GENERAL DYNAMICS
Land Systems

PQA-3000

Product Quality Assurance

12/16/2025

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.

Contents

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
9/19/2022	Update to QG5 regarding date of implementation	SJW/CFS
8/17/2023	Update from 1-year to 2-year break in production shipments require new FAI. Update to Repair vs Rework section	SJW
10/11/2024	Updates to Corrective Action and Continuous Improvement Methodology section	SJW
10/22/2024	Updates to Inspection Delegation program	SJW
7/24/2025	Added updated to Intensive Management Program	LCW
12/16/2025	Revised for AS9102 updates and removal of QY12	SJW/LCW

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 though 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, TS16949 or equivalent. 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. If not Nadcap Accredited, proper documentation is required to provide proof of compliance to all specifications.

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 Standardization (ISO 10012, ISO/IEC 17025) 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", or "COTS" 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. 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 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) at a particular supplier site, 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.

Further detail and instruction on the participation of the Inspection Delegation Program is in the Inspection Delegation Guide in the **Appendix of 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, Inspection Delegation Guidelines and online training slide presentation found at: http://www.gdls.com. After the review and all actions checked off on the QJ21 form 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 individua**l. In the event an individuals' 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.

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 must 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

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

Configuration Control (Changes) fka No Change Clause

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 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 workstation 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 outsourcing 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 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-QSA)
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.

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.

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 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: 2 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 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. The GDLS PO will be updated with authorization to perform the approved repair process.

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, plug and weld, or plug welding incorrectly places holes.)

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 (QY11) & (QY14) it is the supplier's responsibility to conduct an internal FAI. For QY11, an FAI must be completed on the first lot of material produced for production vehicles prior to shipment to GDLS. Supplier will conduct lot sampling per QG5 and record results of one piece in accordance with AS9102 and the GDLS FAI Guide. For QY14, FAI must be completed on the first 5 production pieces manufactured for QY14 clause and must also conduct proper lot sampling per QG5. 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 AS9102 FAI forms 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.

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 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. The request for FAI can be found at 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 (2) year break 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 AS9102 FAI 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

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, NON-CONFORMING HARDWARE (NCH), rework, etc.)
6) Notify the GDLS Buyer and GDLS SQA Regional Manager of any changes pursuant to the Configuration Control (fka No Change Clause). (See Configuration Control 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)
- GDLS Audit Record
- AS9102 Form 1 – Part Number Accountability
- A Balloon Drawing and associated AS9102 Form 3 - Characteristic Accountability, Verification, and Compatibility Evaluation
  - 100% Dimensional with inclusion of print note verification
  - Final Inspection/Test Reports
- Certifications for materials and processes on AS9102 Form 2 – Product Accountability – Materials, Special Processes, and Functional Testing
- 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 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. 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).

FAI and Supplemental Documents to the TDP (QY11, QY14, QY2, EQD2A)

Nonconforming Hardware

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. A Nonconforming Hardware approval document may be needed to review the unshipped nonconformance to determine if the hardware can be shipped to GDLS facilities with noted nonconformance. The supplier will contact the GDLS buyer about the nonconforming issue. The buyer will escalate the issue within GDLS to solicit approval (ship) or rejection (do not ship). The supplier will receive the GDLS disposition regarding the issue from the buyer.

Note:

****Approval to ship Nonconforming Hardware does not waive the FAI requirement unless it is specifically stated this within the Nonconforming document. If you have any question, contact your GDLS SQA Regional Manager.***

***If a FAI is shipped under Nonconforming Hardware approval, 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.

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).

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 AS9102 Forms will be used to document the Source Inspection audits. Copies of the FAI forms, and FAI guide are available at 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 in accordance with AS9102 and GDLS FAI Guide,. 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 AS9102 Forms 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. 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, NON-CONFORMING HARDWARE (NCH), 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, NON-CONFORMING HARDWARE (NCH), 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, NON-CONFORMING HARDWARE (NCH), 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)
- GDLS Audit Record
- AS9102 Form 1 – Part Number Accountability

- A Balloon Drawing and associated AS9102 Form 3 – Characteristic Accountability, Verification, and Compatibility Evaluation 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
- Certifications for materials and processes on AS9102 Form 2 – Product Accountability – Materials, Special Processes and Functional Testing 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 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. First and last pieces run may be used as a portion of your samples.

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 ***Lot Sampling Plan /*** 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

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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.

Corrective Action and Continuous Improvement Methodology

Deferred Corrective Action (DCA)

Suppliers will be notified of nonconformances received at GDLS facilities. The notification may be sent to the supplier's quality contact or via the Supplier Performance scorecard. In the first method, the supplier notifications of non-conformances that is discovered and deemed supplier responsible will be coded in the disposition cause code as (SUP) Supplier Responsible. The notification will occur in the form of an email titled **"Notice of Supplier Material Rejection."** Once received the supplier is expected

to conduct a **formal** investigation and maintain the results on file. The results may be reviewed by GDLS personnel upon request. The second method of notification is through the Supplier Performance Scorecard sent to active suppliers monthly. The detail of quality issues and delivery is sent monthly.

When a supplier disputes a Supplier Responsible SUP nonconformance material return, justification describing the rational for the change in recorded disposition must be furnished in writing to the GDLS Buyer & SQA Regional Manager 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. SUP Supplier Responsible rejected material will impact the supplier's Quality Rating. It is supplier's responsibility to address any disputed issues ASAP upon formal investigation results.

Formal Corrective Action

Formal Corrective Actions (CA) may be issued for any supplier for supplier issues found at GDLS facilities. When a CA is issued, a formal response will be required and submitted through your GDLS SQA Regional Manager prior to the due date noted on the CA notification. A copy of the 7D Corrective Action Form can be found at gdls.com (**Corrective Action Form 7-D).** The GDLS 7-D is the required format for submittal. Other information may also be requested by the GDLS SQA Regional Manager such as a 5-Why, Fish Bone, Flow Chart/Control Plan (FC/CP) Work Sheet to be completed as part of the Permanent Corrective Action.

Formal CA's may be required when the following conditions applies (but not limited too):

- **Significant Non-Conformance:** When a supplier's product or service fails to meet quality standards or specifications, causing significant impact on the organization's operations, safety, or customer satisfaction.
- **Repeat Issues:** When there are recurring quality issues with the supplier that have not been adequately resolved by previous corrective actions.
- **High-Risk Problems:** When the non-conformance poses a high risk to product functionality, safety, or regulatory compliance, necessitating a thorough investigation and resolution.
- **Customer Complaints**: When customer complaints or returns are related to the supplier's products and require a detailed root cause analysis and corrective action plan.
- **Regulatory or Compliance Violations:** When the supplier's product or service fails to comply with industry standards, regulations, or contractual requirements, requiring formal documentation and corrective action.
- **Internal Quality Audits**: When an internal audit or assessment identifies significant issues with the supplier's performance or quality that necessitate a structured resolution process.

