



SUPPLIER QUALITY MANUAL

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Supplier Quality Manual

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Supplier Quality Manual

1.0 – Introduction and Overview

ASYST QUALITY POLICY

The Employees of ASYST Technologies, LLC are dedicated to providing products and services that meet or exceed our customers' requirements. We recognize that our products and services are vital to our customers' success therefore; we will measure our performance and commit ourselves to the unending goal of improving our Core Processes and the Quality Management System. It is every employee's responsibility to take an active role in Defect Prevention, Continuous Improvement, and Customer Satisfaction.

ASYST Technologies, LLC has developed this Supplier Quality Manual in order to communicate expectations and requirements to ensure optimal performance throughout the supply chain. This Supplier Quality Manual and associated development activities are intended to ensure compliance using Section 1 of IATF 16949 as the fundamental quality system requirement.

ASYST is committed to helping suppliers continually improve their processes and systems with the ultimate goal of zero defects. In order to do this, ASYST shall provide suppliers with up-to-date data, information, and feedback they need to effectively develop, implement, and maintain a robust quality plan.

The supplier must accept ultimate responsibility for the quality of their products and services. ASYST Technologies, LLC will support the supplier's efforts but will not be responsible for implementation of cost and quality improvement programs such as scrap reduction, SPC, Lean Manufacturing, etc. This manual shall provide the basis for establishing and maintaining a mutually beneficial relationship between ASYST and its suppliers.

2.0 – Supplier Assessments

2.1 General Requirements

- 2.1.1 ASYST Purchasing and Quality are responsible for evaluating and selecting suppliers that will be used to supply product and services. Before approving a supplier, or ordering products or services, the supplier is evaluated on their ability to meet subcontract and quality system requirements.
- 2.1.2 ASYST and its customers reserve the right to verify that purchased product conforms to specified requirements at the supplier's facilities. Such verification will not be used by ASYST as evidence of effective control by the supplier.
- 2.1.3 Suppliers shall ensure that all purchased products, processes, and services used in part manufacture conform to the current applicable statutory and regulatory requirements in the country of receipt, the country of shipment and the customer-identified country of destination, if provided (refer to Section 3.4.5 for more information on restricted & reportable substances) as well as environmental, electrical and electromagnetic considerations applicable to the country of manufacture and sale.
- 2.1.4 Suppliers must maintain quality, delivery and any other performance levels to maintain approved or preferred status.
- 2.1.5 Suppliers must permanently mark all ASYST owned or ASYST customer owned tooling with the ASYST Tool Number and ASYST Part Number. Digital photos of the completed tooling showing these markings should be submitted to the ASYST Director of Supply Chain.
- 2.1.6 Suppliers of materials and services, producing or affecting direct production material, must be registered to ISO 9001 at a minimum, with the ultimate objective of becoming IATF 16949 certified. Should any existing certification expire, be revoked or placed in suspension or probation, the supplier must immediately contact ASYST, notifying them of the change in certification status. Any suspension in certification status must be reported to ASYST within five (5) working days. **Suppliers are required to submit a copy of their new quality system certification at time of renewal to ASYST purchasing.**
- 2.1.7 ASYST participates in Conflict Mineral reporting and to ensure compliance with the SEC requirements, ASYST must request information regarding **use of**

Conflict Minerals from all suppliers. All suppliers must support ASYST by accurately providing all requested data and reports. Additional information on Conflict Minerals reporting can be found at www.aiag.com or www.conflict-minerals.com.

- 2.1.8 ASYST is committed to environmental responsibility and has become ISO 14001 certified to show our dedication and commitment to the environment. We expect our suppliers to show the same dedication and commitment and recommend certification to ISO 14001 standards. Suppliers not currently holding environmental certification are encouraged to develop a plan of execution having the objective of achieving certification status.
- 2.1.9 Releases will be sent out weekly to all suppliers. If a supplier does not receive their weekly release, they are to contact ASYST immediately and speak to the Materials Planner.

2.2 Supplier Assessments

2.2.1 Supplier Self-Assessment

Quality Critical suppliers are required to complete a Supplier Assessment. ASYST shall evaluate the supplier's responses and determine if an on-site audit is warranted.

