

GDLS FAI Guidebook | Revision C

1 APPLICATION

This document applies to assemblies, sub-assemblies, and detail parts which have quality clauses QY11, QY14, and EQD2A. This includes any modified standard catalogue or Commercial-Off-the-Shelf (COTS) items.

Unless contractually required, this standard does not apply to:

- Development and prototype parts that are not considered as part of a production order.
- Unique single run production orders, not intended for ongoing production.
- Procured standard catalogue items, Commercial Off The Shelf (COTS) parts, Deliverable software
- Black box items - Supplier's proprietary information
- Parts with Quality Clause QY12 and QY15

2 REFERENCE DOCUMENTS and STANDARDS

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

- QCS-16 Cover Sheet
- QCS-16-1 Inspection Data
- QCS-16-2 NC Summary
- QCS-16-3 Materials & Processes
- GDLS PQA-3000 Production Quality Assurance Handbook
- AS9102 Aerospace First Article Inspection Requirement
- MIL-STD-1916 DOD Preferred Methods for Acceptance of Product
- ASME Y14.43 Dimensioning and Tolerancing Principles for Gages and Fixtures
- GDLS-C 0573 Commercial Item Risk Assessment Form (Canada)
- GDLS SCM 085 Commercial Item Supplier Representation and Determination (U.S.)

2.1 HIERARCHY OF DOCUMENTATION

- The GDLS Purchase Order (PO) takes precedence over all documents. If there are any conflicts between the GDLS PO and any documentation the PO takes precedence.
- If a conflict between any of the reference documents and this document occur then the requirements of this document will apply. Nothing in this document supersedes applicable laws and regulations unless a specific exemption has been obtained.
- If there is a conflict between any of the standards/documents/quality clauses stated and the GDLS print, the GDLS print takes precedence.

GDLS FAI Guidebook | Revision C

3 TERMS and DEFINITIONS

ATTRIBUTE DATA

A result from a characteristic or property that is appraised only as to whether it does or does not conform to a given requirement (e.g., go/no-go, accept/reject, pass/fail).

BASELINE PART NUMBER

This refers to the previous FAI part number or approved configuration, including revision level, to which a partial FAI is performed. An example of an approved configuration could be a part produced, prior to the requirements of this standard.

BLACK BOX ITEMS

Is a device, system, or object which can be viewed in terms of its inputs and outputs, without any knowledge of its internal workings. Specification only controlled drawing.

CAPABILITY

Ability of an organization, system, or process to produce a product that will fulfill the associated design characteristics defined for that product.

COMMERCIAL-OFF-THE-SHELF (COTS) ITEMS

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;

DESIGN CHARACTERISTICS

Those dimensional, visual, functional, mechanical, and material features or properties, which describe and constitute the design of the article, as specified by drawing or DPD requirements. These characteristics can be measured, inspected, tested, or verified to determine conformance to the design requirements. Dimensional features include in-process locating features (e.g., target-machined or forged/cast dimensions on forgings and castings, weld/braze joint preparation necessary for acceptance of finished joint). Material features or properties may include processing variables and sequences, which are specified by the drawing or DPD (e.g., heat treat temperature, fluorescent penetrant class, ultrasonic scans, sequence of welding and heat treat). These provide assurance of intended characteristics that could not be otherwise defined.

DESIGNED TOOLING

Product specific tooling [e.g., check fixtures, Coordinate Measurement Machine (CMM) program] specifically made to validate the design characteristics of a product.

GDLS FAI Guidebook | Revision C

3 TERMS and DEFINITIONS continued

DIGITAL PRODUCT DEFINITION (DPD) REQUIREMENTS

Requirements of any digital data files that disclose, directly or by reference, the physical or functional requirements, including data files that disclose the design or acceptance criteria of a product.

Examples of DPD include the following:

1. The digital definition and fully dimensioned two-dimensional (2D) drawing sheets.
2. Three-dimensional (3D) data model and simplified or reduced content 2D drawing sheets.
3. The 3D model with design characteristics displayed as text.
4. Any other data files that define a product in its entirety.

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.

FIRST ARTICLE INSPECTION REPORT (FAIR)

The forms and package of documentation for a part number, sub-assembly, or assembly, including associated FAI results, as defined by this standard.

FIRST PRODUCTION RUN

The initial group of one or more parts that are the result of a planned process designed to be used for future production of these same parts.

FULL FAI

A full inspection of the assembly, sub-assemblies, and/or detail parts to all requirements of the full technical data package to produce the item.

MULTIPLE CHARACTERISTICS

Identical characteristics that occur at more than one location (e.g., "4 places"), but are established by a single set of drawing or DPD requirements (e.g., rivet hole size, dovetail slots, corner radii, chemical milling pocket thickness).

NO CHANGE CLAUSE

The No Change Clause is a contractual requirement and can be found in the Terms and Conditions under Configuration Control. 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.

PRODUCT

Any intended output resulting from the product realization process, which in the context of this standard includes finished detailed parts, sub-assemblies, assemblies, forgings, and castings.

PRODUCT REALIZATION

A clear idea of what the product will be, usually expressed in drawings, statements of work, functional product specs, or their equivalents.

GDLS FAI Guidebook | Revision C

3 TERMS and DEFINITIONS continued

QUALIFIED TOOLING

Universal (not part specific) calibrated monitoring and measuring equipment (e.g., go/no go gauges, thread gauges, radius gauges) used to validate product design characteristics, that are uniquely identified and traceable to their calibration records.

PARTIAL FAI

Only changes that have been completed after a Full FAI has been completed and approved will be inspected. These changes would be classified as per the No Change Clause. This may also be done when sub-assembly and detail parts are used in different assembly part numbers.

REFERENCE CHARACTERISTICS

The characteristics that are used for “information only” or to show relationship; these are dimensions without tolerances and refer to other dimensions on the drawing or in the DPD.

SPECIAL PROCESSES

Any processes for production and service provision where the resulting output cannot be verified by subsequent monitoring or measurement and, as a consequence, deficiencies become apparent only after the product is in use or the service has been delivered.

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.

VARIABLE DATA

Quantitative measurements taken on a continuous scale (e.g., the diameter of a cylinder, the gap between mating parts).

GDLS FAI Guidebook | Revision C

4 REQUIREMENTS

4.1 PART REQUIREMENTS

- a. The supplier shall perform FAI on new product representative of the first production run. The first production delivery parts require an FAI. The FAI will be done on at least 1 of the first 5 parts or as requested that are made using the production process. There will be no shipments until the FAI has been approved by a GDLS Quality Representative.
- b. The supplier shall use a representative part from the first production run of a new product to verify that the production processes, production documentation, and tooling have the capability to produce products that meet the established requirements.
- c. For assemblies, the assembly level FAI shall be performed on those characteristics specified on the assembly drawing or DPD. Each of the sub-assemblies / detail parts within an assembly will require a separate set of FAI documents which will be completed for each of the items within the assembly.
- d. This process shall be repeated, when changes occur that invalidate the original FAI approval per the GDLS No Change Clause in the purchase order terms and conditions (see 4.6 of this document).
 - No part configuration changes have occurred
 - Part is manufactured at the same facility / sub-tier facility
 - Manufacturing process has remained the same /Sub-tier manufacturing process has remained the same
 - No more than (2) year break in production shipments to GDLS
 - The sub-tier suppliers and special processors have not changed
 - No formal corrective action has been required

4.2 FIRST ARTICLE INSPECTION PLANNING

- a. The supplier shall have a process to plan for completion of FAI or shall plan FAI activities prior to the first production run.
- b. FAI planning shall address the activities to be performed throughout the FAI process and identify the responsible areas for those activities.
- c. The supplier should consider the following activities during FAI planning and coordinate planning with the customer, if required:
 - 1. Determination of design characteristic inspection and sequencing for inspection of characteristics not measurable in the final product.
 - 2. Extraction of DPD design characteristics required for product realization that are not fully defined on 2D drawings, including tolerances for nominal dimensions.
 - 3. Determination of objective evidence to be included in the FAIR for each design characteristic.
 - 4. Determination that key characteristic and critical item requirements are identified, as applicable.
 - 5. Determination when part specific gauges and tooling are required. These gauges and tooling are identified, qualified, and traceable, as appropriate.
 - 6. Provide for customer FAI review, if required.
 - 7. Identification of events requiring an updated FAI (see 4.6).

GDLS FAI Guidebook | Revision C

4.3 DIGITAL PRODUCT DEFINITION REQUIREMENTS

- a. When design requirements are in a DPD format and traditional 2D drawing information is not available for all applicable design requirements, the DPD design characteristics required for product realization shall be extracted, verified, and included in the FAIR.
- b. The supplier shall:
 - 1. Establish a process to extract the applicable DPD design characteristics.
 - 2. Extract the DPD design characteristics required for product realization.
 - 3. Ensure the production, inspection, and operations requiring verification have been completed as planned to achieve DPD design characteristics.