Intensive Management Program (IMP) for Suppliers

Commitment to Quality

At GDLS, we are committed to delivering high-quality products, and we expect our suppliers to share this commitment. Suppliers play a critical role in our supply chain and must ensure that all products meet quality, reliability, and performance standards.
Each supplier starts with an initial quality score of 100%. Only supplier-responsible nonconformances will reduce this rating. Our expectation is that suppliers produce and ship 100% conforming parts by implementing robust processes and inspection techniques that prevent defects and ensure product consistency.
The Intensive Management Program is not a punitive measure. It is a structured pathway for suppliers to recover from quality challenges and regain compliance with GDLS standards. We encourage all suppliers to be proactive in maintaining robust quality control measures to ensure 100% conforming products. Collaboration and commitment to improvement will ensure continued success in our partnership.

Induction into the Intensive Management Program (IMP)

Suppliers with recurring, systemic, or major quality issues may be inducted into the Intensive Management Program (IMP). This program provides structured support and oversight to help resolve quality concerns and restore supplier performance to acceptable levels.

Suppliers may be placed in the IMP due to:

- High defect rate that consistently fail to meet specifications
- Recurring nonconformances indicating ongoing quality problems
- Systemic defects affecting product reliability and consistency
- Major quality failures impacting production safety, schedules or customer satisfaction
- Failure to implement effective corrective actions after prior quality issues

Supplier Responsibility and Engagement

If inducted into the IMP, the supplier must actively engage with GDLS to implement corrective actions and improve quality performance. The supplier will work with GDLS through a structured 30, 60, 90, and 180-day improvement process specifically designed to ensure compliance with quality expectations.

Support and Oversight Provided Through the IMP

GDLS is committed to assisting suppliers in resolving quality issues. Supply Chain Management (SCM) and Supplier Quality Assurance (SQA) will provide direct support through process reviews, corrective action planning, and ongoing monitoring. SCM will facilitate meetings between GDLS and supplier senior leadership and stakeholders to review scheduled tasks throughout the IMP.

30, 60, 90, and 180-Day IMP Process (General Practice)

The IMP follows a structured timeline to drive improvements. Suppliers must demonstrate consistent quality improvement throughout this period to successfully exit the program. SCM may convey specific objectives and measures, such as reducing scheduled material shipments and potentially placing severely deficient suppliers on new business hold status.

Note: The following is a representative list of potential actions. Actual activity will be based on scope of issue(s).

1-30 Day Objectives (Initial Assessment & Immediate Corrective Actions)

- Communicate the quality performance issues
    - Review historical quality data (e.g., Non-conformances, Corrective Actions, defects, compliance issues)
- Define the scope of the program and timeline
- Set clear performance improvement targets to measure progress in the following weeks/months
- Identify the preliminary root cause(s) of quality failure(s) (e.g., inadequate processes, lack of training, poor material sourcing, etc.)
    - GDLS SQA/SCM may perform an initial on-site audit or virtual meeting to assess the operational processes
    - Creating and implementing containment plans
- Supplier will develop a Corrective Action Plan (CAP) based on the root cause analysis
    - Include both interim and permanent corrective actions
- Prioritize the actions based on impact (quick wins first, then more structural changes)
- Provide remedial training on GDLS standards, expectations, and best practices if necessary
- Help the supplier implement quick fixes to address any immediate issues (e.g., recalibration of equipment, revising QC checkpoints, etc.)
- May be required to identify date/ lot codes to track corrective action effectiveness

31-60 Day Objectives (Process Validation & Continuous Improvement)

- Ensure supplier's corrective actions are being implemented as planned
    - Follow-up audit(s) or site visit(s) may continue throughout this phase to verify the implementation of the corrective actions
    - If the corrective actions have not been fully implemented or if the improvements are not sufficient, escalate to higher management
- Continue to monitor supplier's KPI for improvement
- Support the supplier with process refinement, such as revising workflows, optimizing resource allocation, or enhancing training programs
- Identify any system gaps and propose solutions
- Ensure proper documentation and traceability for all changes
- Hold a progress review meeting with the supplier to discuss their achievements and challenges
- Define the next steps based on the performance improvements achieved
- Address systemic issues across similar process and end items
    - Ensure supplier accountability for meeting quality targets and performance expectations
- Analyze root cause(s) and corrective actions if the issues persist or new ones emerge

61-90 Day Objectives (Performance Stabilization & Process Standardization)

- Ensure the supplier has implemented a robust system to prevent the recurrence of the issues
- Review the supplier's process control systems to ensure they are capable of consistently maintaining high standards across all product lines
- Conduct a formal performance review meeting with the supplier leadership
- Assess whether the supplier has met the agreed-upon KPIs and improvement targets
- If improvement has been achieved, discuss the possibility of reducing oversight while maintaining periodic reviews
    - If performance is still below expectations, prepare to escalate the issue or consider alternatives

91-180 Day Objectives (Long-Term Monitoring/Continuous Improvement)

- On going performance monitoring (e.g., quarterly reviews, continuous data collection via quality metrics)
- Continue to offer support for any remaining areas of improvement
- Encourage the supplier to innovate and continuously improve their processes, even after the immediate issues have been addressed
- If significant issues remain unresolved, explore escalation measures
- Continue tracking KPIs and keep a channel open for feedback and adjustments

Exit Criteria and Consequences of Non-Compliance

To exit the IMP, a supplier must:

- Conduct a final evaluation of the supplier's overall performance against the original quality targets and metrics
- Demonstrate sustained quality improvement with no recurring defects
- Successfully implement and maintain effective corrective/preventative actions
- Closure of all open corrective action items