2.2.2 On-Site Audit

An on-site audit may be necessary to fully evaluate a supplier's capabilities. Circumstances that may prompt an on-site audit include:

- 2.2.2.1 A new supplier of key components or materials.
- 2.2.2.2 A new supplier with incomplete or inadequate responses on the "Supplier Quality Survey".
- 2.2.2.3 An existing supplier with poor performance.
- 2.2.2.4 An existing supplier being asked to quote more complex product.
- 2.2.2.5 Supplier risk assessment.
- 2.2.2.6 Supplier monitoring.
- 2.2.2.7 Supplier Quality Management System development.
- 2.2.2.8 Product and/or process audits.

2.3 Supplier Status

After the assessment has been completed, ASYST Purchasing and Quality shall designate the supplier's status as approved, preferred, or probationary. Status is defined as follows:

- 2.3.1 Approved Supplier: A supplier who has met minimum qualification criteria and has been approved to supply a required item. ASYST Technologies, LLC inspection and/or testing may be required prior to use.
- 2.3.2 Preferred Supplier: An approved supplier who has demonstrated excellent quality, delivery and cost performance. A Preferred Supplier is given first opportunity to quote new business and may qualify for reduced audit and/or inspection frequencies.
- 2.3.3 Probationary Supplier: An approved supplier who has demonstrated less than adequate quality, delivery or cost performance. A Probationary Supplier may not be given the opportunity to quote new business. Also, the supplier may be required to present corrective actions taken and/or propose an improvement plan for those areas where performance is less than adequate. Probationary suppliers may require increased audit and/or inspection frequencies.

2.4 Normative Reference Documents

The following reference documents are vital to the development of the quality system that meets ASYST's standards. Therefore, the supplier shall follow the requirements of the following documents:

AIAG CQI-9 Special Process: Heat Treat System Assessment

AIAG CQI-11 Special Process: Plating System Assessment

AIAG CQI-12 Special Process: Coating System Assessment

AIAG CQI-23 Special Process: Molding System Assessment

Assessment results shall be submitted to ASYST on an annual basis to the Director of Supply Chain.

3.0 Production Part Approval Process (PPAP)

3.1 General Requirements for PPAP

- 3.1.1 The purpose of a PPAP (Production Part Approval Process) submission is to ensure that all part requirements are understood by the supplier and that the supplier's process has the potential to produce compliant product consistently. All suppliers are responsible for preparing and submitting a PPAP package to ASYST prior to shipping production-intent product.
- 3.1.2 Suppliers are also responsible for implementing and managing a sub-supplier part approval process that is recognized by ASYST. Please refer to the AIAG (Automotive Industry Action Group) PPAP reference manual for suggested methods to use.

3.2 When PPAP Submission Is Required

A PPAP submission **SHALL BE** required for the following circumstances:

- 3.2.1 Initial production of a new or revised component and/or material.
- 3.2.2 Correction of any discrepancy on a previous submission (resubmission of an Interim or rejected PPAP).
- 3.2.3 Any change in process, tooling or engineering design that may affect form, fit or function of the product (resulting in change to process control plan).
- 3.2.4 Any change in the supplier's manufacturing location or movement of any or all of the production processes used to manufacture the component.
- 3.2.5 Any change in sub-supplier (new sub-supplier).
- 3.2.6 Any change in the sub-supplier's process, tooling or engineering design that may affect form, fit or function of the supplier's product.
- 3.2.7 Any change in the status of a component and/or material from inactive to active if the inactive period was longer than 12 months.

3.3 When PPAP Submission Is NOT Required

A PPAP submission **IS NOT** required for the following circumstances:

- 3.3.1 Any changes to component-level drawings, manufactured internally or manufactured by sub-suppliers, that do not impact the design record for the product supplied to ASYST.
- 3.3.2 Tool movement within the same facility (used in equivalent equipment, no change in process flow, no disassembly of tool) or equipment movement within the same facility (same equipment, no change in process flow).
- 3.3.3 Identical gage replacement (calibration and/or maintenance issue).
- 3.3.4 Any changes in process resulting in lower RPN's (Risk Priority Numbers) on the supplier's PFMEA (Process Failure Mode & Effects Analysis) that do not alter the process flow.