4.4 NONCONFORMANCE HANDLING

- a. The FAI with design characteristic nonconformance(s) is "not complete". An FAI with noted nonconforming design characteristics will have Form QCS-16 Cover Sheet checked off as a "Failed" audit.
- b. All parts within the lot which have been found to contain at least one nonconformance will need to be quarantined and contained from shipping prior to FAI approval. 100% of the parts within the lot will need to be inspected for the nonconformance's. 100% inspection will be required for all manufacturing runs until a root cause and permanent corrective action have been implemented and verified conforming.
- c. When processing a FAIR with documented nonconformance's:
 - 1. Record the nonconforming design characteristics on Form QCS-16-2 "NC Summary".
 - 2. The supplier will contact the appropriate GDLS Buyer and Supplier Quality Assurance (SQA) Regional Manager to inform them the FAI has failed and the parts will not ship until the nonconforming items are dispositioned, corrected, and the FAI is approved.
 - 3. Parts cannot ship until the FAI is approved and the QCS-16 Cover Sheet is signed, and stamped by a GDLS Quality Representative.
- d. The supplier may be required to implement corrective action(s) when nonconformance's are discovered during the FAI process. The supplier will be required to perform a partial FAI for all affected characteristics on the next production run, after implementation of the associated corrective action(s). A partial or full FAI may be required to verify any corrective actions that were implemented have corrected the nonconformance's.

4.5 EVALUATION ACTIVITIES

The supplier shall conduct the following activities during product realization, when applicable, in support of FAI to ensure conformance with design characteristics:

- a. Review documentation for the manufacturing process (e.g., routing sheets, manufacturing or quality plans, manufacturing work instructions) to ensure all operations are complete as planned and call out the correct specification, material types, conditions, and approvals.
- b. Review supporting documentation in the FAI package (e.g., inspection data, test data, Acceptance Test Procedures, special process approvals and certifications) for completeness.
- c. Verify that the raw material and special process certifications call out the correct specification, material types, conditions, and approvals.
- d. Verify that required customer approved sources are utilized e.g., source control prints, high strength fasteners, ASTM A514, etc.

GDLS FAI Guidebook | Revision C

4.5 EVALUATION ACTIVITIES continued

- e. Review nonconformance documentation included in the FAIR for completeness. Nonconformance's will be documented on the QCS-16-2 NC Summary.
- f. Verify that required designed tooling (e.g., part specific gauges) are used and appropriately documented on Form QCS-16-1 Field 15. Part specific gauges should be built in accordance with ASME Y14.43 Dimensioning and Tolerancing Principles for Gages and Fixtures.
- g. Verify that every design characteristic requirement is accounted for, uniquely identified, and has inspection results traceable to each unique identifier.
- h. Verify the design characteristics that are the output of the manufacturing process are measured, inspected, tested, or verified to determine conformance, including DPD characteristics as required per 4.3.b.
- i. Verify part marking is legible, correct in content and size, and properly located per applicable specifications.
- j. The supplier should complete these activities prior to scheduling the FAI to verify all requirements have been met so the FAI should pass on the first visit.

4.6 PARTIAL OR RE-ACCOMPLISHMENT OF FIRST ARTICLE INSPECTION

- a. The FAI requirement, once invoked, shall continue to apply even after initial compliance.
- b. The FAI requirements may be satisfied by a partial FAI that addresses only the changes from a baseline part number provided all other characteristics were conforming on the previous FAI and are produced by the original production processes.
- c. When a partial FAI is performed, the supplier shall, as a minimum, complete the affected fields in the FAI forms.
- d. When the supplier performs a partial FAI, the supplier shall record the "Baseline Part Number", including the revision level and reason for the partial FAI on Form QCS-16 (see field 14).
- e. FAI requirements may be satisfied by a previously approved FAI performed on identical characteristics of similar parts produced by identical means. When FAI requirements (partial or full) are satisfied in this manner, identify the "Baseline Part Number" on Form QCS-16 (see field 14).
- f. The supplier shall perform a full FAI or a partial FAI for affected characteristics, when any of the following occurs:
 - 1. A change in the configuration of the assembly, sub-assembly, detail parts.
 - 2. A change in manufacturing source(s), process(es), inspection method(s), location of manufacture, tooling, or materials.
 - 3. A change in numerical control program(s) or translation to another media that can potentially affect fit, form, or function.
 - 4. A natural or man-made event, which may adversely affect the manufacturing process.
 - 5. An implementation of corrective action which effects a change in process, sub-tier supplier, sub-tier supplier process.
 - 6. A lapse in production shipments for more than 2 years.

GDLS FAI Guidebook | Revision C

4.7 DOCUMENTATION

4.7.1 FORMS

- a. FAI documentation will consist of using the following GDLS documents to record all of the FAI results:
 - 1. QCS-16 Cover Sheet
 - 2. QCS-16-1 Inspection Data
 - 3. QCS-16-2 NC Summary
 - 4. QCS-16-3 Materials & Processes
- b. Each field in the forms is designated with a unique reference number and is identified as:
 - 1. (R) - Required: This is mandatory information.
 - 2. (CR) - Conditionally Required. Shall be completed when the data is available or enter "N/A" if not applicable. Do not leave blank.
- c. All forms shall be completed either electronically or in permanent ink.
- d. All forms shall be completed in the English language.
- e. Continuation sheets and insertion of additional rows are acceptable.
- f. All data recorded will be recorded in the units as specified within the technical data package.
- g. Every build to print part that is part of an assembly or a detail part will be required to have all forms completed as part of the FAI process. Forms QCS-16, QCS-16.1, QCS-16.2, and QCS-16-3.

4.7.2 CHARACTERISTIC ACCOUNTABILITY BUILD TO PRINT ITEMS

- a. The supplier shall verify every design characteristic, during the FAI, and record the associated results. Every design characteristic shall have its own unique characteristic number.
- b. Reference characteristics may be omitted from the FAI.
- c. More than one line may be used, if needed, for any characteristic.
- d. Characteristics not measurable in the final product shall be verified during the manufacturing process, as long as they are not affected by subsequent operations or by destructive means.
- e. Value Added Suppliers that are purchasing Vendor Item Controlled Drawing parts and/or Source Controlled Drawings parts for direct shipment or to be used in an assembly see 4.7.3.a - 4.7.3.d for part approval documentation requirements.
 - 1. Every build to print part that is part of an assembly or a detail part will be required to have all forms completed as part of the FAI process. Forms QCS-16, QCS-16.1, QCS-16.2, and QCS-16-3.

4.7.3 ADDITIONAL VERIFICATION ACTIVITIES INCLUDING DISTRIBUTORS

- a. **Vendor Item Control Drawings (VICD)** - When purchasing parts per a VICD it is recommended that the supplier buy from the recommended sources of supply. If the supplier does not purchase from a recommended source of supply and corresponding part number as shown on the GDLS drawing then see 4.7.3.a.3 below.
 - 1. If the part(s) purchased come from the supplier listed on the VICD then a certificate of conformance from the manufacturer listed on the VICD will be acceptable for approval of FAI activity. **A C of C will only be accepted from a distributor when the C of C is from an authorized franchise distributor as designated by the manufacturer of the part.**

GDLS FAI Guidebook | Revision C

4.7.3 ADDITIONAL VERIFICATION ACTIVITIES INCLUDING DISTRIBUTORS continued

2. Additionally, the supplier will balloon the drawing and verify that the VICD parts meet requirements as listed on the GDLS drawing. Verification can be done by reviewing the manufacturers catalog pages. If nonconformance's exist between GDLS Drawing and Manufacturer drawing add to QCS-16-2 per section 4.4.

3. When a supplier chooses to purchase a part that is not listed as a recommended source and part number or chooses to make the part, the supplier must fully balloon all requirements of the Technical Data Package and supply verification that all TDP requirements have been met. This will include all environmental, qualification and/or performance testing. All FAI forms will be required to be completed, QCS-16, QCS-16.1, QCS-16.2, and QCS-16-3.

b. Source Controlled Drawings (SCD) - When purchasing parts per a GDLS Source Controlled Drawing the supplier is required to purchase from the approved source of supply and corresponding part number.

1. Verify on the Certificate of Conformance that required customer approved sources and corresponding part numbers are utilized. (e.g., source control prints, high strength fasteners)

2. Additionally, the supplier will balloon the drawing and verify that the Source Controlled parts meet the requirements as listed on the GDLS drawing. In accordance with ASME Y14.24 , a qualification item (e.g., environmental requirements, etc.) will be considered verified via the approved source of supply.

3. All nonconformance's between the GDLS print(s) and the manufacturer print(s) will be added to the QCS-16-2 per section 4.4.

c. Standard Catalogue Items & Commercial Off The Shelf (COTS)

1. Standard Catalogue Items & Commercial Off The Shelf (COTS) - When these items are part of an assembly and the GDLS PO has QY11, QY14, or EQD2A quality clause the supplier may provide a certificate of conformance and/or review of catalog page from the manufacturer of the items as a form of part acceptance. When using a catalog page as a form of acceptance, evidence of purchasing source will be required. The certificate of conformance information will be listed on the QCS-16-3 for the assembly in which the part resides.

2. Standard Catalogue Items - When these items are a part procured as a detail part and the GDLS PO has QY11, QY14, or EQD2A quality clause the supplier may provide a certificate of conformance and/or review of catalog page from the manufacturer of the items as a form of part acceptance. When using a catalog page as a form of acceptance, evidence of purchasing source will be required.

3. Commercial Off The Shelf (COTS) - When these items are procured as a detail part and the GDLS PO has QY11, QY14, or EQD2A quality clause the supplier may provide a certificate of conformance and/or review of catalog page from the manufacturer of the items as a form of part acceptance. When using a catalog page as a form of acceptance, evidence of purchasing source will be required.

