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***NOTE: Changes to this document require the new document revision to be uploaded to the TDGO website, [www.teledynemarine.com/dgo](http://www.teledynemarine.com/dgo), to replace the obsolete version located under the SUPPLIERS Tab.***

## **1.0 PURPOSE**

- 1.1 This Supplier Quality Handbook is published as a supplement in support of Purchase Order Quality Assurance requirements, to provide additional Teledyne DGO (TDGO) quality compliance requirements to which suppliers must adhere.
- 1.2 The SQH-001 and QA-308 documents should be used to aide in fully comprehending a given requirement through a narrative discussion of the requirements and its intent.

## **2.0 SCOPE**

- 2.1 This document applies to all TDGO suppliers of services and product, and to their sub-tier suppliers with whom they engage in business in the fulfillment of a TDGO Purchase Order.

## **3.0 POLICY**

- 3.1 TDGO is committed to safely providing products and services of the highest integrity and reliability. We continually review and improve the effectiveness of our Quality Management System through execution of goals and objectives, verification of compliance with customer and legal requirements, and conformance to the ISO 9001 standard.
- 3.2 We strive to provide ultimate customer satisfaction and product quality by engaging and empowering our entire stakeholder community from supply chain, to workforce, to customers, in attaining these goals.
- 3.3 TDGO understands the crucial role and contribution of our suppliers to ensure product reliability is maintained. TDGO is committed to working with suppliers to resolve specification ambiguities and ensure only compliant products are supplied to our customers. Therefore, we are all responsible for complying with purchase order requirements, quality clauses, drawings, procedures and work instructions.
- 3.4 Shipments will not be acceptable at TDGO without compliance to Quality Assurance requirements as noted on a Purchase Order (PO). All required certifications and test data shall accompany shipments of material.
- 3.5 Negligence in flow down of TDGO Quality requirements to Supplier's sub-tier suppliers may result in rejection of product, or removal from TDGO's Approved Supplier List.
- 3.6 Due to the critical nature of TDGO's molding applications, the use of Silicone or Silicone based products is strictly prohibited from all manufacturing practices, unless deliverables are cleaned by a TDGO approved procedure prior to shipment.
- 3.7 Any violation of TDGO Purchase Order requirements or invoked specifications may result in shipments being rejected and invoices not paid until satisfactory resolution of discrepancies is achieved.

## **4.0 MANDATORY CHANGE ORDER REQUIREMENTS (TDGO INTERNAL)**

- 4.1 Changes to this document require the approval of the Materials Manager and Quality Managers.
- 4.2 When appropriate, at the discretion of the Materials Manager and Quality Manager, a Supplier Alert may be distributed notifying Suppliers of changes to this document.
- 4.3 The Document Control Coordinator is required to initiate an IT ticket, requesting the upload of the new document revision to the TDGO website.

## **5.0 INPUT**

- Suppliers
- Purchase Orders
- TDGO Quality Assurance Requirements

## **6.0 OUTPUT**

- TDGO communicates to suppliers regarding QA Requirements
- Supplier awareness of TDGO QA Requirements
- Supplier provides parts in compliance with TDGO QA Requirements

## **7.0 REFERENCES**

- 7.1 ANSI Z1.4-2008 Sampling Plan
- 7.2 QA-791 Purchase Order/Drawing Concessions/Deviations & Non-Conformance Form
- 7.3 QA-308 Quality Assurance Clause
- 7.4 P-108 Fraud and Falsification Notice
- 7.5 QA-703 Supplier Procedure Approval Request
- 7.6 WI-QA-0062 Supplier Delegated Inspection (SDI) Program
- 7.7 WI-QA-0090 First Article Inspection

## **8.0 ORDER OF PRECEDENCE**

- 8.1 In the event of conflict regarding quality system requirements, the order of precedence will be as follows:
  - 8.1.1 Purchase Order (excluding this handbook) and the procurement specifications referenced, including Quality Assurance Clauses.
  - 8.1.2 TDGO drawing and specifications so listed.
  - 8.1.3 TDGO Supplier Quality Handbook (SQH -001) as posted on <http://www.teledynemarine.com/dgo> website, "Suppliers" tab.

