Title:	Supplier Quality Requirements
Document Number	D-0301530
Revision:	00
Effective Date:	January 31st, 2024

1. Scope

The requirements of this document are applicable to Gastops suppliers, including any level of the suppliers supply chain that is used in the fulfilment of the Gastops purchase order.

2. Normative References

AS9100	ASQR-01	COL-ASQR-PRO-003
AS9146	AS6174	AS5553
DFARS 252.246-7007	DFARS 252.246-7008	AS13003

3. Definitions/Acronyms

C of C	Certificate of Conformance
FAI	First Article Inspection
FOD/d	Foreign Object Damage/debris
NCAR	Nonconformity and Corrective Action Request
PO	Purchase order
QMS	Quality Management System
Record	Objective evidence of conformity to requirements and activities performed
Supplier	An organization that provides product or services to Gastops or another sub tier supplier.
Supply Chain	A series of suppliers who are linked together during the course of providing products/services, and is operated with hierarchic control by the prime supplier.
Waiver:	A method to formally document Gastops acceptance of a deviation from requirements.

4. Quality Management System (QMS) Requirements

4.0 Supplier shall have an acceptable quality management system to Gastops. The QMS should be to an applicable international standard such as AS9100, ISO9001 or, ISO17025.

4.1 Unless otherwise specified, the supplier shall comply with the latest revision of this document and, requirements listed within the applicable PO and drawings.

4.1.1 Unless otherwise formally communicated from Gastops, the supplier shall establish compliance within 60 days of the listed effectiveness date of this document and, other requirements flown down by Gastops.

4.1.2 The supplier shall have a documented method to show compliance to Gastops requirements documents. This should include any actions taken to ensure compliance in event a requirement was found non compliant during initial review. Refer to appendix A.

4.1.3 In the event a supplier requests a waiver from a requirement in this document, it must be approved by the Gastops Quality Director.

4.2 Right of Access

Gastops, their customers, and/or Regulatory authorities reserve the right of access to conduct reviews/audits of applicable areas of the suppliers facilities and to applicable documented information, at any level of the supply chain. Reviews/audits could occur at a mutually agreed upon to date and time.

4.3 Approved Suppliers

4.3.1 Gastops shall only use approved suppliers within its supply chain. To become an approved supplier, Gastops may request various information to determine the supplier's ability to provide conforming product/service on time. This evaluation can include audits, surveys and, test builds.

4.3.2 If the supplier implements changes that are beyond its current approval parameters, it shall be subject to requalification and/or potential disqualification.

4.3.3 Gastops will perform periodic evaluation of suppliers performance base on factors such as product/service conformity, audit results and, on time delivery. Suppliers who are deemed as underperforming may be requested to perform corrective actions. In event the corrective actions are not effective, the supplier may be disqualified.

4.4 Control of Non Conformances

4.4.1 In the event product/services are found to be non compliant to requirements, items shall be controlled and segregated. Containment activities should be considered to avoid escape of a repeat of the non compliance.

4.4.2 Gastops must provide a formal approved waiver prior to providing product/service that do not meet requirements. The applicable waiver(s) must be referenced on the C of C.

4.4.3 If the supplier wishes to submit product/service for a waiver of requirements, the supplier shall provide Gastops with a minimum of the following information:

- PO number, revision and, line item.
- Description of item.
- Part number and revision
- Description of non conformance, including applicable requirement(s) not met and actual results. Must include where requirement is defined(drawing, specification, P.O) with applicable revision.
- Details of intended corrective action.

4.4.4 In the event a non conformance is issued to the supplier by Gastops, the supplier shall perform a root cause corrective action plan in line with D-0300134 – Gastops Nonconformity Corrective Action Request (NCAR) Form.

4.4.5 In the event the supplier suspects nonconforming product/service was delivered to Gastops, the supplier shall immediately notify Gastops. Initial notification may be via phone however, a formal written notification must be provided no later than two business days after discovery of the issue.

4.5 Suppliers must ensure that the requirements within this document and, those called out on the purchase order, including key characteristics and, flight safety are flown down throughout the supply chain.

4.6 Foreign Object Debris/Damage

Supplier shall have a FOD/d program based on risk in line with requirements of AS9146.

4.7 Counterfeit Avoidance

Supplier shall have a counterfeit avoidance program in line with applicable standards. AS5553 for electronic components or AS6174 for non-electronic product and, DFARS 252.246-7007, and/or DFARS 252.246-7008 as applicable throughout the supply chain.