GDLS FAI Guidebook | Revision C

4.7.3 ADDITIONAL VERIFICATION ACTIVITIES INCLUDING DISTRIBUTORS continued

Note: Suppliers should always first request COTS parts procured as detail parts have the quality clause changed to QG4 Commercial Requirements if clause QY11, QY14, or EQD2A clause appear on the GDLS purchase order.

For GDLS-Canada PO's - request for clause changes should have form GDLS-C 0573 completed and sent to QACLAUSES@GDLSCANADA.COM and copy your GDLS Buyer.

For GDLS-U.S. PO's - request for clause changes should have form SCM 085 completed and send a copy to your GDLS Buyer.

d. During FAI and each shipment there after the supplier is required to verify no changes have taken place since the last shipment and the parts still meet all requirements of the technical data package. If the manufacturer makes any changes to the design on a suggested source of supply part or an approved source of supply part, the supplier shall notify GDLS as soon as possible. The supplier shall verify all print notes and dimensions listed on the VICD and SCD are still conforming to the parts as manufactured. If a change is found, the supplier shall notify the GDLS Buyer per the no change clause.

4.7.4 RECORD RESULTS

a. The supplier and sub-tier suppliers shall record the requirements and results in the units specified on the drawing, DPD, or specification, unless otherwise approved by the customer.

b. Results from inspection of design characteristics shall be expressed in quantitative terms (i.e., variable data), when a design characteristic is expressed by numerical limits. Except that attribute data (e.g., pass/fail) may be used in lieu of variable data when:

1. No inspection technique resulting in variable data is feasible

2. Designed tooling or qualified tooling is consistently used as a check feature and a go/no-go feature has been established for the specific characteristic. When qualified tooling (e.g., radius/thread gauges) are used as a go/no-go gauge, record the gauge value or range (e.g., minimum/maximum value), as applicable. Gauges should be built in accordance with ASME Y14.43 Dimensioning and Tolerancing Principles for Gages and Fixtures.

c. Attribute data shall be used, when the design characteristic does not specify numerical limits (e.g., break all sharp edges).

d. When recording variable data for multiple features that are the same (e.g., 20x holes size, hole positions, etc.) it is required that each feature be identified and listed separately on form QCS-16-1 inspection data form. See example 1 FAI documents for examples.

e. The GDLS Field Service Representative will review the results of the supplier's FAI. QCS-16 Cover Sheet and QCS-16-2 NC Summary will be submitted to GDLS SQA when the audit is completed. The supplier will keep all records on file.

4.8 CONTROL OF RECORDS

FAI documentation required by this standard shall be considered a quality record. The supplier shall retain the all FAI documentation while the product is being produced and, at a minimum, retain the documentation according to applicable customer or regulatory requirements. (Review your GDLS Terms and Conditions)

GDLS FAI Guidebook | Revision C

FAI Guide Revision History

13-Feb-20	Ran spell check per communications team. Two words updated. No update will be made at this time. Added Revision History	SJW
13-May-20	A. Section 1. bullet 3 Removed - verbiage (designated on PO by quality clause QG4 Commercial Requirement)	SJW
	B. Section 1 Bullet 6 add QY12 Clause	SJW
	C. Section 2 Add 2 bullets on QG4 Clause COTS evaluation form for GDLS-US and GDLS-Canada	SJW
	D. Section 3 Add to COTS definition	SJW
13-Oct-20	E. Section 4.7.3 - Reformatted to add par. 1 & 2	SJW
	F. Section 4.7.3 - Removed - Exceptions	SJW
	G. Section 4.7.3 - Added par 2 detail parts requirements for SCI's and COTS with QY11 clause.	SJW
31-Oct-20	Release Rev. B	
25-Aug-23	Update from 1 yr to 2 yr break in production shipments	SJW

FAI Numbered Explanation Revision History

15-Oct-20	Update QCS-16 #6 to reflect quantity of 1 piece recorded on QCS-16-1 for EQD2A.	
	Update QCS-16-1 change EQD2A documentation to 1 piece recorded.	
	Update QCS-16-2 - 17. added SQMR and MRB as examples of what to list as a disposition to a nonconformance that may have been found.	
	Update the QCS-16-2 heading information to include the following: <i>Any nonconformance (NC) found during the audit should be listed on the QCS-16-2. If the NC found is resolved using a SQMR, waiver/deviation, etc. and found to be acceptable then the issue should still be listed on the QCS-16-2 with the proper disposition type listed in section 17. of the form.</i>	
	Update the QCS-16-2 #17 to include MRB, SQMR, waiver/deviations.	
	Update all # 7 all sheets to reflect Audit Report and replace FAIR# per FAI worksheets.	
31-Oct-20	QCS16 #14 add QY12 / EQD2A / Source No Stamp & Definition	

10-06-22	JK	RZ	PRODUCT BASELINE
11-08-14	ZH	HLB	REVISED PER 11-04-01

FIND NO	QTY	CAGE CODE	PART NUMBER	DESCRIPTION	SPECIFICATIONS	NOTES
1	1	01417	LS1151268-1	TUBE		(7.1)
2	2	01417	LS1151268-2	PLATE		(7.2)

DATE	DESCRIPTION	BY	APPROVED
11-08-14	REVISED PER 11-04-01	ZH	HLB

PARTS LIST

GENERAL DYNAMICS
Land Systems

TITLE
GRAB HANDLE

PART NO
LS1151268

SIZE
D 01417

SCALE
1:2

SHEET 1 OF 2

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MILLIMETERS

TABLES ON PAGES 1, 2, AND 3
TOLERANCES ON ANGLES

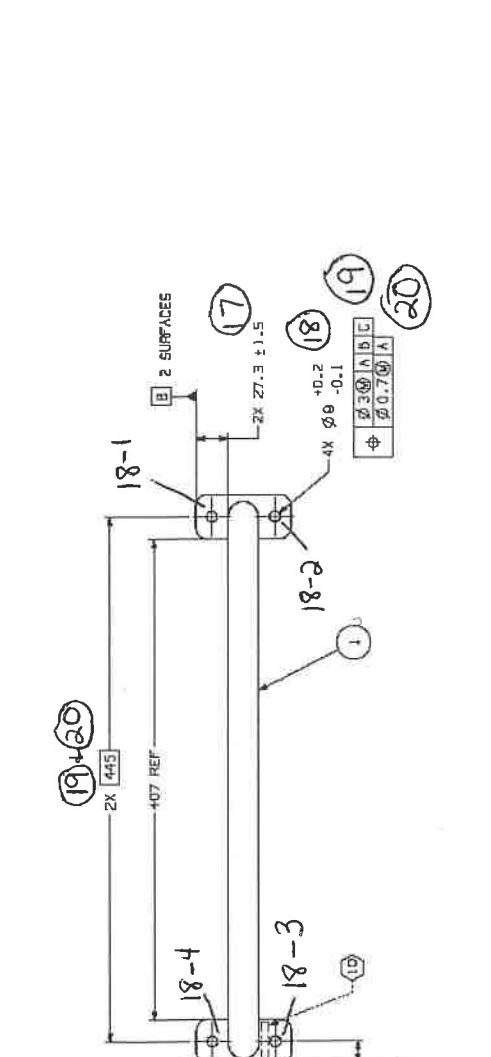
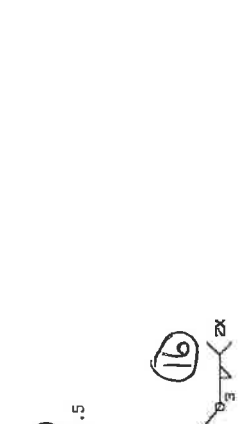
1 FLAT 2 FLARE
± .010 ± .015 ± .020

LOT MARKING REQUIREMENTS

SEE DRAWING FOR APPLICATION

1 2 3 4 5 6 7 8

- NOTES:
1. DIMENSIONS AND TOLERANCING IN ACCORDANCE WITH ASME Y14.5M-1994.
 2. ASTM S1 10 APPLIES. ANNEX B SHALL BE USED IN CONVERTING AND ROUNDING OFF 1 INCH = 25.4 mm APPLIES.
 3. UNLESS OTHERWISE SPECIFIED, TO BE ± 2 DEGREES ANGLES.
 4. MATERIAL SHALL BE FREE OF OIL, WAXING FLUIDS, GREASE, OR OTHER CONTAMINANTS THAT MAY HAVE AN ADVERSE EFFECT ON WELDING.
 5. REMOVE ALL BURRS AND SHARP EDGES.
 6. UNLESS OTHERWISE SPECIFIED ALL WELDING TO BE PER AWS D1.2
 7. MATERIALS:
 - (7.1) TUBING, ALUMINUM ALLOY 6061-T6 OR 6061-T6511, SPEC. ASTM B210 OR ASTM B221, 25.4mm O.D. X 3.18mm WALL THICKNESS 11.0 DIA. X .12 INCH WALL THICKNESS.
 - (7.2) ALUMINUM ALLOY, 6061-T6E1 OR T6E11, ASTM B208 OR ASTM B221, 7.64 mm 1.312 INCH THICK.
 8. PROTECTIVE FINISH PER MIL-DTL-5541, TYPE II, CLASS 1A. PAINT PER REQUIREMENTS ON DRAWING NO. 18007-12348-563, WHITE, COLOR NO. 17628 OR FED-STD-365.
 9. ALL HOLES TO BE FREE OF PAINT.
 10. ITEM IDENTIFICATION: RUBBER STAMP OR STENCIL THE FOLLOWING MARKINGS IN ACCORDANCE WITH MIL-STD-130 USING BLACK EPOXY INK PER MIL-STD-130. MARKINGS SHALL BE IN HIGH CHARACTERISTICS. DRAWING NO. LS1151268 MFR: LS - MANUFACTURER'S CASE CODE
 11. 640P-DIAMOND KNURLING CLASS 1 PER ASME B54.6-1984