## 9.0 SUPPLIER RESPONSIBILITIES

- 9.1 It is the responsibility of the Supplier to transmit those portions of the Purchase Order that are applicable, including the substance of this document, to any and all sub-tier suppliers via a Purchase Order or some other contractual means. Verbal direction is not contractual and should be avoided.
- 9.2 Suppliers are responsible to:
- 9.2.1 Notify TDGO of process changes.
    - 9.2.1.1 Parts supplied under contract shall be homogenous and identical to each other.
    - 9.2.1.2 The supplier shall notify TDGO of any changes relative to the following (Note: advance notice of changes is required).
      - a. Change in ownership
      - b. Facility moves
      - c. Major equipment moves
      - d. Process changes
      - e. Anything that would cause material to be different from originally quoted
    - 9.2.1.3 The supplier shall evaluate the associated risk with each move.
  - 9.2.2 Ask the TDGO Buyer or Supplier Quality if information or requirements are unclear or Supplier is unsure of the task they are being asked to perform.
  - 9.2.3 Review and ensure flow-down of, compliance to, and proper implementation of, all the requirements set forth herein, and those QA-308 Quality Clause requirements applied to and reflected on TDGO Purchase Order parts/materials/services in the acceptance and fulfillment of a Purchase Order.
  - 9.2.4 Visit the <http://www.teledynemarine.com/dgo> "Suppliers" tab to access the latest revision of P-108, SQH-001, QA-308, QA-703, and other Supplier related Contract flow-down documentation.
  - 9.2.5 Provide TDGO advance notice (prior to implementation) regarding a change to any of the following, to allow TDGO enough time to assess supply chain risk and make appropriate decisions:
    - 9.2.5.1 Design
    - 9.2.5.2 Product obsolescence (end of life)
    - 9.2.5.3 Business Classification
    - 9.2.5.4 Manufacturing location

- 9.3 Suppliers are also responsible for all thread gaging.
  - 9.3.1 If a supplier does not have the gage required for the job, they shall first request a “Supplier Gage” from the TDGO Buyer. If TDGO does not have a “Supplier Gage”, then Supplier shall quote the needed gage to TDGO.
  - 9.3.2 A line item for the gage may be added to the PO for purchase of needed gage. Gages should be quoted and purchased with a long form calibration certificate. When the job is completed the gage will be returned to TDGO for future production use.

## 10.0 LEVEL 1 CRITICAL APPLICATIONS

- 10.1 Materials supplied by TDGO are used in harsh environments performing in operationally critical applications, such as submarines, deep submergence vehicles, oil & gas platforms, aviation, and medical devices.
- 10.2 The use of incorrect or defective material would create a high probability of failure resulting in loss of vital systems, serious personal injury and/or loss of life.
- 10.3 Suppliers who fabricate and/or provide LEVEL 1 designated product must adhere to the EB2678 Spec (latest revision) Appendix A, located on our Teledyne DGO website, under the Suppliers Tab.
- 10.4 TDGO Purchase Orders for procurement of LEVEL 1 product are watermarked as such, are governed by all the requirements listed in EB2678 Appendix A, for LEVEL 1 Material Quality Assurance Requirements.

## 11.0 FRAUD AND FALSIFICATION

- 11.1 Fraud and Falsifications is defined as an action that deals with intentional deceit, lies, misrepresentation, falsehood, negligence, dereliction, etc. In regards to compliance. Key is the fact the fraud and falsification is intentional.
- 11.2 The act of fraud or falsification has the potential of:
  - 11.2.1 severe and costly damage, and could involve product functional failure causing loss of life on land or sea;
  - 11.2.2 severe dollar loss to TDGO, Suppliers, and the Government due to lengthy investigations, disqualification from future contracts, production shutdown, and loss of employment;
  - 11.2.3 federal criminal prosecution for violations of laws under Title 18 of the U.S. Code, Chapter 47, Section 1001, up to and including penalties, fines and imprisonment for many kinds of fraud and falsification that may be levied against TDGO, suppliers and individuals involved in fraud and falsification.
- 11.3 Flow Down
  - 11.3.1 Suppliers are required to prevent fraud and/or falsification by ensuring that their employees are trained on fraud and falsification, provided necessary information on TDGO established engineering, production, certification, and inspection requirements to perform assigned workflow correctly, and informed of the consequences of violations.