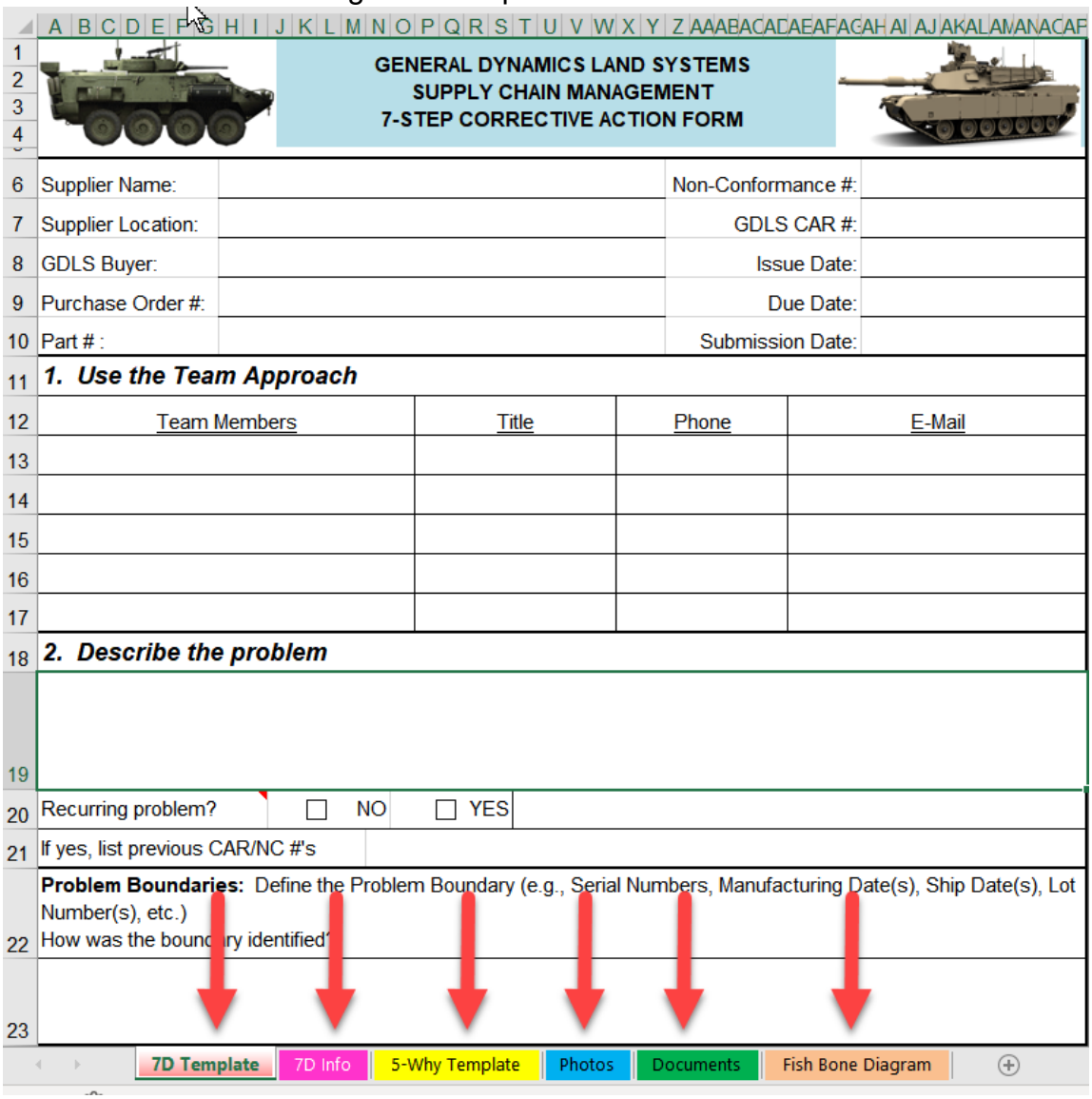
If satisfactory improvements are not made, GDLS reserves the right to disqualify and remove the supplier from the approved supplier list.

CORRECTIVE ACTION 7-STEP CAR TEMPLATE

- The 7-Step CAR template is in Excel format which will allow suppliers to adjust cell sized so that all required information can be added as necessary.

Tabs located at the bottom of the Excel template will assist suppliers while filling in the CAR as well as providing templates and guides to problem solving techniques such as

5-WHY and Fishbone Diagrams if required.



GENERAL DYNAMICS LAND SYSTEMS
SUPPLY CHAIN MANAGEMENT
7-STEP CORRECTIVE ACTION FORM

Supplier Name:		Non-Conformance #:	
Supplier Location:		GDLS CAR #:	
GDLS Buyer:		Issue Date:	
Purchase Order #:		Due Date:	
Part # :		Submission Date:	

1. Use the Team Approach

Team Members	Title	Phone	E-Mail

2. Describe the problem

Recurring problem? ☐ NO ☐ YES

If yes, list previous CAR/NC #'s

Problem Boundaries: Define the Problem Boundary (e.g., Serial Numbers, Manufacturing Date(s), Ship Date(s), Lot Number(s), etc.)
How was the boundary identified?

7D Template | 7D Info | 5-Why Template | Photos | Documents | Fish Bone Diagram

7-STEP CORRECTIVE ACTION FORM
STEP 1 FORM THE TEAM

1. Use the Team Approach

Team Members	Title	Phone	E-Mail

Objective: Supplier to assemble a corrective action team composed of cross-functional experts tasked with identifying, analyzing, and resolving issues or non-conformances within organizational processes. The team's primary goal is to implement effective corrective measures that prevent recurrence, improve performance, and ensure compliance with relevant standards and regulations, fostering a culture of continuous improvement and accountability.

STEP 2 PROBLEM DESCRIPTION

2. Describe the problem			
Recurring problem?	☐ NO	☐ YES	
If yes, list previous CAR/NC #'s			
Problem Boundaries: Define the Problem Boundary (e.g., Serial Numbers, Manufacturing Date(s), Ship Date(s), Lot Number(s), etc.) How was the boundary identified?			

Objective: The problem description step is to clearly and comprehensively define the issue or non-conformance, ensuring a shared understanding among all stakeholders. This step involves documenting the details of the problem, including what occurred, where, when, and under what conditions. A well-defined problem statement serves as the foundation for effective analysis, enabling accurate identification of the root cause and development of targeted corrective actions.

Defining problem boundaries is to establish the scope and limits of the issue, ensuring that the investigation remains focused and efficient. By specifying where, when, and under what conditions the problem occurs—and equally important, where it does not occur—this step helps narrow the analysis, preventing unnecessary exploration of unrelated areas. Clearly defining the problem boundaries ensures a more precise root cause analysis and allows for the effective allocation of resources toward resolving the issue.

STEP 3 CONTAINMENT

3. Contain Suspect Product: Communicate Containment Actions to GDLS within 48 hours

Objective: The containment step is to immediately isolate and manage the impact of a non-conformance, defect, or process failure to prevent further damage or disruption. This step aims to protect ongoing operations, minimize risk to product quality and safety, and maintain customer satisfaction while long-term corrective actions are being developed. The containment step provides a temporary solution to stop the problem from escalating until a permanent resolution is implemented.

Actions:

The purpose of containment is to **immediately stop the spread of defective products**, prevent further customer impact, and protect the supply chain while the root cause is investigated, and corrective actions are implemented.

1. Identify and Isolate the Defective Products
- **Identify Affected Batches/Lots: Determine the range of affected products, including batch numbers, production dates, and serial numbers.
- Segregate Defective Products: Remove all potentially defective products from the production line, inventory, and distribution channels.
- Isolate Inventory: Place any suspect materials in a quarantined or “hold” area, clearly labeled to avoid further use or shipment.

2. Stop Production or Shipment
- Halt Production Line: Stop the production line associated with the defect to prevent more defective products from being produced.
- Hold Shipments: Pause any shipments of affected products until containment measures are in place and the issue is resolved.
- Initiate a Recall (if necessary): If defective products have already been shipped, start the recall process to prevent further use by customers.