4.8 Notification of Change

The Supplier is required to notify Gastops of any changes or amendments to previously declared standards, previously approved processes or materials before implementation. Gastops will review the requested change and notify the Provider in writing with acceptance or rejection of the proposed change. Changes that may affect quality must be documented and communicated to Gastops Quality Assurance prior to the change. Examples of change may include, but are not limited to, ownership, manufacturing location, third party certification status (ISO, AS), process or inspection techniques.

4.9 Gastops requires that all of our suppliers conduct business in an ethical manner and to ensure that the provided products/services conform to the required customer, safety, statutory and regulatory requirements.

4.10 Records

4.10.1 Documented information that provide evidence of conformance shall be maintained for a minimum of 10 years after the date of manufacture. For parts indicated as flight safety, records shall be maintained for 40 years after the date of manufacture. Methods and records shall be available for review by Gastops, customers, and regulatory authorities.

4.10.1.1 If the Supplier is unable to maintain quality records for the applicable retention period, the supplier shall provide Gastops the option to take possession of documented information.

4.10.1.2 Documented information must be retrievable within three business days of a request.

4.10.1.3 Documented information must be stored in a method to ensure preservation and legibility.

4.10.1.4 When documented information is managed electronically, data protection processes must be defined which would include but not limited to; protection from loss, unauthorized changes, corrupted data and, physical damage.

4.11 Gastops reserves the right to review the process and instructions used by the External Provider for Quality Control purposes and to assess their adequacy. The Supplier will be required to make any alterations or improvements deemed necessary to eliminate deficiencies that do not meet requirements. Copies of the suppliers process and instructions shall be made available to Gastops Quality Assurance upon request.

4.12 To ensure compatibility between the suppliers and Gastops test equipment, when requested by Gastops, the supplier shall supply correlation samples.

5. Product Requirements

5.1 Identifier and Revision Status

Unless agreed otherwise, an identifier and revision status must be clearly stated on the procured item and on the relevant Certificate of Conformance or agreed alternative.

5.2 Traceability

Supplier shall have traceability to OEM components and or raw material from mill. The use of material and hardware with broken traceability or sourced from a non-authorized supplier is prohibited unless approved by Gastops.

5.3 Product Inspection

5.3.1 Any special tests required by Gastops, in addition to or, instead of those required by the supplier Quality Control System, shall be specified on the purchase order.

5.3.2 Special requirements, critical items or key characteristics will be identified on the purchase order or provided drawings. Supplier must ensure that these requirements and those called out on the purchase order, including key characteristics, are passed on to Second/Lower Tier Suppliers and all levels of their Supply Chain.

5.4 First Article Inspection (FAI)

Parts produced to a Gastops drawing shall prior to shipment, have a first article inspection per AS9102 for the drawing and revision listed on the purchase order. If any drawing requirements are found to be non compliant during the FAI, the supplier shall either:

- Make changes to the manufacturing process to address the non conformance until parts are produced with an acceptable FAI or,
- shall receive a waiver from Gastops.

5.4.1 The FAI shall be performed on a part that is representative of the first production run.

5.4.2 If changes are made to the method of manufacture of the part, a new FAI shall be performed (E.G. Engineering changes, change of supplier, process changes, inspection method).

5.4.3 If a waiver is approved by Gastops for a first article inspection, the waiver shall be referenced on the FAI for affected nonconforming attributes and, C of C for applicable shipments of the product.

5.5 Sampling

5.5.1 If sampling is permitted per the drawing and/or P.O, a part can only qualify to begin sample inspection after a minimum of 25 consecutive pieces are inspected and no non conformances have been detected.

5.5.2 Sampling is not permitted for Key Characteristics and flight safety characteristics.

5.5.3 Additional sample requirements shall be per D-0301506 - Gastops Inspection Sampling Plan.

5.6 Inspection Accuracy

5.6.1 Supplier shall select monitoring and measuring equipment accuracy ratio in line with AS13003.

5.6.2 A minimum accuracy of 4 to 1 is required, major and critical features shall have an accuracy of at least 10 to 1.

5.6.2.1 Major and critical features include but not limited to; Key Characteristics, Flight safety characteristics.

5.6.3 Inspection results shall be absolute, no rounding or averaging is permitted.

5.7 Rejection of Items by Gastops

5.7.1 If a non conformance is discovered at Gastops that was created by the supplier. The item(s) may be rejected and returned to the supplier for recertification at the suppliers cost.

5.7.2 In the event a non conformance is detected at Gastops cause by the supplier. Regardless if product is to be returned to the supplier or not, Gastops should communicate the non conformance information with the supplier. The supplier should perform corrective actions to address the issue(s).