METRIC

THIRD ANGLE PROJECTION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS

TABLES ON PAGES 1, 2, AND 3

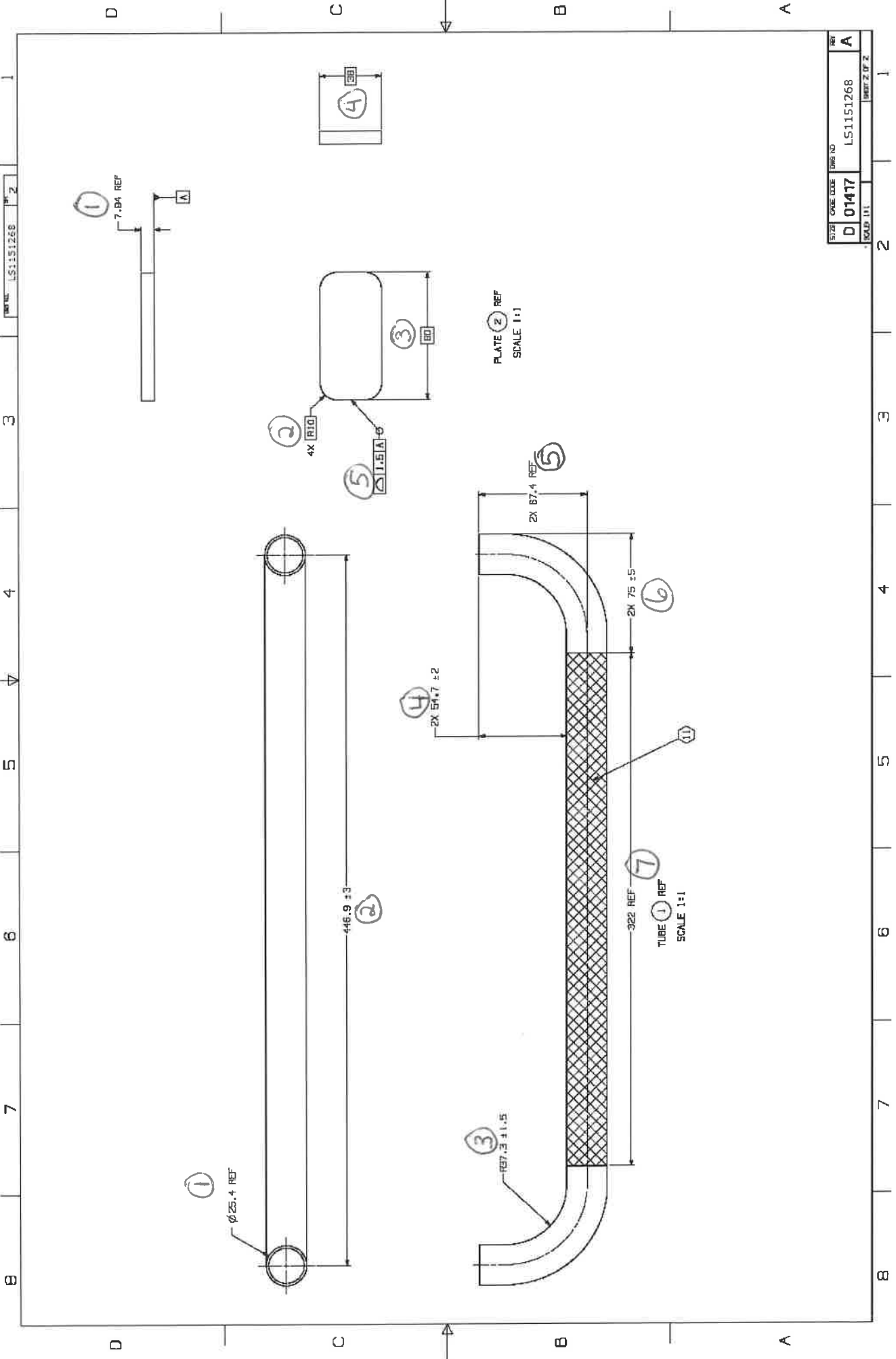
TOLERANCES ON ANGLES

1 FLAT 2 FLARE ± .010 ± .015 ± .020

LOT MARKING REQUIREMENTS

SEE DRAWING FOR APPLICATION

PART NO	LS1151268
TITLE	GRAB HANDLE
SIZE	D 01417
SCALE	1:2
SHEET 1 OF 2	A



REF ID: LS1151268 P. 2

SIZE	ORIG CODE	ORIG NO	REF
D	01417	LS1151268	A
SHEET 11			SHEET 2 OF 2

1. Part Number LS1151268	7. FAI Report # (Audit Sequence No.) VFP 128546
2. Part Name Grab Handle	8. GDLS Purchase Order / PO Revision 4024354684 PO Rev 5
3. Print and/or Model Revision Rev. A	9. GDLS Quality Clauses QG3, QG5, QJ21, QY11, QX118, QP93,
4. Parent Assembly Part Number N/A	10. Supplier Name Best Ever Supplier Targeting Company Inc. (BEST Co. Inc.)
5. Serial Number(s) N/A	11. City, State Timbuktu, Mississippi, USA
6. Lot Quantity / Quantity Inspected Lot 50 / 8 Inspected	12. GDLS Supplier No. / Government Cage Code 5001234 / OU812
13. Detail Part: <input type="checkbox"/> Assembly FAI: <input checked="" type="checkbox"/>	14. Full FAI: <input checked="" type="checkbox"/> Partial FAI: <input type="checkbox"/> Baseline Part Number (including revision level): Reason for Partial FAI: N/A



DATA USED FOR EVALUATION

15. Part Number & Print Revision	16. SCR/CCR	17. QAR / QAP	N/A
LS1151268-1 Rev. A	N/A		
LS1151268-2 Rev. A			
		18. Mil Specification(s)	MIL-STD-130
			MIL-DTL-5541
		19. Other (e.g., Deviation, TRA, Ordering Data)	N/A

SUMMARY Check as appropriate (X) = Documentation Reviewed, Approved and Attached to this Report

<input checked="" type="checkbox"/> 20. Part Identification/Marking	N/A 24. Brazing / Soldering Approval Letter Validation
N/A 21. Software Approval Letter Validation	N/A 25. Non-Destructive Testing Validation
N/A 22. High Strength Fastener(s)	N/A 26. Critical Safety Item Inspection Validation
<input checked="" type="checkbox"/> 23. Weld Process Approval Letter / Date of Approval	Date: Weld Process Approved Oct. 25, 2019

27. REMARKS

FAI STATUS: <input checked="" type="checkbox"/> 28. PASS <input type="checkbox"/> 29. FAIL			
Thomas Best		John Smithster	
30. SUPPLIER PRINTED NAME <i>Tom Best</i>		33. GDLS PRINTED NAME <i>John Smithster</i>	
31. SUPPLIER APPROVAL SIGNATURE <i>Tom Best</i>	32. STAMP	34. GDLS APPROVAL SIGNATURE <i>John Smithster</i>	35. STAMP
DATE: 11/15/2019		DATE: 11/15/2019	

QCS-16 Cover Sheet Form Explanations Document

(R) - Required. Mandatory information to be on the FAI

(CR) - Conditionally Required. Shall be completed when the data is available or enter "N/A" if not applicable. Do not leave blank.

- 1. (R) Part Number (GDLS):** Number of the FAI part as it appears on your GDLS Purchase Order or the detail part number being evaluated that is part of parent assembly part number.
- 2. (R) Part Name:** Name of the FAI part as shown on your GDLS Purchase Order.
- 3. (R) Print and/or Model Revision:** Latest print revision that is being used during the FAI part inspection. If the part has not been revised, indicate as such (e.g., Rev -, Rev NR).
- 4. (CR) Parent Assembly Part Number:** List the upper part assembly number here if the part number in found in cell 1. (R) Part Number) is part of an assembly.
- 5. (CR) Serial Number:** Serial number of the FAI part; unique identifier assigned to a detail part, sub-assembly, or assembly by the organization or customer.
- 6. (R) Lot Quantity / Quantity Inspected:** List the quantity of parts that were made in this lot of material. List the quantity of parts inspected as part of the lot sampling plan. (Ref. Mil-Std-1916 if needed)
For the QY11 clause and EQC4 clause the supplier will need to record the data for 1 of the first 5 pieces produced on form QCS-16-1.
For QY2 clause and QY14 clause the supplier will record the data for 5 pieces on the QCS-16-1.
For EQD2A clause the supplier will record the data for 1 piece on form QCS-16-1. The data for the remainder of the supplier's lot sampling plan can be recorded in the supplier's preferred format.
- 7. (R) Audit Type & Sequence Number:** Reference number that identifies the FAI; this will be the GDLS Audit Sequence Number provided to the GDLS Field Service Representative after the supplier requests the audit.
- 8. (R) GDLS P.O. Number/PO Revision:** GDLS purchase order number. The revision of the GDLS PO.
- 9. (R) GDLS Quality Clauses:** List the quality clauses assigned to the part number shown on the GDLS PO. If your GDLS PO does not have any quality clauses listed please contact your GDLS Buyer to have the PO corrected.
- 10. (R) Supplier Name:** Supplier Company Name that is performing the FAI.
- 11. (R) City, State:** City and State of the supplier location the parts are being manufactured and inspected.
- 12. (R) GDLS Supplier No. / Government Cage Code :** A unique number given by the customer to the organization (GDLS Oracle identification number) / U.S. given CAGE (Commercial And Government Entity) code.
- 13. (R) Detail Part / Assembly FAI:** Check, as appropriate.
- 14. (R) Full FAI / Partial FAI / QY12 FPI / EQD2A / Source No Stamp:** Check, as appropriate.
Full FAI (PO Clause QY11) is required when the part first ships to GDLS and will be required again if a part has not shipped to GDLS for more than 2 years.
Partial FAI (PO Clause QY11), provide the previously approved FAI part number, including revision level after Baseline Part Number.
Include the reason for the current partial FAI (e.g., changes in design, process, subtier supplier change, or manufacturing location change per the GDLS No Change Clause).
First Piece Inspection (PO Clause QY12) is required per the FPI Guide.
Source Inspection (PO Clause EQD2A) perform inspection using all forms in the FAI guide for every shipment of this part number to GDLS.
Source Inspection No Stamp - When a supplier does not have a stamp because of quality issues, stamp holder leaves company, new supplier, etc. Consult your GDLS SQA Regional Manager as to quantity of parts to record on the FAI documentation.