3. Inspect and Test the Products
- Perform 100% Inspection: Conduct thorough inspections of all in-process and finished products to identify any additional defective items.
- Recheck Critical Dimensions/Functions: Test and verify critical dimensions, functions, or characteristics of the product to ensure they meet specifications.
- Use Third-Party Inspection (if required): If needed, consider hiring a third-party inspector to ensure impartiality and rigor in identifying defective products.

4. Contain Defective Products at the Customer Location
- Notify Customers: Inform customers immediately about the issue and provide instructions on how to identify and contain potentially defective products at their facilities.
- Provide Replacements or Rework: If feasible, provide immediate replacements or arrange for rework of defective products at customer sites to minimize disruption.

5. Rework or Scrap Defective Products
- Rework Defective Items: If possible, rework defective items to bring them back into compliance with the specifications.

- Scrap Non-Recoverable Items: Scrap any products that cannot be reworked, ensuring they are properly disposed of and do not re-enter the supply chain.

6. Implement Temporary Fixes

- Apply Interim Process Adjustments: Make temporary changes to the production process to prevent further defects while investigating the root cause (e.g., tighter quality checks, temporary design adjustments).
- Use Temporary Controls: Introduce temporary controls, such as additional inspections or process checks, to ensure no further defects occur until the permanent corrective action is implemented.

7. Communicate Internally

- Inform All Departments: Notify all relevant departments (quality, production, procurement, etc.) about the containment actions to ensure everyone is aligned and aware of the temporary measures in place.
- Update Leadership and Stakeholders: Keep management and key stakeholders informed about the issue, the containment measures, and the progress towards resolution.

8. Document All Containment Activities

- Track Containment Progress: Document every action taken during containment, including the number of defective products found, actions performed (rework, scrap), and inspection results.
- Maintain Detailed Records: Ensure proper records of all quarantined, reworked, and scrapped products are maintained for traceability and auditing purposes.

9. Monitor and Verify Containment Effectiveness

- Audit Containment Actions: Verify the effectiveness of containment actions through audits, ensuring no defective products are being used or shipped.
- Review Data: Continuously monitor data and trends to ensure that the defect is fully contained and that no new issues arise while the permanent fix is being developed.

STEP 4 ROOT CAUSE

4. Define & Verify Root Causes:	
Process Root Cause: Implementation Date:	
Inspection Root Cause: Implementation Date:	

Objective: The root cause step is to accurately and thoroughly identify the fundamental reason behind a non-conformance, defect, or failure. This step aims to go beyond surface-level symptoms to uncover the actual cause, ensuring that corrective actions are targeted effectively. By precisely determining the root cause(s), this step ensures that appropriate measures are implemented to prevent recurrence, thus contributing to the long-term improvement of processes, product quality, and operational efficiency.

Actions:

1. Process Root Cause

This focuses on identifying the underlying issues within the supplier's manufacturing or operational processes that led to the defect or non-conformance. Suppliers should:

- Collect Data: Gather detailed information on the specific process steps where the issue occurred.
- Analyze the Process: Use tools like process flow diagrams, control charts, or value stream mapping to identify any deviations or inefficiencies in the process.
- Identify Root Causes: Apply root cause analysis methods such as the 5 Whys or Fishbone Diagrams (Ishikawa) to determine the fundamental reason for the issue.
- Corrective Action: Develop and implement a corrective action plan aimed at eliminating the root cause to prevent recurrence.

2. Inspection Root Cause

This addresses why the inspection process failed to detect the defect before delivery. Suppliers should:

- Review Inspection Procedures: Evaluate the current inspection methods, tools, and techniques used at various stages to determine their effectiveness.
- Check for Gaps: Identify whether the inspection missed the defect due to human error, inadequate tools, poorly defined criteria, or other factors.
- Root Cause Analysis: Similar to process root cause analysis, use techniques like the 5 Whys to find the root cause of the inspection failure.
- Corrective Action: Strengthen the inspection process by updating procedures, training staff, or introducing better inspection tools to ensure defects are caught early.

In both cases, it is crucial for suppliers to document the findings and corrective actions, monitor their effectiveness, and communicate the outcomes with the customer to demonstrate accountability and continuous improvement.

STEP 5 INTERIM CORRECTIVE ACTION

5. Implement & Verify Interim Corrective Actions:

Objective: Interim corrective actions is to implement temporary measures that immediately address and mitigate the impact of a non-conformance, defect, or failure. These actions are designed to contain the issue, safeguard quality, and reduce risk while permanent corrective actions are being developed and implemented. The goal is to ensure continuity of operations and prevent further escalation of the problem, providing a short-term solution to maintain stability and protect stakeholders.

Actions:
Suppliers should complete Interim Corrective Actions (ICA) by following these steps to provide a temporary solution that mitigates the immediate impact of a problem while a permanent corrective action is being developed.

1. Containment of the Issue:
- Isolate Affected Products: Identify and segregate defective products or components from the rest of production to prevent further delivery of non-conforming items.
- Inspect and Rework: If possible, rework defective items to meet specifications, or at least inspect all related items to catch any other issues.

2. Stop Further Defects:
- Temporary Process Adjustments: Implement quick changes to the process to stop the defect from continuing. This could involve extra inspections, temporarily halting a process step, or using alternative materials.
- Increased Monitoring: Introduce additional checks at critical points in the process to catch defects before they propagate through production.

3. Communicate with Stakeholders:
- Notify Affected Parties: Inform customers, suppliers, and internal teams about the issue, the interim corrective action, and the expected timeline for a permanent solution.
- Set Clear Expectations: Clarify the scope of the interim fix, any potential impact on lead times or product quality, and provide regular updates.

4. Document the ICA:
- Track ICA Implementation: Document the specific steps taken during the interim action, including any adjustments made to processes, materials, or inspections. This helps ensure transparency and aids in evaluating the effectiveness of the ICA.

- Log Containment Results: Keep records of how many defective products were contained, reworked, or scrapped, as well as any new defects discovered during enhanced inspections.

5. Monitor Effectiveness:
- Evaluate Short-term Effectiveness: Monitor whether the interim corrective actions are preventing further defects or if additional containment is needed.
- Adjust as Necessary: If defects continue to occur, revise the ICA to provide stronger mitigation until the root cause can be addressed permanently.

6. Transition to Permanent Corrective Action:
- Plan for Long-term Fix: Begin working on identifying the root cause and planning the permanent corrective action while the ICA is in place.
- Minimize Disruption: The ICA should aim to stabilize the situation without causing significant disruption to production, ensuring that normal operations can continue as much as possible while a permanent solution is developed.

In summary, interim corrective actions are designed to provide immediate containment and mitigation of an issue, preventing further defects while the supplier works toward a comprehensive and permanent solution. The goal is to ensure that the customer is minimally impacted during this temporary phase.