#### 11.4 Reporting Fraud or Falsification

- 11.4.1 Any party aware of or having reason to suspect FRAUD & FALSIFICATION (F&F), is obligated to report this violation anonymously or in person to the TDGO Quality Manager, Supplier Quality Analyst, Materials Manager or Buyer.
- 11.4.2 Should such a notification be necessary, information including location, date(s), time, names of people involved, and suspected violation would be most helpful to promote an investigation.

#### 11.5 Awareness

- 11.5.1 TDGO shall flow down to Suppliers a Fraud and Falsification Notice (P-108) to communicate their fraud and falsification obligation and remind Suppliers of the importance of compliance to TDGO written requirements and convey the serious consequences of violating them.
- 11.5.2 Suppliers are required to post this notice in conspicuous and prominent locations throughout the facility, especially in work areas, at a minimum rate of one (1) copy for every fifty (50) employees.
- 11.5.3 When processing TDGO Purchase Orders, suppliers shall alert their sub-tier suppliers of the fraud and falsification requirement by flow-down of this requirement in supplier Purchase Orders.

### 12.0 CORRECTIONS TO DOCUMENTS

#### 12.1 When making corrections to documents, the following method shall be used:

- 12.1.1 Draw a single line through the incorrect entry. Erasure or obliterations, including “whiteout”, of information is prohibited. Enter the corrected information in a legible fashion. Initial and date each correction.
- 12.1.2 When additions are made to a document, the additions shall also be initialed and dated.
- 12.1.3 When a document is revised to make corrections or add information, in part or completely, the document shall be identified as a corrected copy and all changes shall be identified using an asterisk \* with an explanation of the correction/addition stated on the document. The document shall be re-signed and dated with a typed name and title.
- 12.1.4 Corrections/additions cannot be made to another organization’s certification.

### 13.0 ELECTRONIC SIGNATURES

#### 13.1 Electronic Signature and Identification

- 13.1.1 An electronic signature is equivalent to a person’s handwritten signature. It indicates approval of a certification of information or action(s) in the same manner as pen-and-ink signatures.

- 13.1.2 The electronic identification is an electronic means of identifying a signer or an electronic record, document, transaction, or instrument. It is unique and attributable to only one person. For example, an identifying keystroke, a password, a personal identification number (PIN), token, or magnetic key.

## 13.2 Process Controls

- 13.2.1 The signer must take a distinct action to “sign” electronically. The process should provide for:

- 13.2.1.1 A means to identify the electronic signer by name on the electronic paper version of the document and should be maintained for the retention life of the electronic record.

- 13.2.1.2 Preservation of unauthorized access to electronic identifications.

- 13.2.1.3 An established password policy for changing an electronic identification and for not sharing electronic identifications.

- 13.2.1.4 A means to identify an electronic signature, as an electronic signature, on a record.

- 13.2.2 Flow Down to Sub-Tier Suppliers

- 13.2.2.1 Suppliers are responsible to flow down these electronic signature requirements to their sub-tier suppliers and sub-contractors.

- 13.2.2.2 It is the Supplier’s responsibility to ensure that their suppliers or sub-contractor have a policy that addresses changes to electronically signed documents, to include that changes are only performed by authorized personnel, and that all changes to electronically signed documents or records are properly documented.

## 14.0 COUNTERFEIT COMPLIANCE

- 14.1 TDGO has established a comprehensive program for preventing the purchase, receipt, and use of Counterfeit Parts.

- 14.2 Where appropriate, TDGO shall require a Supplier to certify they have provided authentic parts (hereinafter “Parts”), as follows:

- 14.2.1 Certify that any electrical, electronic, and electromechanical Parts supplied and delivered to Buyer by Supplier under Buyer’s purchase orders are new and authentic and are not counterfeit and that the Parts have not been marked or remarked to disguise or falsely represent the identity of the manufacturer, Part number, date code, constituent materials, or completed screening and testing of the Parts.

- 14.2.2 Certify that any Parts used in any products purchased, supplied, and delivered to Buyer by Supplier under Buyer’s purchase orders include new and authentic Parts and do not include any counterfeit Parts.

- 14.2.3 Warrant that, its lower-tier suppliers, and subcontractors of Parts purchased by Supplier in support of Buyer’s purchase orders, have supplied only new and authentic Parts and have not supplied counterfeit parts.



