMR for informational purposes and be required to follow the indicated disposition.

*Note: All quantities shipped to GDLS under an SQMR if approved, are considered as nonconforming material and will be reflected on the Suppliers Quality Rating.*

## **Corrective Action and Continuous Improvement Methodology**

### **Corrective Action (CA)**

GDLS SQA has a three step approach to supplier/part corrective actions. Supplier notifications of non-conformances are emailed to suppliers when a nonconformance is discovered and deemed supplier responsible. (SUP)

### Step 1

The notification will occur in the form of a “**Notice of Supplier Material Rejection.**” The supplier must conduct a **formal** investigation and maintain the results on file. The CA must be presented to the GDLS Field Rep during the scheduled Inspection Delegation Audit.

When a supplier disputes SUP material return, justification describing the rationale for the change must be furnished in writing to the GDLS Buyer by the supplier. Documentation must identify the return GDLS shipper number, the applicable nonconformance document number, purchase order number, line item number, serial number(s) and quantity in question. The repair versus new unit cost and supplier contact name and telephone number must also be obtained. Copies of applicable nonconformance documents and GDLS shippers should also be provided.

Rejected material impacts the supplier’s Quality Rating. It is supplier’s responsibility to address any disputed issues.

### Step 2

Formal Corrective Actions (CA) may be issued for any supplier with three or more rejects for the same part number in a 30-day period. A formal response, within 30 days, will be required and is to be submitted through your GDLS SQA Regional Manager. A copy of the 7D Corrective Action Form can be found at [gdls.com](http://gdls.com) (**Corrective Action Form 7-D**). The 7-D is the preferred format for submittal. The GDLS SQA Regional Manager may also request that a Flow Chart/Control Plan (FC/CP Work Sheet be completed as part of the Permanent Corrective Action.

### Step 3

Any supplier with a Quality acceptance rate below 98% for a 12-month period may be placed on Intensive Management. Intensive Management consists of both Procurement and GDLS SQA representatives who review supplier history and determine disposition for each supplier up to and including disapproval and removal from the GDLS Approved Supplier List.

Supplier’s Responsibility: At a minimum the 7-D format CA should include:

- Use the team approach
- Describe the Problem
- Contain the Suspect Product (*Notify GDLS of any Suspect Product that has already been shipped*)
- Define and Verify Root Cause
- Implement and Verify Interim Corrective Action
- Implement Permanent Corrective Action
- Prevent Recurrence (Submit a FC/CP/ Work Sheet if requested)

## Tools for Continuous Improvement

To achieve the desired goal of producing consistently conforming products, a supplier's manufacturing process should be designed to reduce variation by using various tools such as Six Sigma, Lean Manufacturing, Kaizen, Five-S, Failure Mode Effects Analysis (FMEA), Key Product Characteristics, SPC, Process Flow Charts, Control Plans, Error Proofing, Detailed Work Instructions with definitions and examples. These and other Quality initiatives can be found at: [www.gdls.com](http://www.gdls.com) (Quality Toolbox - Tools & Techniques)

## Supplier Performance Score

General Dynamics Land Systems rates suppliers in relation to various performance factors. The goal is to identify problem areas and work with the supply base to improve their performance ratings with the various General Dynamics Land Systems locations. The performance factors reviewed are summarized in the figure below. Please review the Supplier Manual at [www.gdls.com](http://www.gdls.com) for further details

Primary Criteria	Category Weight	Sub Category	Sub Category Possible Points	Rating Scale		Scoring Guide			
				Range	Points	Excellent	Acceptable	Marginal	Unsatisfactory
Quality	40	Acceptance Rate	25	≥ 99%	25	40	39 to 32	31 to 24	< 24
				98.5% to 98.9%	20				
				98% to 98.4%	15				
				<98%	0				
Non-Conformance Score	5		5	0-1	5	40	39 to 32	31 to 24	< 24
				2-5	4				
				6-15	3				
				>15	0				
				Corrective Action Score	10				
1	8								
2	6								
>2	0								
Sub Category Total			40						
Delivery	40	On-Time to Need-by Date	20	> 95%	20	40	39 to 32	31 to 24	< 24
				90% to 95%	16				
				85% to 90%	12				
				< 85%	0				
				Promise Date Accuracy	20				
90% to 95%	16								
85% to 90%	12								
< 85%	0								
Sub Category Total			40						
Risk and Compliance	20	Order Acknowledgement	10	> 95%	10	20	19 to 16	15 to 12	< 12
				90% to 95%	8				
				85% to 90%	6				
				< 85%	0				
				Lead Time Accuracy	10				
90% to 95%	8								
85% to 90%	6								
< 85%	0								
Sub Category Total			20						
Overall			100			100	99 to 81	80 to 58	< 58

## Supplier Quality Score

There are NO receiving inspectors in any of our assembly plants. GDLS Suppliers are expected to make the necessary commitments to achieve and maintain acceptable performance score. In the event a Supplier fails to maintain this score, GDLS may elect to terminate the Supplier's delegation privileges and recall or suspend the inspection delegate stamps. Any Supplier with an unsatisfactory score-may be required to provide corrective action. If the Supplier's score fails to improve in a timely manner it could lead to GDLS termination for default proceedings in accordance with the purchase order's (PO) terms and conditions.