STEP 6 PERMANENT CORRECTIVE ACTION

6. Implement & Verify Permanent Corrective Actions:	
Process Permanent Corrective Action:	**Implementation Date:**
Inspection Permanent Corrective Action:	**Implementation Date:**

Objective: The objective of permanent corrective actions is to develop and implement long-term solutions that address the root cause of a non-conformance, defect, or failure. These actions aim to eliminate the underlying issues to prevent recurrence and improve overall process performance, product quality, and compliance. The goal is to create sustainable improvements that enhance operational efficiency, reduce risk, and ensure continuous alignment with organizational standards and customer expectations.

Actions:

Suppliers should take the following steps when implementing a Process Permanent Corrective Actions.

1. Identify Effective Solutions: After determining the root cause of the process failure, suppliers should brainstorm and evaluate corrective action options that directly address the identified cause. The solution must be designed to permanently fix the issue, not just treat the symptoms.

2. Develop an Implementation Plan: The corrective action should be integrated into the relevant process. Suppliers should:

- Define clear steps to implement the corrective action.
- Assign responsibilities to specific team members.
- Set a timeline for implementation and completion.

3. Test and Validate: Before full-scale implementation, conduct tests or pilot runs to ensure the corrective action is effective in real-world conditions. Validate that the issue does not reoccur.

4. Implement Across the Process: Once validated, implement the corrective action across all relevant stages of the process. Update process documentation, work instructions, and standards to reflect the new procedures.

5. Monitor and Review: Continuously monitor the updated process to ensure that the corrective action is preventing recurrence. If necessary, make adjustments to fine-tune the solution.

6. Documentation and Reporting: Document the entire corrective action process, from root cause analysis to implementation. Share this documentation with stakeholders, including the customer, to demonstrate resolution.

Suppliers should take the following steps when implementing an Inspection Permanent Corrective Actions (PCA)

1. Evaluate and Improve Inspection Methods: After identifying the root cause of the inspection failure, assess whether existing inspection tools, techniques, or methods need improvement. This could involve:

- Upgrading or calibrating inspection tools.
- Revising inspection criteria or methods.
- Introducing automation or more precise inspection technologies.

2. Training and Competency Development: If the root cause is related to human error or inspection oversight, provide additional training for inspectors to ensure they are

aware of the new standards and inspection requirements. Ensure inspectors are fully competent in the use of tools and techniques.

3. Standardize and Automate Where Possible: Standardize the inspection process to eliminate variability between inspectors. Implement automated inspection systems if applicable, which reduce human error and enhance accuracy.

4. Integrate into Quality Control Systems: Update the quality management system (QMS) to include the new inspection standards. This ensures that inspection improvements are integrated into the overall quality control process.

5. Regular Audits and Monitoring: Conduct periodic audits to ensure the permanent corrective actions in the inspection process are effective over time. Use key performance indicators (KPIs) to track inspection accuracy and the rate of defect detection.

6. Documentation and Communication: Record the improvements made in the inspection process and communicate the updated procedures with all relevant stakeholders. This documentation should also be shared with customers to show the supplier's commitment to quality control improvements.

By systematically addressing both process and inspection issues with permanent corrective actions, suppliers can ensure long-term quality and reliability.

STEP 7 PREVENT RECURRENCE

7. Prevent Recurrence:		
7.a) Follow Up Activities: Date Complete:		
7.b) Read Across (list similar processes / part #'s with a potential of the same defect) Date Compl		
7.c) Documentation: Date Complete:		
	Reviewed Document	Update / Revision / Who's Resp	Date Complet
☐	Quality Alert / Awareness Documented		
☐	Work Instructions		
☐	Job Traveler / Process Documentation		
☐	Sampling Plan - (increase inspection)		
☐	Inspection standard - Receiving		
☐	Inspection standard - Shipping		
☐	Engineering Change Request		
☐	Training documentation		
☐	First Article Inspection - Delta		
☐	Other 1:		
☐	Other 2:		
☐	Other 3:		

Objective: The objective of the prevent recurrence step is to implement targeted corrective actions that address the root cause of a problem, ensuring that the issue does not reoccur. This step focuses on designing and enforcing sustainable changes to processes, procedures, or systems to eliminate the identified causes. The ultimate goal is to safeguard quality, efficiency, and compliance by preventing future occurrences of the same or similar issues.

- **Follow-up activities:** The objective in the prevent recurrence step is to verify the effectiveness of the implemented corrective actions and ensure that the issue has been fully resolved. This step involves monitoring performance,

conducting audits, and gathering feedback to confirm that the corrective measures have successfully eliminated the root cause and that no similar issues are arising. The goal is to ensure sustained improvement, continuous compliance, and long-term prevention of recurrence.

- **Read Across:** The objective of read across in the prevent recurrence step is to systematically evaluate and apply lessons learned from one issue or non-conformance to similar processes, products, or areas within the organization. This step aims to identify potential vulnerabilities or risks that could affect other areas and implement proactive measures to prevent similar issues from occurring elsewhere. The goal is to enhance overall quality and consistency by leveraging insights gained from previous problems to prevent their recurrence across the organization.

Actions:

Suppliers should complete the Preventive Actions step by focusing on identifying and addressing potential issues before they occur, thus avoiding future defects or non-conformances. The key steps include:

1. Identify Potential Risks:

- Conduct Risk Assessments: Suppliers should use tools like Failure Modes and Effects Analysis (FMEA), process audits, and risk matrices to identify potential points of failure in their processes, materials, or products.

- Analyze Historical Data: Review past issues, customer complaints, and audit results to identify trends and recurring problems that could lead to future non-conformance.

2. Develop Preventive Measures:

- Improve Processes: Based on the identified risks, modify processes, materials, or techniques to eliminate potential sources of defects. This may involve updating standard operating procedures (SOPs), improving machinery, or refining workflows.

- Enhance Training: Provide additional training for workers to ensure they understand potential risks and know how to prevent issues from arising. This might include emphasizing best practices, quality control measures, or safety protocols.

3. Implement Preventive Actions:

- Incorporate Safeguards: Implement safeguards within the production process, such as automated systems, alarms, or quality checkpoints, that can help prevent issues from occurring.

- Update Documentation: Modify process documentation, work instructions, and control plans to reflect the newly implemented preventive measures.

4. Monitor and Validate Effectiveness:

- Track Performance: After implementing preventive actions, closely monitor the processes and track key performance indicators (KPIs) to ensure that the measures are effective in reducing the identified risks.

- Adjust as Needed: If potential issues still arise, reevaluate and adjust the preventive actions to improve their effectiveness.

5. Audit and Review:

- Conduct Regular Audits: Periodically audit the preventive actions and their effectiveness to ensure they are working as intended and that new risks have not emerged.

- Continuous Improvement: Use the results of these audits to continuously improve preventive measures, aiming to create a culture of proactive problem-solving and risk mitigation.