QCS-16 Cover Sheet Form Explanations Document

(R) - Required. Mandatory information to be on the FAI

(CR) - Conditionally Required. Shall be completed when the data is available or enter "N/A" if not applicable. Do not leave blank.

14. Continued

Baseline Part Number: For a partial FAI, provide the previous FAI part number or approved configuration (including revision level) to which this partial FAI is performed. State the reason for the current FAI (e.g., changes in design, process, or manufacturing location). For a partial FAI based on similar parts (reference GDLS FAI Guide section, 4.6), provide the approved configuration FAI part number, including revision level.

15. (R) Part Number and Print Revision: List all sub-assemblies and detail parts that are used in the manufacturing of the FAI part number listed in box 1. If this is a detail part without any sub components just list N/A. Additional sheets may be required.

16. (CR) SCR/CCR: Sterling Heights Change Request (SCR) / Canadian Change Request (CCR) list all change requests used for the manufacture of the FAI part number listed in box 1 and/or box 13.

17. (CR) Quality Assurance Requirement (QAR)/Quality Assurance Provision (QAP): List all QAR/QAP used for the manufacture of the FAI part number listed in box 1. **NOTE: All requirements found within the QAR/QAP should be ballooned and added to QCS-16-1 Inspection Data and QCS-16-3 Materials & Processes documentation as required to show conformance.**

18. (CR) Mil Specification(s): List any Military specifications noted on the print used for the manufacture of the FAI part number listed in box 1.

19. (CR) Other (e.g.: Deviation, TRA, Ordering Data): List any other supplement documentations that were used for the manufacture of the FAI part number listed in box # 1.

Summary: Check all appropriate areas as required per the technical data package when the documentation has been reviewed and found to be acceptable per the print requirement, quality clause, approved supplier list.

20. (CR) Part Identification / Marking: Check this box when the part marking has been reviewed and found to meet the requirements of the TDP. Provide a photo of how the part is being marked when part marking is listed in the technical data package.

21. (CR) Software Approval Letter Validation: If a software approval letter is required review that it has been reviewed and approved from GDLS Quality Engineering and Test group. Review requirements for Software Approval in the GDLS PQA3000.

22. (CR) High Strength Fastener(s): Review and verify that the manufacturer of high strength fasteners is a supplier on the GDLS approved supplier list. You can request the approved supplier list for High Strength Fasteners from your GDLS Buyer or SQA Regional Manager.

23. (CR) Weld Process Approval Letter/Date of Approval: If a Weld Process Approval Letter is required per the Quality Clauses as noted on the GDLS PO please review and verify the supplier has the approval from the GDLS authority. The welding quality clause will list the requirements and where to send the requirements for approval. List the date the Weld Process Approval was given. **NOTE: Weld Process Approval Letters are good for 3 years from the date of approval. Resubmittal of the weld process package is required prior to part shipment when the 3 years has expired. See the PQA3000 for additional information.**

24. (CR) Brazing / Soldering Approval Letter Validation: Check this box if a soldering approval letter is required and the operators certified to perform the soldering.

25. (CR) Non-Destructive Testing Validation: If NDT is required as per the Technical Data Package (TDP) please review the certification of the NDT operator to verify he/she is approved to the proper level required to perform the NDT per the TDP.

QCS-16 Cover Sheet Form Explanations Document

(R) - Required. Mandatory information to be on the FAI

(CR) - Conditionally Required. Shall be completed when the data is available or enter "N/A" if not applicable. Do not leave blank.

26. (CR) Critical Safety Item Inspection Validation: If a part is considered a Critical Safety Item verify parts are inspected per Quality Clause QK16 and/or acceptance testing per the requirements as noted within the Technical Data Package. CSI parts are identified per a note on the print, within the QAR/QAP. See PQA3000 for added information on CSI parts.

27. (O) Remarks: List any additional information from sections above, or additional comments from the audit.

28. (R) FAI STATUS PASS: If all requirements have been met for all requirements of the First Article Inspection the PASS box can be checked.

29. (R) FAI STATUS FAIL: If any requirements within the First Article Inspection have failed to meet the Technical Data Package requirements then the audit will FAIL and this box will be checked. **All nonconformance's found during the audit will be listed on the NC Summary tab on form QCS 16-2**

30. (R) Supplier Printed Name: Supplier Representative for reviewing and validating the documentation prints name here.

31. (R) Supplier Approval Signature & Date: Supplier Representative for reviewing and validating the documentation signs name here.

32. (CR) Stamp: Supplier's Quality Representative with a GDLS Stamp will stamp here.

33. (R) GDLS Printed Name: GDLS Quality Representative for reviewing and validating the documentation prints name here.

34. (R) GDLS Approval Signature & Date: GDLS Quality Representative for reviewing and validating the documentation signs name here.

35. (R) Stamp: GDLS Quality Representative stamps here.

GENERAL DYNAMICS
Land Systems
FORM QCS-16-1

FIRST ARTICLE INSPECTION REPORT
INSPECTION DATA
Page 1 of 3

1. Part Number (GDLS) IS1151268		2. Part Name Grab Handle		3. Print and/or Model Revision Level Rev. A			
4. Parent Assembly Part Number N/A		5. Supplier Name Best Ever Supplier Targeting Company Inc. (BEST Co. Inc.)		7. FAI Report # VFP 128546			
8. Supplier Rep. Print and Sign: <i>Tom Best</i>		9. Date: <i>11/15/2019</i>					
10. ITEM NO.	11. DWG CHARACTERISTICS WITH TOLERANCE	12. BP ZONE	13. SUPPLIER ACTUAL RESULTS	14. INSPECTION METHOD	15. GAGE / FIXTURE NUMBER	16. ENGINEERING CHANGES / DEVIATIONS IF APPLICABLE	17. ADDITIONAL DATA / COMMENTS
1	1. DIMENSIONING AND TOLERANCING IN ACCORDANCE WITH ASME Y14.5M-1994.	D8	Acceptable		N/A	N/A	
2	2. ASTM S110 APPLIES. ANEX B SHALL BE USED IN CONVERTING AND ROUNDING OFF 1 INCH = 25.4 mm APPLIES.	D8	Acceptable		N/A	N/A	
3	3. UNLESS OTHERWISE SPECIFIED: TOLERANCE ON IMPLIED 90 DEGREE ANGLES TO BE ± 2 DEGREES.	D8	Acceptable		N/A	N/A	
4	4. MATERIAL SHALL BE FREE OF OIL, MACHINING FLUIDS, GREASE, OR OTHER CONTAMINANTS THAT MAY HAVE AN ADVERSE AFFECT ON WELDING.	D8	Acceptable	Visual blast clean completed	N/A	N/A	
5	5. REMOVE ALL BURRS AND SHARP EDGES.	D8	Acceptable	visual / deburr tool	N/A	N/A	
6	6. UNLESS OTHERWISE SPECIFIED ALL WELDING TO BE PER AWS D1.2	D8	Acceptable	Certified welders used / verified	N/A	N/A	
7	7.1 TUBING, ALUMINUM ALLOY 6061-T6 OR 6061-T6511, SPEC. ASTM B210 OR ASTM B221. Ø 25.4mm O.D. X 3.18mm WALL THICKNESS (1.0 DIA. X .12 INCH) WALL THICKNESS	C8	Acceptable	C of C from material manufacturer	N/A	N/A	
8	7.2 ALUMINUM ALLOY, 6061-T651 OR T6511, ASTM B209 OR ASTM B221. 7.94 mm (1.312 INCH) THICK.	C8	Acceptable	C of C from material manufacturer	N/A	N/A	
9	9. PROTECTIVE FINISH: FINISH PER MIL-DTL-5541 TYPE 11, CLASS 1A. PAINT PER REQUIREMENTS ON DRAWING NO. 19207-12344343, WHITE, COLOR NO. 17925 DF FED-STD-585.	C8	Acceptable	C of C from special process supplier	N/A	N/A	Form 4707 completed / reviewed
10	9. ALL HOLES TO BE FREE OF PAINT.	C8	Acceptable	visual	n/a	n/a	

