

Document Name: <i>Chainworks Supplier Quality Manual</i>	Manual Number: 2.2 Ref 8.4	Origination Date: 04Nov02
Originator: R. Hubbard Title: CWI Operations	Revision Date: 8-Jun.-18 (revision. 4)	Page 1 of 5



Chainworks Inc.

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1.0 Introduction

Chainworks mission is to delight our customers in every aspect of product quality, delivery and customer service. A critical element of this mission is the maintenance on quality systems compliant with TS 16949, IAFT 16949:2016, ISO 9001:2015 and A.I.A.G. guidelines.

All automotive manufacturing suppliers to Chainworks Incorporated are required to have a quality system compliant to *IATF 16949: 2016* via third party certification. Under certain circumstances, certification to ISO 9001 is acceptable provided an action plan is in place to transition to *IATF 16949: 2016*. Product processors, at a minimum, are to be certified to ISO 9001:2015. Processors shall meet any *IATF 16949:2016* and customer requirements applicable to a specific product. Service providers are encouraged to implement ISO 9001:2015. Services shall be complaint to Chainworks external control requirements.

Under exceptional circumstances Chainworks may approve a supplier not certified to ISO/TS standards provided the supplier meets all expectations and product requirements. Chainworks shall receive customer approval for non-certified suppliers.

Chainworks shall perform site assessments on all manufacturing suppliers.



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2.0 Supplier Approval

Prior to any release to manufacture product, all suppliers must be added to the approved supplier listing. The requirements to be added to the approved supplier listing are as follows:

- Third party certification to *ATF 16949: 2016* for automotive product.
- Third party certification to ISO 9001 or site assessment for product processors.
- *Services providers certified to ISO 9001:2015 or meeting Chainworks extremal control requirements.*
- Completion of the Chainworks supplier assessment for all manufacturing suppliers.
- Signed confidentiality agreement
- Exceptions as noted in section 1.0

The Chainworks supplier assessment is a general assessment document addressing several other important factors relevant to predicting future supplier performance.

The Supplier's IATF/ISO certification number and expiration date shall be noted on the Supplier Expiration Matrix. Suppliers shall be contacted by Chainworks 60 in advance of expiration dates to assure activities are in place for continual certification to ISO or *IATF* requirements. Suppliers shall confirm such activities and provide an action plan if necessary.

3.0 Production Part Approval Process

All production material released for production must pass the Production Part Approval Process as defined in the AIAG PPAP Manual, third edition. Advanced Quality Planning (AQP) is a critical element in this process. Through the quotation development process as well as through the PPAP development process, AQP discussions will be held to assure the following:

- Feasibility of the design for manufacturability
- Possible suggestions or improvements to reduce cost or improve quality
- Assure that all requirements including process specification are available and understood

4.0 Supplier Performance Requirements

Chainworks Incorporated expects its suppliers to deliver defect free product 100% on time. If non-conforming material is identified by Chainworks Incorporated, the material will be immediately rejected and subject to disposition which may include the following:

- Return of the material to the supplier
- Sorting and rework of the material at the supplier's expense
- Premium freight associated with the replacement of defective material
- An 8D corrective action request issues to the supplier



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It is the intention of Chainworks Incorporated to cooperate with its supply base in a partnering manner at all time. Chainworks Incorporated will do everything in its power to communicate with the supplier relative to the defective material to minimize additional costs incurred to disposition the material. However, customer satisfaction is our highest priority and Chainworks Incorporated will take every necessary action to eliminate or minimize customer impact of defective material.

5.0 General Commercial Requirements

Chainworks Incorporated operates on a purchasing system based on Blanket Purchase Orders. For production material, a blanket order will be issue for that part. The blanket order is not a release for production. Specific releases will be issued on a separate document from Chainworks Incorporated Operations. Any reference to annual volumes on the blanket order is for information purposes only and is not a commitment to a given volume of material. Variability in forecasted volumes is common in our industry and the supplier should plan accordingly.

All purchase orders are subject to Chainworks Incorporated standard terms and conditions which are available upon request and are posted on the Chainworks Incorporated website which can be found at chainworksinc.com.

In addition, suppliers are to be compliant with Chainworks forms #6.6 "Supplier Confidentiality Agreement", # 6.7 "Supplemental Purchase Order Conditions" and #6.8 "Standard Quotation Terms and Conditions". Contact Chainworks purchasing for any clarification on the requirements and copies of the forms.

Invoices for all goods and services are to be sent to:

Chainworks Incorporated
1031 South Main St.
Plymouth, MI 48170

Invoices are paid in accordance with the terms stated on the purchase order. Electronic invoices are also acceptable and should be sent to Marlena@chainworksinc.com Invoice approval is based upon the following:

- Match of invoice to blanket order for part number and price
- Match of invoice to a valid receipt by Chainworks Operations

Invoices will be placed on hold if there is not a match with the above information.

From time to time, it may be necessary to debit a suppliers payable based on a quality or delivery issue. Chainworks Incorporated will not debit a supplier's account without first communicating the issue and working to reach an acceptable resolution.



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6.0 Chainworks Incorporated Specific Requirements

After PPAP approval, the supplier shall notify Chainworks Incorporated of any proposed change(s) made in the manufacturing process including but not limited to:

- Raw material change
- Manufacturing process change
- Sub-contracted special process changes

Written approval from Chainworks is required prior to implementing any process change.

A new PPAP submission from the supplier is required for any change after approval unless waived in writing by Chainworks Incorporated.

The supplier shall do everything in its power to protect the confidentiality of all customer supplied information. A signed confidentiality agreement is required to be added to the approved supplier listing.

The Chainworks Incorporated quality system is based on continuous improvement. Suppliers are expected to continually evaluate products and processes to improve quality delivery and cost. Suppliers will be evaluated on their ability to provide continuous cost reduction and are expected to share in process improvements.

6.1 Supplier inspection and testing:

Chainworks suppliers shall provide evidence that product has passed all applicable inspection and testing for each shipment. Inspection data shall be provided at time of each shipment.

Supplier inspection data to include as applicable:

- Material certifications and applicable testing
- SPC data for key or significant characteristics as identified by the drawing.
- Dimensional layout results
- Production lot traceability

Chainworks reserves the right to have designees perform product verification on site. Typical conditions requiring on site verification include:

- Product shipped directly from supplier to Chainworks customer
- Initial production run/PPAP



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- Quality issues

The supplier shall be notified if this requirement is applicable.

6.1.1: Conflict Mineral reporting

In addition to material certification requirements noted in section 6.1, Suppliers are not permitted to use Tin, Tungsten, Tantalum and Gold (3TG) in their products supporting conflict in the Democratic Republic of Congo (DRC) and its neighboring countries. Material certification review and approval process shall include this conflict minerals requirement

Additionally, records of all items are to be maintained on file at the supplier's facility and are to be made available upon request of Chainworks Incorporated.

7.0 Environmental

All suppliers are encouraged to be certified to ISO 14001. Certification is not mandated. However, suppliers shall be compliant to all national and local governmental environmental laws and regulations in which the supplier resides. Any statutory and regulatory requirements shall also be considered. Suppliers shall report any violations to Chainworks so as to determine if any risk exists to products and packaging shipped to the USA. Suppliers shall provide evidence of corrective actions taken and report closure of violations.