6. Document and Communicate:

- Maintain Comprehensive Records: Keep detailed records of the risk assessments, preventive measures taken, and their effectiveness. This documentation should be shared with relevant stakeholders, including internal teams and customers, to demonstrate the commitment to preventing issues before they arise.

- Customer Communication: If necessary, inform customers about the preventive actions taken, especially if the action is related to a previously reported issue or a critical part of the supply chain.

By systematically addressing potential risks and taking action to eliminate them, suppliers can significantly reduce the likelihood of future defects or non-conformances. This proactive approach not only improves product quality but also strengthens supplier reliability and customer trust.

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
(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 for further details

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

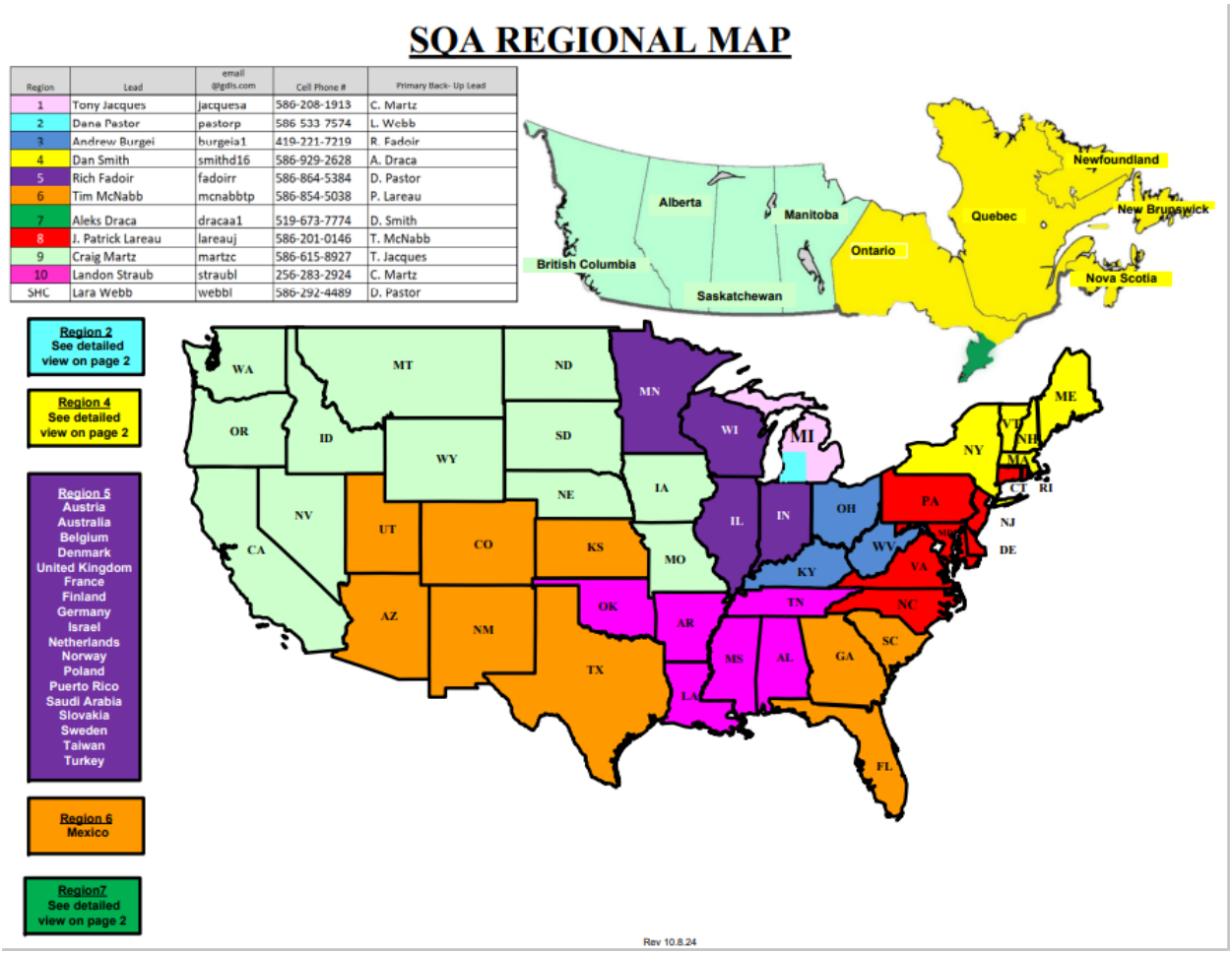
Communications with the SQA Organization can be made through the following media**:**

E-mail**:** **sqa@gdls.com**

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

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 www.gdls.com for the latest revision of the GDLS SQA Regional Map and all Forms. A sample of what it looks like is below:



Frequently Asked Questions

Where are the Quality Clauses located?

www.**gdls.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 NON-CONFORMING HARDWARE (NCH) 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.

Why is written approval needed if I want/need to change a sub-tier supplier of a part?

The part your company is supplying may have qualification requirements or be going into a larger assembly that has qualification requirements. A change in manufacturers at any supplier tier level may require requalification of that your supplied part or the larger assembly. Your GDLS Buyer will get this change reviewed and dispositioned by the appropriate personnel at GLDS. Written approval is required prior to making changes and requesting a delta FAI.

Forms for SQA are at www.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)

Appendix

GDLS Inspection Delegation Guidebook | Revision A

SCOPE

QJ-21 Inspection Delegation (ID)

The GDLS Inspection Delegation Guidebook is to be used while participating in the GDLS Inspection Delegation Program. It will detail the requirements and the responsibilities for the participants to this program. This includes the responsibilities of GDLS and Suppliers, as well as the responsibilities and requirements of suppliers and supplier delegates to be qualified for eligibility for Inspection Delegation. Suppliers will be required to create and maintain processes and procedures that will meet the requirements within this guidebook to be eligible for and maintain their inspection delegation approved status.

Inspection Delegation (ID) is the General Dynamics Land Systems certified supplier program. Suppliers that participate in 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 Technical Data Package (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. Participants for the program will be trained on the requirements needed. A periodic audit of programs compliance will be conducted by GDLS.

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 with QJ21 as a clause on the PO must have a FAI approved by a GDLS SQA Inspector or GDLS Regional Manager

prior to the Supplier's Inspection Delegate stamping off GDLS shipments.

The supplier shall identify qualified delegate(s) to perform acceptance activities at their facility.

The delegate(s) should have Quality Assurance (QA) responsibilities, experience and appropriate knowledge of manufacturing processes with access to GDLS PO(s) and technical information (note based on appropriate supplier training program). The delegate(s) selection must be based upon GDLS approval and based on sections 4.2. and 4.3 of the Inspection Delegation Guide."

Once the suppliers potential ID candidate has completed the supplier internal requirements (4.2, 4.3) and the GDLS ID training, a GDLS inspection stamp will be assigned to the approved delegate(s). This individual is responsible for ensuring proper usage, control and maintenance of the inspection delegation stamp. 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 individuals' 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 Purchase Order and Technical Data Package are satisfied. Reference requirements set forth in 4.4 of GDLS Inspection Delegation Guide. Additionally, other considerations are 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.