1. Part Number (GDLS)		2. Part Name		3. Print and/or Model Revision Level	
LS1151268		Grab Handle		Rev. A	
4. Parent Assembly Part Number		5. Supplier Name		6. Serial Number	
N/A		Best Ever Supplier Targeting Company Inc. (BEST Co. Inc.)		N/A	
7. FAI Report #					
VFP 128546					
11	<p>ITEM IDENTIFICATION: RUBBER STAMP OR STENCIL THE FOLLOWING MARKINGS IN ACCORDANCE WITH MIL-STD-130 USING BLACK EPOXY INK PER A-A-56032, IN 4-7 mm HIGH CHARACTERS. 01417-LS1151268 MFR-XXXX MANUFACTURER'S CAGE CODE</p>	B8	Acceptable	visual, C of C for Ink	n/a
12	<p>SDP-DIAMOND KNURLING CLASS 1 PER ASME B94.6-1994</p>	B8	Acceptable		N/A
13	4.4 +/- 1.5	D6	4.95	CMM	CM8675309
14	6.3 +/- 1.5	D3	7.65	CMM	CM8675309
15-1	 1.5 2 SURFACES	D4	0.59	CMM	CM8675309
15-2	 1.5 2 SURFACES	D4	0.26	CMM	CM8675309
16-1	 3 2X	C3	3	Fillet Gauge	FG5642
16-2	 3 2X	C3	3	Fillet Gauge	FG5642
17-1	2X 27.3 ± 1.5	B3	28.55	CMM	CM8675309
17-2	2X 27.3 ± 1.5	B3	26.95	CMM	CM8675309
18-1	4 x dia 9 +0.2 / -0.1	B4	9.11	CMM	CM8675309
19-1	 3  A  B  C	B3	1.52	CMM	CM8675309
	Basic 13.5	B4	13.8	CMM	CM8675309
	Basic 464	B4	464.7	CMM	CM8675309
18-2	4 x dia 9 +0.2 / -0.1	B4	9.12	CMM	CM8675309
19-2	 3  A  B  C	B3	1.71	CMM	CM8675309
	Basic 66.5	B4	66.8	CMM	CM8675309
	Basic 464	B4	464.8	CMM	CM8675309

QCS-16-1 Inspection Data Form Explanations Document

(R) - Required. Mandatory information to be on the FAI

(CR) - Conditionally Required. Shall be completed when the data is available or enter "N/A" if not applicable. Do not leave blank.

For the QY11 clause and EQC4 clause the supplier will need to record the data for 1 of the first 5 pieces produced on form QCS-16-1.

For QY2 clause and QY14 clause the supplier will record the data for 5 pieces on the QCS-16-1.

For EQD2A clause the supplier will record the data for 1 piece on form QCS-16-1. The data for the remainder of the supplier's lot sampling plan can be in the supplier's preferred format.

- 1. (R) Part Number (GDLS):** Number of the FAI part as it appears on your GDLS Purchase Order or the detail part number being evaluated that is part of parent assembly part number.
- 2. (R) Part Name:** Name of the FAI part.
- 3. (R) Print and/or Model Revision:** Latest print revision that is being used during the FAI part inspection. If the part has not been revised, indicate as such (e.g., Rev -, Rev NR).
- 4. (CR) Parent Assembly Part Number:** List the upper part assembly number here if the part number in found in cell 1. (R) Part Number) is part of an assembly.
- 5. (R) Supplier Name:** Supplier Company Name that is performing the FAI.
- 6. (CR) Serial Number:** Serial number of the FAI part; unique identifier assigned to a detail part, sub-assembly, or assembly by the organization or customer.
- 7. (R) Audit Report#:** Reference number that identifies the FAI; this will be the GDLS Audit Sequence Number provided to the GDLS Field Service Representative.
- 8. (R) Supplier Print & Sign:** Supplier will print and sign document as being accurate to inspections done per the FAI requirements.
- 9. (R) Date:** Date when field 8 was signed
- 10. (R) Item No.:** Unique assigned number for each characteristic within the technical data package. This number will correlate to the balloon print. (e.g., dimensions, print notes, etc.)
- 11. (R) DWG Characteristics With Tolerance:** The specified requirement for the technical data package characteristic. (e.g., Nominal dimensions and tolerances, drawing, notes, specification requirements, etc.)
- 12. (R) BP Zone:** Location within the technical data package that the Item No. is located. (e.g., drawing zone, model location, note, QAR/QAP item, etc.).
- 13. (R) Supplier Actual Results:** List the measurement(s) taken for the technical data package characteristics. These measurements shall be recorded in the units specified within the technical data package.
When recording data for multiple features that are the same (e.g., 20x holes size, hole positions, etc.) it is required that each feature be identified and listed separately on the inspection report.
Variable data is to be recorded when the inspection technique used is read as variable data.
When qualified tooling (e.g., radius gauges, thread gauges, pin gauges) is used as a go/no-go gauge record the results as an attribute (e.g., pass/fail).
If a characteristic is found to be nonconforming, then that characteristic shall be recorded on the QCS-16-2 NC Summary. The lot will be quarantined and 100% of the lot will be inspected for conformance.

QCS-16-1 Inspection Data Form Explanations Document

(R) - Required. Mandatory information to be on the FAI

(CR) - Conditionally Required. Shall be completed when the data is available or enter "N/A" if not applicable. Do not leave blank.

14. (R) Inspection Method: List the type of equipment that was used to obtain the data.

15. (CR) Gage / Fixture Number: List the number associated with the gauge / fixture that was used to approve the parts to the technical data package. This number should correlate back to a calibration record. Any gage/fixture used to approve products for shipment to GDLS shall be calibrated and found to be within the recalibration date.

16. (CR) Engineering Changes / Deviations if Applicable: List any associated engineering changes (CCR / SCR), Deviations, SQMR's, MRB's, TRA's used to approve the parts during the audit. You must have a copy of the approved document to review with the auditor. Review PO to verify any type of change is documented.

17. (CR) Additional Data / Comments: List any added data and/or comments in this section.

1. Part Number (GDLS) LS1151268		2. Part Name Grab Handle		3. Print and/or Model Revision Level Rev. A			
4. Parent Assembly Part Number N/A		5. Supplier Name Best Ever Supplier Targeting Company Inc. (BEST Co. Inc.)		7. FAI Report # VFP 128546			
8. GDLS PO Number 4024354684 PO Rev 5		9. FAI Date 11/15/2019		10. Reinspect Date			
11. QCS 16-1 ITEM #	12. Drawing Number	13. B/P Zone	14. GDLS Spec. / Drawing Requirement (List)	15. Inspection Actual (List)	16. Requires Corrective Action	17. Disposition of NC	
N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Thomas Best		John Smithster					
18. SUPPLIER PRINTED NAME <i>Tom Best</i>		21. GDLS PRINTED NAME <i>John Smithster</i>					
19. SUPPLIER APPROVAL SIGNATURE		20. STAMP		22. GDLS APPROVAL SIGNATURE		23. STAMP	
DATE: 11/15/2019		DATE: 11/15/2019		DATE: 11/15/2019		DATE: 11/15/2019	



QCS-16-2 NC Summary Form Explanations Document

(R) - Required. Mandatory information to be on the FAI

(CR) - Conditionally Required. Shall be completed when the data is available or enter "N/A" if not applicable. Do not leave blank.

Any nonconformance (NC) found during the audit should be listed on the QCS-16-2. If the NC found is resolved using a SQMR, waiver/deviation, etc. and found to be acceptable then the issue should still be listed on the QCS-16-2 with the proper disposition type listed in section 17. of the form.

1. **(R) Part Number (GDLS):** Number of the FAI part as it appears on your GDLS Purchase Order or the detail part number being evaluated that is part of parent assembly part number.
2. **(R) Part Name:** Name of the FAI part.
3. **(R) Print and/or Model Revision:** Latest print revision that is being used during the FAI part inspection. If the part has not been revised, indicate as such (e.g., Rev -, Rev NR).
4. **(CR) Parent Assembly Part Number:** List the upper part assembly number here if the part number in found in cell 1. (R) Part Number) is part of an assembly.
5. **(R) Supplier Name:** Supplier Company Name that is performing the FAI.
6. **(CR) Serial Number:** Serial number of the FAI part; unique identifier assigned to a detail part, sub-assembly, or assembly by the organization or customer.
7. **(R) Audit Report#:** Reference number that identifies the FAI; this will be the GDLS Audit Sequence Number provided to the GDLS Field Service Representative.
8. **(R) GDLS P.O. Number:** Customer purchase order number.
9. **(R) FAI Date:** Date the original FAI took place.
10. **(CR) Reinspect Date:** Enter the date the FAI has been rescheduled for review of the nonconforming items.
11. **(CR) QCS 16-1 ITEM #:** Unique assigned number taken from form QCS 16-1.
12. **(CR) Drawing Number:** List the drawing number that nonconformance was found on.
13. **(CR) Blue Print Zone:** List the page number and the letter/number zone the feature can be found.
14. **(R) GDLS Specification / Drawing Requirement:** List the specification / drawing requirement as found in the technical data package. (e.g., dimensions, material, weld size, etc.)
15. **(R) Inspection Actual:** List that actual result found during the review / inspection of the parts.
16. **(CR) Requires Corrective Action:** If a corrective action is issued by GDLS Quality then list the CAR number here.
17. **(R) Disposition of NC:** List how the NC will be dispositioned. (e.g., rework, problem report/engineering change, waiver/deviation, SQMR, MRB)
18. **(R) Supplier Printed Name:** Supplier Representative for reviewing and validating the documentation prints name here.
19. **(R) Supplier Signature:** Supplier Representative for reviewing and validating the documentation signs name here.
20. **(CR) Stamp:** Supplier's Quality Representative with a GDLS Stamp will stamp here.
21. **(R) GDLS Printed Name:** GDLS Quality Representative for reviewing and validating the documentation prints name here.
22. **(R) GDLS Signature:** GDLS Quality Representative for reviewing and validating the documentation signs name here.
23. **(R) Stamp:** GDLS Quality Representative stamps here.