## 15.0 DDTC ITAR COMPLIANCE

- 15.1 Suppliers who fabricate and handle ITAR designated (Defense) Articles must be DDTC registered, have a valid annual Registration Letter, provide TDGO a valid annual renewal DDTC Registration Letter, and provide an executed Supplier ITAR Initiative to be kept on file.
- 15.2 Outside Service Suppliers who handle and process ITAR designated (Defense) Articles must have an executed Supplier ITAR Initiative on file.

## 16.0 RESTRICTED SUPPLIERS

- 16.1 It is critical that the supply chain ensures that evidence of proper testing, and certifications are available upon request. In support of the criticality of our product applications, we may restrict Suppliers based on notification or evidence of fraudulent activities such as, but not limited to, deliberating changing certifications without authority, obscuring data on certifications, signing off on tests not performed, misrepresentation of material acceptability, or for other non-compliance concerns.
- 16.2 To communicate the seriousness of this type of activity throughout the supply chain, we have created a "Restricted Suppliers List" that prohibits our Suppliers from delivering any material, products, and/or services to us that were manufactured by any of the suppliers on the list.
- 16.3 It is incumbent upon each Supplier to review the Restricted Suppliers List located under the SUPPLIERS tab located on the TDGO Website, prior processing purchase orders released to the Supplier.
- 16.4 The following suppliers are currently prohibited from use, however, the TDGO website Suppliers Tab will always carry the latest list.
  - 16.4.1 Western Titanium, Mach 2 Metals, Bristol Alloys

## 17.0 PURCHASE ORDER REQUIREMENTS

- 17.1 Quality Assurance and Procurement requirements are located under each line item on the Purchase Order. They shall coincide with the QA-308 Quality Assurance Clause document, located on the TDGO website, under the "Suppliers" tab.
- 17.2 Other requirements, including, but not limited to, Quality, Engineering, Procurement, Manufacturing, and Testing, as noted on the Purchase Order shall also apply unless otherwise prearranged, in writing, by TDGO personnel.

## 18.0 SUPPLIER SYSTEM MONITORING

- 18.1 Suppliers may be re-evaluated, inspect, and/or audited, at any time, in the event such Supplier's history demonstrates systemic or recurring performance issues.
- 18.2 TDGO reserves the right to periodically, inspect or audit suppliers to any TDGO requirements placed upon the supplier. TDGO will notify the supplier in advance to schedule compliance audits.
- 18.3 TDGO Supplier Audit Reports may include observations, as feedback, that point out opportunities for improvement or a potential issue not currently deemed a non-conformance.



- 18.4 Audit findings resulting in a Corrective Action/Preventive Action (CAPA), will be classified as follows:

Term	Definition
Major non-conformity	An element of the QHSE standard is missing, or there is pervasive non-compliance with a portion or portions of the regulation or standard.
Minor non-conformity	An error in record keeping or documentation that does not fully address the requirements of the element of the QHSE standard or portion; a single lapse or isolated occurrence of a nonconformity.

- 18.5 TDGO additionally requires that materials and workmanship forming part of any subcontracted order, may be inspected and/or tested at all times and places by their customer and/or Government Inspector.
- 18.6 During inspection at the supplier facility, the supplier shall provide the TDGO representative or TDGO customers with equipment, facilities and assistance necessary to verify product conformance to purchase order requirements if an on-site inspection is deemed necessary.

## 19.0 SUPPLIER PERFORMANCE RATING

- 19.1 Supplier performance may be evaluated using historical Quality and Delivery results.
- 19.2 The supplier shall ensure there is sufficient time to ship the product via the method as prescribed by the purchase order.
- 19.3 It is the supplier's responsibility to notify the appropriate TDGO buyer if any shipment will be delinquent to the Due-Date/Delivery-Date listed on the purchase order.
- 19.4 TDGO reserves the right to deviate from this procedure when failure to do so would result in a customer commitment being sacrificed.

## 20.0 WELDING REQUIREMENTS

- 20.1 Also reference NDT Procedure Approval Section.
- 20.2 Unless otherwise specified:
- 20.2.1 Production welding and/or weld repair shall be in accordance with Tech. Pub.-S9074-AR-GIB-010/278 and MIL-STD-278.
  - 20.2.2 Weld procedures and personnel shall be qualified in accordance with Tech. Pub. S9074-AQ- GIB-010/248 and MIL-STD-248.
  - 20.2.3 Nondestructive Testing (NDT) shall be in accordance with Tech. Pub. T9074-AS -GIB-010/271 and MIL-STD-271.
  - 20.2.4 All weld wire used on military orders must be from a supplier that is listed on Approved Quality Products Listing. QPL can be found at <http://quicksearch.dla.mil>, once in assist enter QPL & Specification (e.g. enter "QPL-21562").