A new supplier to GDLS or supplier not participating in the ID program will be required to use the Source Inspection procedure even though the QJ21 Clause appears in the

PO. This will continue until the tasks listed in the suppliers QJ21 form are complete.

This program is subject to termination by GDLS with minimum notice for failure to meet the requirements of the PQA3000 and Inspection Delegation Guidebook defined herein.

1 APPLICATION

This document applies to assemblies, sub-assemblies, and detail parts which have quality clause QJ21. This includes any modified standard catalogue or Commercial-Off-the-Shelf (COTS) items.

This standard does not apply to:

• Development and prototype parts that are not considered as part of a production order.

• Assemblies, sub-assemblies, and detail parts which have quality clause EQD2A GD Source Inspection

• Assemblies, sub-assemblies, and detail parts with quality clause QG4 Commercial Requirements, e.g., Commercial Off The Shelf (COTS) parts and QY15

2 REFERENCE DOCUMENTS and STANDARDS

The following documents support the application/use of the GDLS Inspection Delegation process. The latest edition of each document as well as any amendments apply at the time of PO acceptance by the supplier.

- GDLS PQA-3000 Production Quality Assurance Handbook
- GDLS First Article Inspection Guide
- GDLS First Piece Inspection Guide
- SAE AS9117 Delegated Product Release Verification
- SAE AS9100 Quality System Aerospace/Defense
- ISO 9000 Quality Management Systems

3 TERMS and DEFINITIONS

Configuration Control (Changes) fka NO CHANGE CLAUSE

The configuration control is a contractual requirement and can be found in the Terms and Conditions. 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 buyer.

COMMERCIAL-OFF-THE-SHELF (COTS) ITEMS

Reference Only. Always refer to the latest revision for full definition of a COTS item. Commercially available items intended by design to be procured and utilized without modification.

Defined per FAR 2.101 Commercially available off-the-shelf (COTS) item—

(1) Means any item of supply (including construction material) that is–

(i) A commercial item (as defined in Commercial Items (1) of the definition in this section) below;

(ii) Sold in substantial quantities in the commercial marketplace; and

(iii) Offered to the Government, under a contract or subcontract at any tier, without modification, in the same form in which it is sold in the commercial marketplace; and

Commercial item means

(1) Any item, other than real property, that is of a type customarily used by the general public or by non-governmental entities for purposes other than governmental purposes, and-

(i) Has been sold, leased, or licensed to the general public; or

(ii) Has been offered for sale, lease, or license to the general public;"

INSPECTION DELEGATION PROGRAM: A process whereby a supplier is delegated the authority to act on behalf of the delegating organization to verify and release products/services.

DRAWING REQUIREMENTS: Requirements of the drawing and associated parts lists, specification, or purchasing document to which the product is to be produced from, including any notes, specifications, and lower-level drawings invoked.

FIRST ARTICLE INSPECTION (FAI): A planned, complete, independent, and documented inspection and verification process to ensure that prescribed production processes have produced an item conforming to engineering drawings, DPD, planning, purchase order, engineering specifications, and/or

other applicable design documents.

QUALITY MANAGEMENT SYSTEM (QMS): A quality management system (QMS) is defined as a formalized system that documents processes, procedures, and responsibilities for achieving quality policies and objectives. A QMS helps coordinate and direct an organization's activities to meet customer and regulatory requirements and improve its effectiveness and efficiency on a continuous basis. e.g., ISO9001, AS9100, IATF 16949

STANDARD CATALOGUE ITEMS: A part or material that conforms to an established industry or national authority published specification, having all characteristics identified by text description or industry/national/military standard drawing.

Inspection Delegation Requirements
GDLS RESPONSIBLE ITEMS

4.1 System Requirements for Delegating Organization

4.1.1 The delegating organization shall have a documented process defining their delegation requirements, including the organization's responsibilities
note: Suppliers will use this document as a guide to obtaining and usage of GDLS ID stamps.

4.1.2 Inspection Delegation supplier selection criteria shall include the following:

a. The supplier shall be approved and on the GDLS Active Supplier List.

note: Suppliers must be on GDLS's active supplier list.

b. The delegating organization shall provide documented authorization of the supplier's participation in their Inspection Delegation program.

note: GDLS Regional Manager's will provide the Supplier Inspection Delegate a copy of signed and approved QJ21 form for their records.

c. During selection of suppliers for Inspection Delegation, the delegating organization shall review the supplier's quality performance. Supplier performance criteria shall be defined and documented by the delegating organization. The data reviewed shall include a measure of product/process conformance and responsiveness to corrective action requests.

note: Suppliers must be on GDLS's active supplier list and have a 12-month quality score of 98% or higher. GDLS Regional Manager approval is required for suppliers performing below this level.

e. The delegating organization shall verify that the supplier is knowledgeable of its requirements and expectations associated to product quality.

note: Supplier Inspection Delegate candidates will be required to successfully complete applicable training and quizzes. (QJ21 and Quizzes)

4.1.3 The delegating organization shall define and document the scope and limitations of the delegation. Documentation stating the scope and limitations of delegation shall be provided to and acknowledged by the supplier.

note: Suppliers will use the Inspection Delegation Guide for scope and limitation of this GDLS ID program.

4.1.4 The delegating organization shall define change notification requirements to the supplier. These requirements shall include the type of changes requiring notification and process for communicating these changes. (ex. Change stamp holders employment status, etc.)

note: Any changes in the suppliers' processes/procedures/personnel pertaining to the ID program should be communicated via email the applicable GDLS SQA Regional Manager.

4.1.5 The delegating organization's maintenance process for Inspection Delegation shall, at a minimum, include the following:
a. A periodic review of the supplier's quality performance.

note: GDLS SQA will review suppliers on a quarterly basis.

b. A periodic inspection and/or validation of product.

note: Suppliers will be subject to GDLS VIDA audit

c. A periodic review of the supplier's Inspection Delegation process.

note: VIDA audits will be done on periodic basis by GDLS.

d. Actions to address poor supplier performance.

note: Actions to address poor performing suppliers are subject to further corrective action or escalation to Intensive Management System and may also include removal from ID Program.

e. Criteria to remove, suspend, and limit the delegation to the supplier and/or Inspection Delegation personnel.

note: Removal of ID stamps may include but are not limited to: any improper usage of the ID stamp, continuous quality issues, quality score below 98%, major quality issues, etc.

SUPPLIER RESPONSIBLE ITEMS

4.2 SUPPLIER RESPONSIBILITIES

4.2.1 The supplier shall maintain their QMS approval.

note: Suppliers will be certified to applicable QMS's (e.g., ISO9000, AS9100) or successfully passing the GDLS VQSA/VMIN audit.