## *Contact Information*

Communications with the SQA Organization can be made through the following media:

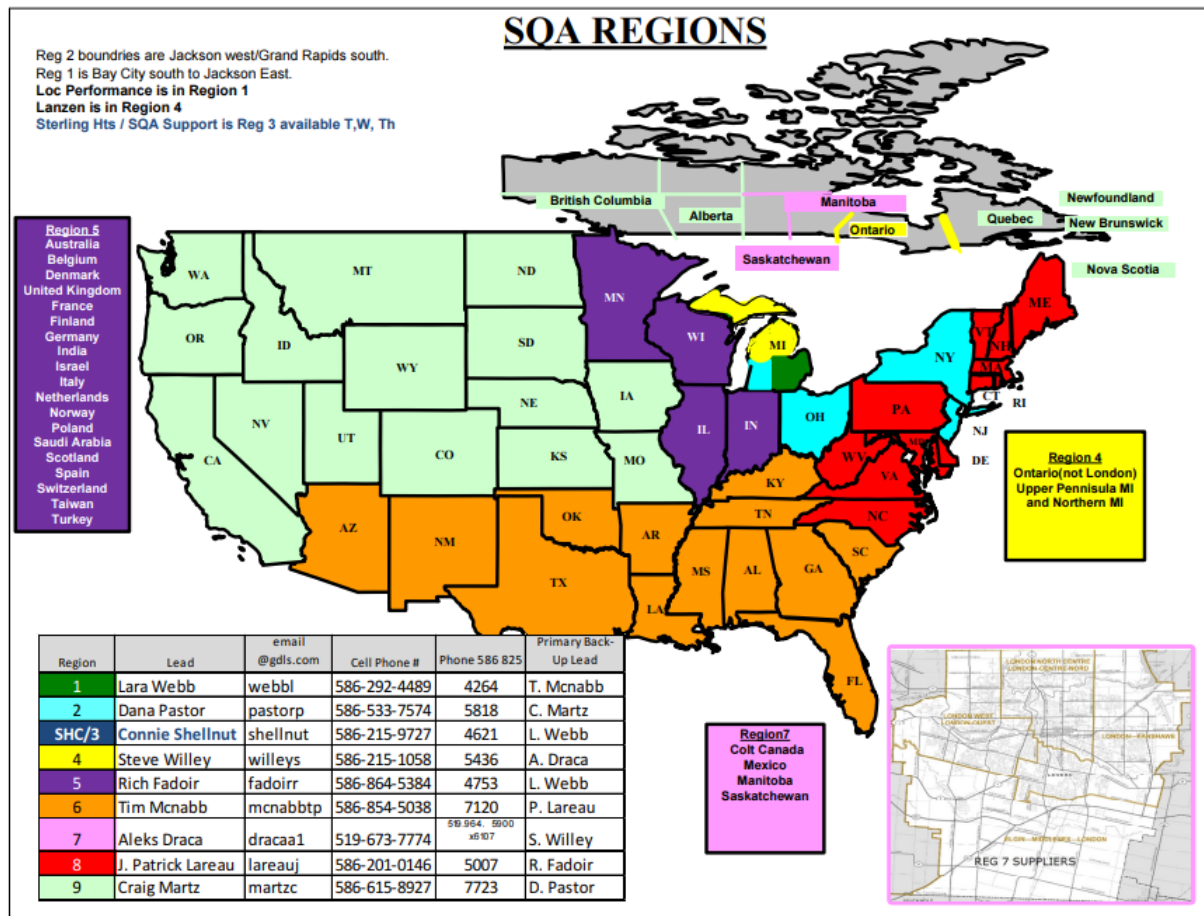
E-mail: [sqa@gdls.com](mailto:sqa@gdls.com)

Mail: General Dynamics Land Systems  
38500 Mound Road  
Sterling Heights, MI 48310-3200  
Mail Zone: 436-30-45  
Attention: Recipients Name

Phone: See the SQA Regions on Line Map for Office and Cell Phone Numbers

FAX: (586) 446-7568 Attention: Recipients Name

The preferred method of communication is E-Mail due to the administrative availability of the SQA Regional Managers. Using the SQA E-Mailbox electronically allows the request to be processed regardless of specific GDLS SQA Regional Manager availability. The forms exhibited in the PQA3000 Book may be electronically reproduced by the supplier for convenience. See the company Web Site [gdls.com](http://gdls.com) for the latest revision of the GDLS SQA Regional Map and all Forms. A sample of what it looks like is below:



05/1/2022

## Frequently Asked Questions

Where are the Quality Clauses located?