## 21.0 NDT PROCEDURE APPROVAL

- 21.1 All NDT, welding and brazing procedures used on TDGO purchase orders shall be submitted to and approved by TDGO and its customer(s). The supplier shall not use these procedures on TDGO contract items until an approval has been received from TDGO. In addition, evidence of personnel qualification shall be available for review by representatives of TDGO or its customer(s), upon request.
- 21.2 Suppliers are required to notify the applicable TDGO buyer and obtain approval of any change in their NDT, welding or brazing procedures and must be approved prior to performing NDT, Welding, and/or brazing. Any deviation from the purchase order requirements, including materials, designs, quality assurance clauses, drawings and invoked specifications, must be approved by the TDGO buyer in advance of implementing the change. Failure to receive prior approval of the changes/deviations may also be in violation of Federal Law.
- 21.3 All submittals and re-submittals for approval shall be submitted on Form QA-703.

## 22.0 MINIMUM INSPECTION SYSTEM REQUIREMENTS

- 22.1 Unless otherwise specified, inspection sampling plans shall be performed on all machined parts in accordance with the Acceptable Quality Level (AQL) 1.0 System Requirements listed in the table below.
- 22.2 For O rings, use the AQL 1.5 inspection sampling plan outline below.
- 22.3 Lot acceptance is based on "ZERO" defects.
- 22.4 \*General inspection level II

- 22.5 \*\*For this lot size only, a reduced sample size is authorized due to accepting the lot on (0) defects and rejecting the lot if (1) defect is identified.

ANSI Z1.4-2008 SAMPLING PLAN - Table IIA*		
	AQL 1.0	AQL 1.5
Lot Qty.	Sample size	Sample size
2-8	100%	100%
9-15	13 or 100%	8
16-25	13	8
26-50	13	8
51-90	13	8
91-150	13	8**
151-280	50	32
281-500	50	50
501-1200	80	80
1201-3200	125	125
3201-10,000	200	200
10001- 35000	315	315

## 22.6 Inspection Requirements

- 22.6.1 The supplier shall perform, or have performed all inspections necessary to verify that the material, product, process or service offered for an acceptance conform in all respects to the purchase order requirements.
- 22.6.2 Quality of Workmanship: Machined or molded parts shall meet all design dimensions. Machined or molded parts will be visually inspected for cleanliness (oil, chips, dirt), damage (nicks, dents, scratches, cracks or gouges), burrs, sharp edges, porosity, galling, chatter and mismatches. Plated parts will be visually inspected for chipping, peeling, blistering, lack of adhesion, bleed through and damage caused by mishandling or from rack marks. Any of these will be considered adequate basis for rejection of items as being of inferior quality for the purpose intended. Please note: If something is detected thru normal visual observance, then magnification may be used to determine acceptance or rejection.
- 22.6.3 **CAUTION:** Sealing surfaces are critical to the functionality of our product and must be of the highest quality and workmanship as noted above.
- 22.6.4 The supplier shall establish a system which provides for lot identification and direct traceability to applicable material / test certifications.
- 22.6.5 The supplier shall maintain a quality system that assures compliance to Purchase Order requirements.

## 22.7 Inspection Equipment

- 22.7.1 Measuring and test equipment used to determine acceptability of product is to be calibrated utilizing NIST traceable standards.
- 22.7.2 The calibration system can be in accordance to MIL-STD-45662 or ANSI/ISO standards. The calibration status of all equipment must be current and viable.
- 22.7.3 Suppliers are responsible for all thread gaging. If supplier does not have the gages required for the job, they shall quote the needed gages to TDGO. A line item for the gages may be added to the PO for purchase of gages. Gages should be quoted and purchased with a long form calibration certificate. When the job is completed the gages will be returned to TDGO for future production use.

## 22.8 First Article Inspection (FAI)

- 22.8.1 The FAI process is a complete, independent, and documented physical inspection process to verify that prescribed production methods have produced material/components to specified drawings and associated specifications.
- 22.8.2 FAI shall be conducted in accordance with WI-QA-0090 (First Article Inspection Process for Suppliers).