1. Part Number (GDLS) LS1151268		2. Part Name Grab Handle		3. Print And/Or Model Revision Level Rev. A		7. FAI Report # VFP 128546	
4. Parent Assembly Part Number N/A		5. Supplier Name Best Ever Supplier Targeting Company Inc. (BEST Co. Inc.)		6. Serial Number N/A		12. Heat # / Lot # / Batch # / Date Code	
8. Material or Special Process Name	9. Specification Number	10. Manufacturer of Material / Special Process		11. Certificate of Conformance Number			
Tubing Aluminum Allow 6061-T6 or 6061-T6511	ASTM B210 or ASTM B221	Tom's Aluminum		TA4651-025	June 24, 2018 - Lot 354-62418		
25.4mm OD x 2.18mm or 1.0 OD x .12" Wall							
Aluminum Alloy 6061-T651 or T6511	ASTM B209 or ASTM B221	Tom's Aluminum		TA4660-056	Feb 23, 2019 - Lot 365-22319		
7.94mm or 1.312 Inch Thick							
6. PROTECTIVE FINISH FINISH PER MIL-DTL-5541 TYPE I, CLASS 1A. PAINT PER REQUIREMENTS ON DRAWING NO. 18207-12344999, WHITE, COLOR NO. 17825 DF FED-510-566.	Mil-DTL-5541 / 12344343	Military Painting Inc.		MPI65254-089	Nov 01, 2019 Batch 2548-54		
Black Epoxy Inc.	A-A-56032	Part Marking Specialists Inc.		PMS456123-466	Oct 15, 2019 Lot 64510		
64 DP Diamond Knurling Class 1	ASME B94.6	Knurl Warehouse		KW65425-411	Sept 19, 2019 Lot 586486		
13. Functional Test Procedure / Revision Level	14. Functional Test Acceptance Report Number						
N/A	N/A						
15. Comments							
16. SUPPLIER PRINTED NAME				19. GDLS PRINTED NAME			
Thomas Best				John Smithster			
<i>Tom Best</i>				<i>John Smithster</i>			
11/15/2019				11/15/2019			
17. SUPPLIER APPROVAL SIGNATURE				20. GDLS APPROVAL SIGNATURE			
18. STAMP				21. STAMP			
							

QCS-16-3 Materials & Processes Form Explanations Document

(R) - Required. Mandatory information to be on the FAI

(CR) - Conditionally Required. Shall be completed when the data is available or enter "N/A" if not applicable. Do not leave blank.

- 1. (R) Part Number (GDLS):** Number of the FAI part as it appears on your GDLS Purchase Order or the detail part number being evaluated that is part of parent assembly part number.
- 2. (R) Part Name:** Name of the FAI part.
- 3. (R) Print and/or Model Revision:** Latest print revision that is being used during the FAI part inspection. If the part has not been revised, indicate as such (e.g., Rev -, Rev NR).
- 4. (CR) Parent Assembly Part Number:** List the upper part assembly number here if the part number in found in cell 1. (R) Part Number) is part of an assembly.
- 5. (R) Supplier Name:** Supplier Company Name that is performing the FAI.
- 6. (CR) Serial Number:** Serial number of the FAI part; unique identifier assigned to a detail part, sub-assembly, or assembly by the organization or customer.
- 7. (R) Audit Report#:** Reference number that identifies the FAI; this will be the GDLS Audit Sequence Number provided to the GDLS Field Service Representative.
- 8. (R) Material Type, Special Process Name, Part Number:** List all material types, special process names, detail part numbers. Detail part numbers such as standard catalogue items, and Commercial Off The Shelf (COTS) parts can be listed here with the required information back to the certificate of conformance from the manufacturer of the part. Show the auditor the C of C to verify all requirements have been met for approval.
- 9. (CR) Specification Number:** List the specification for the Material or Special Process listed in #8.
- 10. (R) Manufacturer of Material / Special Process:** List the company name that manufactured the material or performed the special process. **(No Distributors) A C of C will only be accepted from a distributor when the C of C is from an authorized franchise distributor as designated by the manufacturer of the part.**
- 11. (R) Certificate of Conformance Number:** List the C of C number as found on the items manufacturer C of C. If the C of C doesn't not have an identification number, the supplier will assign a lot specific number for tracking purposes.
- 12. (R) Heat # / Lot # / Batch # / Date Code:** Record the heat #, Lot #, Batch # / Date code as needed to identify the material lot.
- 13. (CR) Functional Test Procedure / Revision Level:** List any functional test procedure number and the revision of test procedure.
- 14. (CR) Functional Test Acceptance Report Number:** List the functional test acceptance report number.
- 15. (CR) Comments:** List any additional comments here.
- 16. (R) SUPPLIER PRINTED NAME:** Supplier Representative for reviewing and validating the documentation prints name here.
- 17. (R) SUPPLIER APPROVAL SIGNATURE & DATE:** Supplier Representative for reviewing and validating the documentation signs name here.
- 18. (CR) STAMP:** Supplier's Quality Representative with a GDLS Stamp will stamp here.
- 19. (R) GDLS PRINTED NAME:** GDLS Quality Representative for reviewing and validating the documentation prints name here.
- 20. (R) GDLS APPROVAL SIGNATURE & DATE:** GDLS Quality Representative for reviewing and validating the documentation signs name here.
- 21. (R) STAMP:** GDLS Quality Representative stamps here.

1. Part Number LS1151268-1	7. FAI Report # (Audit Sequence No.) VFP 128546
2. Part Name Tube	8. GDLS Purchase Order / PO Revision 4024354684 PO Rev 5
3. Print and/or Model Revision Rev. A	9. GDLS Quality Clauses QG3, QG5, QJ21, QY11, QX118, QP93,
4. Parent Assembly Part Number LS1151268	10. Supplier Name Best Ever Supplier Targeting Company Inc. (BEST Co. Inc.)
5. Serial Number(s) N/A	11. City, State Timbuktu, Mississippi, USA
6. Lot Quantity / Quantity Inspected Lot 50 / 8 Inspected	12. GDLS Supplier No. / Government Cage Code 5001234 / OU812
13. Detail Part: <input checked="" type="checkbox"/> Assembly FAI: <input type="checkbox"/>	14. Full FAI: <input checked="" type="checkbox"/> Partial FAI: <input type="checkbox"/> Baseline Part Number (including revision level): Reason for Partial FAI: N/A



DATA USED FOR EVALUATION

15. Part Number & Print Revision N/A	16. SCR/CCR N/A	17. QAR / QAP N/A
		18. Mil Specification(s) N/A
		19. Other (e.g., Deviation, TRA, Ordering Data) N/A





SUMMARY Check as appropriate (X) = Documentation Reviewed, Approved and Attached to this Report



N/A 20. Part Identification/Marking	N/A 24. Brazing / Soldering Approval Letter Validation
N/A 21. Software Approval Letter Validation	N/A 25. Non-Destructive Testing Validation
N/A 22. High Strength Fastener(s)	N/A 26. Critical Safety Item Inspection Validation
N/A 23. Weld Process Approval Letter / Date of Approval	Date: _____

27. REMARKS

FAI STATUS: <input checked="" type="checkbox"/> 28. PASS <input type="checkbox"/> 29. FAIL	
Thomas Best	John Smithster
30. SUPPLIER PRINTED NAME <i>Tom Best</i> 11/15/2019	33. GDLS PRINTED NAME <i>John Smithster</i> 11/15/2019
31. SUPPLIER APPROVAL SIGNATURE DATE	34. GDLS APPROVAL SIGNATURE DATE
	