[gdl.com](http://gdl.com) (supplier-quality)

If the QJ-21 Inspection Delegation (ID) clause appears on our purchase order (PO) can the Supplier automatically ship material?

*No, ID training must take place and ID Stamps must be issued to the Supplier's Delegates before product can be shipped. Until training can be completed Source Inspection by a GDLS SQA Representative must be requested.*

What should I do if my stamp is lost or damaged?

*Notify GDLS SQA Regional Manager immediately.*

How long must I maintain Records?

*See your Purchase Order for terms and conditions T's & C's.*

**What Documents need to be stamped prior to shipping?**

*Shippers/Packing Slips must be stamped. One copy goes with the parts and one copy must be kept on file. Unstamped documents may cause the product to be shipped back to the supplier at the supplier's cost.*

**Do the suppliers' inspection delegate have final approval authority on First Article Inspection (FAI) requirements?**

*No. Final approval must come from GDLS personnel*

**Does the supplier have MRB authority?**

*Only if specified in your purchase order. All other requests shall be processed in accordance with the SQMR process.*

**Can the ID Delegate's stamp be transferred/reassigned to someone else in the company?**

*No. Return to Regional Manager*

**What do I do if we discover that non-conforming product has been shipped?**

*Contact your GDLS SQA Regional Manager and GDLS Buyer immediately and contain any remaining suspect material.*

Forms for SQA are at [gdls.com](http://gdls.com) and a selection of the choice of forms is shown below (excerpt from web page).

## **Supplier Quality Assurance**

4496 - QA Externally Threaded Steel Fasteners(Revised 09/26/2005)

4707 - Chemical Agents Resistance Coating (CARC) Process Certification(Revised 09/28/2015)

4708 - Chemical Agent Resistant Coating (CARC) Process Certification

Corrective Action Form (7-D)

Delegation Training

First Article Inspection / Source Inspection Request

Flow Chart/Control Plan Worksheet

Inspection Delegation Request Form (QJ-21)(Revised 03/11/2020)

Process Flow Charts

Production Quality Assurance Handbook (PQA-3000)(Revised 01/31/2020)

Quality Toolbox - Tools & Techniques

Regional Map (Revised 5/1/2022)

Supplier Quality Material Report (SQMR) Form(Revised 09/01/2017)





## Supplier Quality Material Report (SQMR)

See 2<sup>nd</sup> page for instructions to complete.


This form is to be used when requesting acceptance by *General Dynamics Land Systems* of material containing minor nonconformance(s) to Technical Data Package (TDP) specification. The request will be processed by GD personnel to obtain required approvals. Please fill out the blue items on the form completely and forward it to [sqa@gdls.com](mailto:sqa@gdls.com) (preferred) or FAX to 586-446-7568 for processing.

**PRODUCT AS DESCRIBED BELOW IS NOT TO BE SHIPPED UNTIL AUTHORIZATION HAS BEEN GRANTED AND CITED ON THE PURCHASE ORDER**

Supplier Name:	GD Part Number:	
P.O. Number:	Part Description:	
GD Buyer:	Receiving Facility:	
Supplier No. / Site Code:	Supplier contact name:	
Date Submitted:	GD Eng QA Reference #:	
Phone Number:	Email Address:	
Specification Requirements:		
Deviation From Specification:		
Root Cause:		

**Corrective Action:**

Short Term:		
Long Term:		
Quantity of Parts Discrepant:	Beginning Date:	End Date:
Required Delivery Date:	# of Shipments with Discrepant Material:	
Approval (GD Eng Only):	Discrepant Serial Numbers:	

<b>PERSONAL DATA</b>		DATE: _____
Name (Last, First, Middle Initial) _____		
Company Name _____		Email _____
Company Address including street, city, state (province) zip/postal code _____		
Phone _____	How long with company? _____	
Citizenship _____		
<b>RECENT ASSIGNMENTS</b>		
Previous Position & Responsibilities _____		
Current Position & Responsibilities _____		
<b>STAMP RECORD (*TO BE COMPLETED BY GDLS)</b>		
*STAMP 	*RECIPIENT: _____	
	SIGNATURE: _____	
	DATE: _____	Supplier # and Site Code: _____
GDLS ISSUER : _____		
<p><b>Send this form with first 2 sections completed via email to <a href="mailto:sqa@gdls.com">sqa@gdls.com</a> and/or your regional lead. You will be contacted to arrange a meeting regarding stamp training.</b></p>		

Rev 3/11/2020