## 23.0 SYSTEM 21 INSPECTION REQUIREMENTS FOR THREADED HOLES

- 23.1 Tapped holes and fabricated internal threads shall be inspected in accordance with System 21 criteria per FED-STD-H28/20B.
- 23.2 Inspection shall include use of appropriate size threaded internal functional, fixed limit Go/No Gages to verify the final tapped hole thread form.
- 23.3 Go/No Go cylindrical plug gages shall be used to ensure the threaded hole meets the minor diameter requirements of the threaded hole.
- 23.4 Use of an inside micrometer or Intramik to measure the thread minor diameter in lieu of a cylindrical plug gage is acceptable, but not required.

## 24.0 SUPPLIER CORRECTIVE ACTION REQUEST

- 24.1 The supplier shall establish a system that provides prompt and meaningful action to correct adverse conditions, which could result or have resulted in the inadvertent release of nonconforming products or services to TDGO.
- 24.2 This system must insure that when a Supplier Corrective Action Request is required, that the response is completed and returned by the requested due date.

## 25.0 PURCHASE ORDER DEVIATIONS AND NON-CONFORMANCES

- 25.1 Concessions, Deviations, and Non-conformances require review and are to be reported on the Supplier Concession Request Form QA-791 located on the TDGO website, Supplier's tab, and prior to shipping product to TDGO.

- 25.2 Supplier shall complete the form and submit it to the TDGO Buyer for evaluation and approval by TDGO Quality and Engineering. Supplier may not submit non-conforming material or deviate from Purchase Order requirements without prior written authorization from TDGO Quality.
- 25.3 Nonconforming material shall be identified and segregated from conforming material.
- 25.4 TDGO must be notified when any nonstandard visual condition exists on a part as a result of rework.

## **26.0 PURCHASE ORDER PACKAGING REQUIREMENTS**

- 26.1 This section includes different levels of packaging requirements when shipping product to TDGO, and examples of the types of parts that fall into that category.
- 26.2 All parts with external threads shall be adequately protected to prevent damage.
- 26.3 Non-compliance to the requirements below may be cause for rejection of, and may result in, return of material (unless otherwise specified).
- 26.4 LEVEL A - Critical tolerances, complete protection of part integrity and surface finish required. Cell type separators or individual packaging with cushioning required. All externally threaded screw machine parts shall have threads adequately protected to prevent damage.
  - 26.4.1 Examples: Machined parts such as millings, turnings and threaded items, and finished parts, such as Anodize, Alodine, Passivate, and Plated parts.
- 26.5 LEVEL B - Close tolerance parts, layer packing (separated), skin packing, or individually wrapped to protect surface finish. All externally threaded screw machine parts shall have threads adequately protected to prevent damage.
  - 26.5.1 Examples: O-rings, screw machine parts, engraving or laser marking, insert moldings, connectors, precision castings, stampings requiring surface finish of 125 or better, weld or brazed assemblies.
- 26.6 LEVEL C - Intermediate protection required. Layer packing without separators. Cartons must be of adequate strength to support stacking and skidding for motor freight transportation.
  - 26.6.1 Examples: Forgings, stampings, die castings.
- 26.7 LEVEL D - Material to be coated wrapped or packaged in such a manner as to prevent surface abrasion during transportation.
  - 26.7.1 Examples: Raw material such as extruded shapes, slugs, bar, hex, and sheet stock.
- 26.8 LEVEL E - For non-critical material, bulk pack with best commercial practice to protect material during normal transportation.
  - 26.8.1 Examples: Hardware such as screws, nuts, etc., springs and MRO items.

## 27.0 TEMPORARY METHODS OF SERIAL NUMBER MARKING

- 27.1 Machined Parts that are designated as Level 1, as identified by the Level 1 Watermark on the Purchase Order and/or Level 1 within the Part Description, must have a TDGO-Supplied Serial Number or TDGO-Approved Supplier Serial Numbers marked on the part in a temporary fashion through one of the two following approved methods:
- 27.1.1 **Indelible Ink (black)** - A permanent marker or indelible marker, which is a type of marker pen that is used to create permanent or semi-permanent writing on an object. In general, the ink comprises a main carrier solvent, a glyceride, a pyrrolidone, a resin and a colorant, making it water resistant (i.e., Sharpie®).
  - 27.1.2 **Durable Tag** - The tag and its fastening mechanism must not rust, fade, or deteriorate, and remains intact, legible, and attached to the product when exposed to water, oil, sunlight, and frequent handling. The tag shall be constructed and affixed in a manner which does not degrade the product to which it is attached.
- 27.2 Please contact your TDGO Buyer to set up a TDGO-Approved Supplier Serial Number Process.