5.7.3 Where serious or repetitive non conformances occur, Gastops will issue a Nonconformity and Corrective Action Request (NCAR) to the supplier. The supplier will be required to formally indicate to Gastops Quality Assurance the action taken to correct the issue and prevent discrepancies of a similar nature from recurring on future deliveries.

6. Release of Product/Service

6.1 Supplier shall provide a certificate of conformance with each shipment. The C of C shall include at a minimum:

- Part number and revision as listed on the purchase order.
- Quantity delivered.
- Traceability to manufactured lot/melt/batch/date code.
- When applicable, traceability to special processes. This can include but not limited to heat/lot number of special process, applicable P.O of special process and, standard(s) of special process.
- Country of Manufacture and/or country of Origin
- Gastops purchase order, revision number and, appliable line item.
- Applicable waiver(s).
- Statement of conformity. Including when required, special packaging, handling or preservation required to maintain product conformity. (E.G. I herby certify the product supplied was produced in accordance with the PO and, all applicable drawings and specifications and, the product was stored at a temperature between 20-40 degrees Celsius.)
- Name and Address of the supplier
- Signature and title of authorized supplier representative

6.1.1 Certificate of conformances shall not contain mixed batches of traceability. Multiple individual serial/lot numbers are acceptable on a single C of C provided product is manufactured under the same conditions such as; same heat lot, same special process batch/lot which shall be listed on the C of C.

6.1.2 Unless relevant data is listed on the certificate of conformance, additional certificates/documented information to show conformance must be supplied to Gastops at the time of delivery of the product/service. These include but not limited to; radiographic film, NDT inspection documentation, mill certificates or material samples.

6.2 Preservation of Product

6.2.1 Supplier shall deliver product with a minimum of 50% listed shelf life. Written approval from Gastops is require if product with less than 50% shelf life is to be delivered to Gastops.

6.2.2 Supplier shall ensure product is stored and transported in a manner to ensure compliance with preservation and/or storage requirements.

6.2.3 The packaging of products shipped shall ensure protection from transit damage and, part to part damage.

Appendix A

Specification Approval

Reason for Review	Customer/Governing Body Required ☐ Self Imposed Requirement ☐ Reference Only ☐				
Title					
Specification Number		Revision		Specification Release Date	
Specification Owner		Date received		Due Date	

Prior to implementation of any standard or specification into its Business Management System (BMS), Gastops shall review the applicable document to ensure it can comply with requirements. Any sections found during the review that Gastops does not comply to, either actions shall be identified to ensure compliance or, Gastops shall either negotiate a mutually acceptable requirement with the customer or receive formal acknowledgment from the customer that applicable section(s) are not required. Unless otherwise specified, the time for review and implementation of specifications shall be 60 days from receipt of the specification. Depending on the requirements within the document, applicable process owners are required for approval. Example, Quality director is required if document contains quality requirements or, product manager is required if document contains product development requirements.

Questions	Answer	Note(s)
1.Do any actions need to be completed to comply with the specification?	Yes ☐ No ☐	
2. Does existing documented information need to be updated?	Yes ☐ No ☐	
3. Does implementing this affect current WIP? (If yes, ensure WIP either has MCO or waiver issued)	Yes ☐ No ☐	
4. Do the changes affect multiple departments? (If yes, ensure effected department is included in review for applicable section(s) only)	Yes ☐ No ☐	
5. Does this document need to be flowed down to suppliers?	Yes ☐ No ☐	
7. Does this document have a specific requirement for auditing? (If Yes, ensure requirements are covered in audit schedule)	Yes ☐ No ☐	
8. Are all reference specification listed as required either implemented or in process of being implemented into the BMS?	Yes ☐ No ☐	
9. To be posted on the Intranet?	Yes ☐ No ☐	

Reviewed by:	Signature:	Date:

Approval for use			
Required ☐ N/A ☐	Director of Quality	Signature:	Date:
Required ☐ N/A ☐	Director of Manufacturing	Signature:	Date:
Required ☐ N/A ☐	Director of Engineering	Signature:	Date:
Required ☐ N/A ☐	Other:		

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Reference GTL-QMS-058-003

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Section #	Requirement	Compliance	Notes
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Reference GTL-QMS-058-003

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Approvals		
Authority	Signature	Date
Author:	Approval maintained within the PLM	
Quality Director:	Approval maintained within the PLM	
Supply Chain Manager:	Approval maintained within the PLM	

Revision History		
Rev. No.	Date	Description of change
00	24 January 2024	Initial Issue. Supersedes GTL-QMS-326-002.