32. STAMP	35. STAMP

1. Part Number (GDLS) LS1151268-1		2. Part Name Tube		3. Print and/or Model Revision Level Rev. A			
4. Parent Assembly Part Number LS1151268		5. Supplier Name Best Ever Supplier Targeting Company Inc. (BEST Co. Inc.)		6. Serial Number N/A			
8. Supplier Rep. Print and Sign: <i>Tom Best</i>		9. Date: <i>11/15/2019</i>		7. FAI Report # VFP 128546			
10. ITEM NO.	11. DWG CHARACTERISTICS WITH TOLERANCE	12. BP ZONE	13. SUPPLIER ACTUAL RESULTS	14. INSPECTION METHOD	15. GAGE / FIXTURE NUMBER	16. ENGINEERING CHANGES / DEVIATIONS IF APPLICABLE	17. ADDITIONAL DATA / COMMENTS
3	3. UNLESS OTHERWISE SPECIFIED: TOLERANCE ON IMPLIED 90 DEGREE ANGLES TO BE ± 2 DEGREES.	Pg 1 D8	Acceptable	CMM	CM8675309	N/A	
4	4. MATERIAL SHALL BE FREE OF OIL, MACHINING FLUIDS, GREASE, OR OTHER CONTAMINANTS THAT MAY HAVE AN ADVERSE AFFECT ON WELDING.	Pg 1 D8	Acceptable	Visual	N/A	N/A	
5	5. REMOVE ALL BURRS AND SHARP EDGES.	Pg 1 D8	Acceptable	Visual	N/A	N/A	
6	(7.1) TUBING, ALUMINUM ALLOY 6061-T6 OR 6061-T6611, SPEC. ASTM B210 OR ASTM B221. Ø 25.4mm O.D. X 3.18mm WALL THICKNESS (1.0 DIA. X .12 INCH) WALL THICKNESS	Pg 1 C8	Acceptable	C of C from material manufacturer	N/A	N/A	
7	(11) 84DP-DIAMOND KNURLING CLASS 1 PER ASME B94.8-1994	Pg 1 B8	Acceptable	C of C from material manufacturer	N/A	N/A	Inspection report also reviewed from manufacturer
1	dia 25.4 Ref	Pg 2 D8	25.45	Calipers	Cal4586	N/A	
2	446.9 +/- 3	Pg 2 C6	448.15	Calipers	Cal4586	N/A	
3	R 37.3 +/- -1.5	Pg 2 B7	38.15	Radius Gage	RG8264	N/A	
	R 37.3 +/- -1.5	Pg 2 B7	38.25	Radius Gage	RG8264	N/A	
4	2 x 54.7 +/- -2	Pg 2 C5	55.35, 53.25	Height Gage	HG5605	N/A	
5	2 x 67.4 REF	Pg 2 B4	68.0, 68.1	Height Gage	HG5605	N/A	
6	2 x 75 +/- -5	Pg 2 B4	72.1, 74.5	Calipers	Cal4586	N/A	
7	322 Ref	Pg 2 B6	320	Calipers	Cal4586	N/A	

1. Part Number (GDLS) LS1151268-1		2. Part Name Tube		3. Print and/or Model Revision Level Rev. A	
4. Parent Assembly Part Number LS1151268		5. Supplier Name Best Ever Supplier Targeting Company Inc. (BEST Co. Inc.)		6. Serial Number N/A	7. FAI Report # VFP 128546
8. GDLS PO Number 4024354684 PO Rev 5		9. FAI Date 11/15/2019		10. Reinspect Date N/A	
11. QCS 16-1 ITEM # N/A	12. Drawing Number N/A	13. B/P Zone N/A	14. GDLS Spec. / Drawing Requirement (List)	15. Inspection Actual (List) N/A	16. Requires Corrective Action N/A
					17. Disposition of NC N/A
18. SUPPLIER PRINTED NAME Thomas Best	19. SUPPLIER APPROVAL SIGNATURE 	20. STAMP 	21. GDLS PRINTED NAME John Smithster	22. GDLS APPROVAL SIGNATURE 	23. STAMP 
	DATE 11/15/2019			DATE 11/15/2019	

1. Part Number (GDLS) LS1151268-1		2. Part Name Tube		3. Print And/Or Model Revision Level Rev. A	
4. Parent Assembly Part Number LS1151268		5. Supplier Name Best Ever Supplier Targeting Company Inc. (BEST Co. Inc.)		7. FAI Report # VFP 128546	
8. Material or Special Process Name	9. Specification Number	10. Manufacturer of Material / Special Process	11. Certificate of Conformance Number	12. Heat # / Lot # / Batch # / Date Code	
Tubing Aluminum Allow 6061-T6 or 6061-T6511	ASTM B210 or ASTM B221	Tom's Aluminum	TA4651-025	June 24, 2018 - Lot 354-62418	
25.4mm OD x 2.18mm or 1.0 OD x .12" Wall					
64 DP Diamond Knurling Class 1	ASME B94.6	Kr url Warehouse	KW65425-411	Sept 19, 2019 Lot 586486	
13. Functional Test Procedure / Revision Level	14. Functional Test Acceptance Report Number				
N/A	N/A				
15. Comments					
16. SUPPLIER PRINTED NAME		19. GDLS PRINTED NAME		21. STAMP	
Thomas Best		John Smithster		 	
<i>Thomas Best</i>		<i>John Smithster</i>		<i>11/15/2019</i>	
17. SUPPLIER APPROVAL SIGNATURE		20. GDLS APPROVAL SIGNATURE		DATE	
				11/15/2019	

1. Part Number LS1151268-2	7. FAI Report # (Audit Sequence No.) VFP 128546
2. Part Name Plate	8. GDLS Purchase Order / PO Revision 4024354684 PO Rev 5
3. Print and/or Model Revision Rev. A	9. GDLS Quality Clauses QG3, QG5, QJ21, QY11, QX118, QP93,
4. Parent Assembly Part Number LS1151268	10. Supplier Name Best Ever Supplier Targeting Company Inc. (BEST Co. Inc.)
5. Serial Number(s) N/A	11. City, State Timbuktu, Mississippi, USA
6. Lot Quantity / Quantity Inspected Lot 50 / 8 Inspected	12. GDLS Supplier No. / Government Cage Code 5001234 / OU812
13. Detail Part: <input checked="" type="checkbox"/> Assembly FAI: <input type="checkbox"/>	14. Full FAI: <input checked="" type="checkbox"/> Partial FAI: <input type="checkbox"/> Baseline Part Number (including revision level): Reason for Partial FAI: N/A



DATA USED FOR EVALUATION

15. Part Number & Print Revision N/A	16. SCR/CCR N/A	17. QAR / QAP N/A
		18. Mil Specification(s) N/A
		19. Other (e.g., Deviation, TRA, Ordering Data) N/A



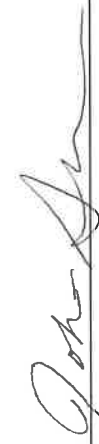
SUMMARY Check as appropriate (X) = Documentation Reviewed, Approved and Attached to this Report

N/A 20. Part Identification/Marking	N/A 24. Brazing / Soldering Approval Letter Validation
N/A 21. Software Approval Letter Validation	N/A 25. Non-Destructive Testing Validation
N/A 22. High Strength Fastener(s)	N/A 26. Critical Safety Item Inspection Validation
N/A 23. Weld Process Approval Letter / Date of Approval	Date: _____

27. REMARKS

FAI STATUS: <input checked="" type="checkbox"/> 28. PASS <input type="checkbox"/> 29. FAIL	
Thomas Best	John Smithster
30. SUPPLIER PRINTED NAME <i>Tom Best</i>	33. GDLS PRINTED NAME <i>John Smithster</i>
31. SUPPLIER APPROVAL SIGNATURE <i>Tom Best</i>	34. GDLS APPROVAL SIGNATURE <i>John Smithster</i>
DATE 11/19/2019	DATE 11/15/2019
32. STAMP 	35. STAMP 

1. Part Number (GDLS) LS1151268-2		2. Part Name Plate		3. Print and/or Model Revision Level Rev. A	
4. Parent Assembly Part Number LS1151268		5. Supplier Name Best Ever Supplier Targeting Company Inc. (BEST Co. Inc.)		6. Serial Number N/A	7. FAI Report # VFP 128546
8. GDLS PO Number 4024354684 PO Rev 5		9. FAI Date 11/15/2019		10. Reinspect Date N/A	
11. QCS 16-1 ITEM #	12. Drawing Number N/A	13. B/P Zone N/A	14. GDLS Spec. / Drawing Requirement (List)	15. Inspection Actual (List) N/A	16. Requires Corrective Action N/A
N/A					17. Disposition of NC N/A
Thomas Best		John Smithster			
18. SUPPLIER PRINTED NAME Thomas Best		21. GDLS PRINTED NAME John Smithster		23. STAMP GDLS 2019	
19. SUPPLIER APPROVAL SIGNATURE 11/15/2019		22. GDLS APPROVAL SIGNATURE		DATE 11/15/2019	

1. Part Number (GDLS) LS1151268-2		2. Part Name Plate		3. Print And/Or Model Revision Level Rev. A	
4. Parent Assembly Part Number LS1151268		5. Supplier Name Best Ever Supplier Targeting Company Inc. (BEST Co. Inc.)		7. FAI Report # VFP 128546	
8. Material or Special Process Name	9. Specification Number	10. Manufacturer of Material / Special Process	11. Certificate of Conformance Number	12. Heat # / Lot # / Batch # / Date Code	
Aluminum Alloy 6061-T6511 or T6511	ASTM B209 or ASTM B221	Tom's Aluminum	TA4660-056	Feb 23, 2019 - Lot 365-22319	
7.94mm or 1.312 Inch Thick					
13. Functional Test Procedure / Revision Level		14. Functional Test Acceptance Report Number			
N/A		N/A			
15. Comments					
16. SUPPLIER PRINTED NAME		17. SUPPLIER APPROVAL SIGNATURE		18. STAMP	
Thomas Best		 DATE 11/15/2019		 DATE 11/15/2019	
19. GDLS PRINTED NAME		20. GDLS APPROVAL SIGNATURE		21. STAMP	
John Smithster		 DATE 11/15/2019		