4.2.2 The supplier's QMS shall have a documented process detailing the requirements for the Inspection Delegation process, including the establishment of process controls and monitoring for process effectiveness.

note: Supplier will provide a copy of this process to GDLS for review and approval prior to Inspection Delegation training program implementation.

4.2.3 The supplier shall keep a list of authorized Inspection Delegate personnel, including the associated scope of approval.

note: Supplier shall keep in their records a copy of the QJ21 form signed and stamped for each inspection delegate.

4.2.4 The supplier is responsible for assuring that the authorized Inspection Delegate personnel have prerequisites, including but not limited to those listed below, sufficient to be able to perform their duties.

a. Access to product-related documentation.

note: Inspection Delegate will have access to GDLS PO and all Technical Data Package prints, standards, etc.

b. Access to necessary facilities and equipment to be able to perform Inspection Delegation activities.

note: Inspection Delegate will have access to all necessary tools to accomplish duties such as: inspection/testing equipment and facilities

c. Sufficient time allotted to adequately perform the associated product verification activities.

note: Many quality misses are caused from rushing the ID process. Inspection Delegate's must have the proper time to review all requirements prior to approving parts for shipment. Shipments are not to leave without full product review and approval by the ID.

d. The authority to suspend the release of products, until all open issues associated with the product being released are addressed.

note: Inspection Delegates must have authority to stop shipments if all requirements to the GDLS PO and TDP are not fully met.

e. Document and demonstrate proficiency and training, including appropriate product knowledge.

note: Suppliers will have training records showing ID's abilities to perform the required duties to approve products. Potential ID's without proficiency to perform the required duties will not be accepted into the ID Program.

4.2.5 The supplier shall provide the delegating organization notification of changes affecting the Inspection Delegation process (see 4.1.4).

note: Supplier shall notify the GDLS SQA Regional Manager via email and copy SQA@GDLS.COM for any changes per 4.1.4. A meeting can also be scheduled with GDLS SQA to relay the updates.

4.2.6 Intentionally left blank.

4.2.7 The supplier shall monitor Inspection Delegate personnel performance and have defined criteria to disqualify/suspend the Inspection Delegation personnel, including notification to the delegating organization.

note: Supplier will define within their internal process and procedures specific criteria to disqualify / suspend their Inspection Delegates stamp.

4.3 QUALIFYING NEW STAMP HOLDERS / REQUALIFYING CURRENT STAMP HOLDERS

4.3 Qualification/Requalification of Delegated Product Release Verification Personnel

4.3.1 Inspection Delegation personnel shall be qualified by the supplier.

note: Supplier will have a process / procedure to identify potential ID personnel.

4.3.2 The selection of Inspection Delegation personnel shall be based on their background, experience, and product knowledge(4.2.4). Specific training and/or testing shall be established by the supplier. The supplier shall ensure training and qualification is appropriate for the product being released.

note: Supplier process / procedure will identify training / test matrix with requirements to be met prior to submitting potential ID personnel QJ21 form to GDLS.

4.3.3 Intentionally left blank.

4.3.4 Inspection Delegation personnel shall be subject to periodic requalification and training by the supplier.

note: The supplier should have internal training program to verify Inspection Delegate is properly educated to continue to be an Inspection Delegate.

4.3.5 Intentionally left blank.

DELEGATE DUTIES TO APPROVE SHIPMENTS

4.4 Review of Product by Delegated Product Release Verification Personnel

4.4.1 The Inspection Delegate shall be performed on each release of product. Inspection Delegation review shall be performed after final inspection, as close to shipment as practical; conducted as an independent process separate from final inspection.

note: Inspection delegate is responsible to review the parts compared to the TDP requirements to verify compliance prior to approving parts for shipment.

4.4.2 The Inspection Delegation review shall consist of but not limited to:

a. Contract/purchase order review.

note: PO review shall be done to verify all contractual requirements (e.g., quality clauses, revision, notes, variances, etc.)

b. Supplier documentation review.

note: Full TDP review is performed prior to product release.

c. Physical product verification, including verification of product marking/identification and visual examination. Inspection Delegate shall validate special requirements, critical items, and key characteristics when contractually required by the delegating organization.

note: Inspection Delegate should do a physical configuration review of the part(s) to the TDP to verify conformance.

d. Shipping/release documentation.

note: Once verification has been completed inspection delegate can stamp the packing list/shippers.

4.4.3 Inspection Delegate personnel shall validate and record the completion of the verification activity. The GDLS Inspection Delegation Checklist Template can be found at GDLS.COM.

note: Inspection Delegation Checklist may be used to assist in the validation of compliance for parts shipped to GDLS. SQA Reg manager will provide direction on usage of checklist.

4.4.4 Specific stamps, signatures, identification numbers, etc., shall be used for product release when contractually required by the delegating organization.

note: GDLS will issue Inspection Delegates specific stamps which shall not be used by any other supplier personnel.

4.4.5 Sampling plans for product verification may be used with approval from the delegating organization.

note: Supplier will perform lot sampling per GDLS Quality Clause QG5 and PQA3000 requirements.

4.4.6 Product and/or documentation nonconformances detected, during the Inspection Delegation process, shall be processed in accordance with the supplier's nonconformance and corrective action procedures, and the delegating

organization’s contractual requirements.

note: Lot sampling requirements of C=0 is the standard. One nonconformance found will result in the entire lot being rejected and inspected 100% to verify conformance.

4.5 RECORDS RETENTION

4.5.1 The delegating organization (GDLS) shall retain the following records in accordance with their defined procedures.

a. List of delegated suppliers.

b. Scope of delegation approval.

c. Delegation limitations, if applicable.

d. Delegation acknowledgements from suppliers.

e. List of authorized Inspection Delegation personnel, if the delegating organization authorizes the personnel.

f. Records from periodic Inspection Delegation process reviews (see 4.1.5).

g. Revision records of changes to the items identified in this listing.

4.5.2 The supplier granted delegation authority shall retain the following records from Inspection Delegation activity, in accordance with the delegating organization’s contractual requirements:

a. Records that Inspection Delegation activity has been performed [e.g., Inspection data, stamped packing slips]

note: Supplier shall maintain a copies of inspection data for each part number/ shipments on file per the PO terms and conditions

b. Initial and recurrent qualification records for Inspection Delegation personnel.

note: Supplier shall maintain a copy of the qualification of personnel that is delegated (training)

c. List of approved Inspection Delegation personnel.

note: Supplier shall maintain a copy of the personnel that is delegated

d. intentionally left blank

e. Records of product and/or documentation nonconformances identified during the Inspection Delegation process.

note: Supplier shall maintain records of nonconformances found during inspection by delegate and result of approved disposition of parts.

f. intentionally left blank

g. Additional documents, as specified, by the delegating organization.

Note: Supplier shall keep GDLS Documents such as QJ21, Training records, Inspection checklist, FAIs as well as internal documents related to these such as training records