## 28.0 PERMANENT METHODS OF SERIAL NUMBER MARKING (LASER MARKING)

- 28.1 Machined Parts that have a drawing note on marking which allows Laser Marking (must be stated in drawing note), supplier may do so using TDGO-Supplied Serial Numbers or TDGO-Approved Supplier Serial Numbers, ensuring the Laser Marking is in compliance with the size and location requirements on the Drawing.
- 28.2 Laser Marking must create a contrast on the material to clearly show information without damaging the product and/or surface. See SAE AS9100D-2016 as a reference.

## 29.0 SUPPLIER DELEGATED INSPECTION (SDI) PROGRAM

- 29.1 A program which grants authority to the supplier to perform selected inspection, surveillance and acceptance activities in lieu of TDGO performing these functions. Qualified parts/services accepted by an approved/authorized delegated supplier are routed directly to TDGO stock without the need for further inspection other than performing periodic product audits and document review.
- 29.2 The Quality Manager, or designee, and the Supplier Quality Analyst shall perform a thorough review of a Supplier's Quality Performance Rating and any MRB Case and rejection data on parts provided by that Supplier to determine acceptance of a Supplier into the program, based on eligibility criteria.
- 29.3 A Supplier is accepted and remains in the SDI Program based on all criteria and requirements set forth, and, in accordance with, WI-QA-0062.



## 30.0 RECORDS

- 30.1 The Supplier shall maintain all objective quality evidence records for all production, test certifications, and inspection activities, including any requirements outlined in associated TDGO Quality Clauses, and make these records available to TDGO upon request.
- 30.2 These files shall be properly maintained, legible and available upon request, for a period of seven (7) years, at a minimum, in accordance with the TDGO Business Unit Record Retention Policy.
- 30.3 If a Supplier is unable to comply with the TDGO Business Unit Record Retention Policy, the Supplier must notify the TDGO Supplier Quality Analyst prior to destruction of any objective quality evidence, and provide copies of such documentation, as needed.

## 31.0 WHY IS QUALITY SO CRITICAL?

### 31.1 Maintain Hull Integrity



### 31.2 Avoid Environmental Disasters



### 31.3 Avoid Aviation Catastrophes





## 32.0 REVISION HISTORY

Revision	Originator	CO/ECO #	Release Date
-	P. Varney	-	01/29/2008
A	P. Varney	E36709	04/10/2008
B	P. Varney	E37449	10/15/2008
C	P. Varney	E39051	12/10/2009
D	P. Varney	E39201	01/28/2010
E	M. Hudson	E39638	05/26/2010
F	M. Hudson	-	02/11/2011
G	M. Hudson	E40653	02/17/2011
H	K. Peek	E3690	03/06/2014
J	K. Peek	E3932	04/03/2014
K	C. White	E4020	04/21/2014
L	R. Peters	E4095	05/13/2014
M	K. Peek	E4615	09/15/2014
N	A. Powis	E6047	07/13/2015
P	K. Peek	E6688	10/30/2015
R	K. Peek	E6784	11/18/2015
T	R. Mills	E7408	04/13/2016
V	S. Blake	E7592	05/12/2016
W	B. Peavey	E7901	07/22/2016
Y	R. Mills	E7944	08/24/2016
AA	M. Mitchell	N/A	11/23/2016
AB	M. Mitchell	N/A	02/10/2017
AC	M. Mitchell	N/A	08/03/2017
AD	M. Mitchell	N/A	11/10/2017
AE	M. Mitchell	CO44367	01/12/2018
AF	R. Mills	CO44992	03/05/2018
AG	M. Mitchell	CO 47437	10/02/2018
AH	M. Mitchell	CO 49519	02/11/2019
AJ	M. Mitchell	CO 49999	03/21/2019
AK	P. Vandette	CO 53903	02/10/2020
AL	M. Dickson	CO 55096	05/14/2020
AM	M. Dickson	CO 55319	06/22/2020
AN	P. Varney	CO 71198	11/14/2024