3.4 PPAP Submission Requirements

- 3.4.1 Purchasing shall notify Quality when a new/revised product is being ordered and also provide the ASYST customer name, supplier name, part number, and Project Engineer name. Quality shall document specific requirements for PPAP for each part on a PPAP Checklist, Form **842-08** or Form **842-12 – Supplier Bulk Materials Requirements Checklist**, and Purchasing will send it to the supplier. A new checklist shall be documented and forwarded to the supplier for all new/revised products that require a PPAP submission. The supplier must assemble all items on the checklist and submit the PPAP package to ASYST for evaluation. All data contained within the PPAP package must show evidence of being in full compliance with all specifications, or be accompanied by an approved SREA Form **842-09** (Supplier Request for Engineering Authorization).

3.4.2 Dimensional Layout Data

The supplier is responsible for conducting and reporting a dimensional layout of all representative cavities of a component as part of the PPAP package. Unless otherwise noted on the PPAP checklist, only one part per cavity needs to be measured. The supplier must submit actual layout parts and a copy of the print with ballooned dimensions linked to the dimensional layout results on the report. When multiple revision levels are stated on a single part drawing (for example, when an ASYST drawing is placed inside of a customer's standard drawing border), the revision level in the outermost border shall be used and recorded on all applicable APQP/PPAP documentation.

- 3.4.2.1** For those characteristics identified as critical or significant, the supplier is responsible for conducting a capability study on no less than 300 parts (unless otherwise noted on the PPAP checklist). Critical or significant characteristics require a minimum Cpk of a 1.67 (1.33 for mature processes). In addition, a Gage Repeatability and Reproducibility (GR&R) study is required for any tools or equipment used to measure the critical or significant characteristics. A gage is acceptable if total variation present in the measurement system is less than 10%. A gage may be acceptable if variation is between 10-30% (depends on the characteristic) but corrective action plan should be initiated to reduce variation present. The gage is unacceptable if total variation exceeds 30%.
- 3.4.2.2** If any dimension does not meet specification, or capability study results are less than the required 1.67 Cpk, the supplier must submit a corrective action plan for correcting the discrepancy which may include completion of an SREA as described in Section 3.4.1.

3.4.3 Material and Performance Test Data

The supplier is responsible for conducting and submitting results of all material and performance testing as specified on the print. If the supplier is not capable of performing all tests, they can contract the service with a qualified source such as the sub-supplier or a third-party laboratory or test facility. The contracted source must be an accredited facility (A2LA, or ISO 17025). The supplier is responsible for maintaining and submitting certificates of compliance and updated test results when applicable prior to the expiration date. Material test results and certificates of compliance should be renewed and submitted annually to the Director of Supply Chain.

3.4.4 APQP (Advanced Product Quality Planning) Documentation

The supplier is responsible for creating and submitting APQP documents to ASYST. Advanced Product Quality Planning is a structured method of defining and establishing the steps necessary to assure that a product satisfies the customer. The supplier must have a documented process to ensure all elements of the APQP process are completed properly and on time.

Elements of the APQP process include the following documents:

3.4.4.1 PFMEA (Process Failure Mode & Effects Analysis)

A PFMEA should be conducted during product quality planning and prior to production. It is a disciplined review and analysis of a new and/or revised process and is conducted to anticipate, resolve, or monitor potential process problems for new and/or revised products.

A PFMEA is a living document and needs to be reviewed and updated as new failure modes are discovered. A more detailed explanation and examples of forms can be found in the AIAG reference manual *"Potential Failure Mode and Effects Analysis"*.

3.4.4.2 Process Control Plan

A process control plan is a written description of the systems for controlling parts and processes. The process control plan is a living document and must be updated to reflect the addition/deletion of controls based on experience gained by producing parts. A more detailed explanation and examples of forms can be found in the AIAG reference manual, *"Advanced Product Quality Planning and Control Plan"*.

3.4.4.3 Process Flow Diagram

A process flow diagram is a schematic representation of the current or proposed process flow. It should be used to analyze sources of variation on machines, materials, methods and manpower from the beginning to the end of a manufacturing or assembly process. The flow diagram helps to analyze the total process rather than individual steps in the process. A more detailed explanation and examples of forms can be found in the AIAG reference manual, *"Advanced Product Quality Planning and Control Plan"*.

3.4.5 International Material Data System – IMDS

The International Material Data System (IMDS) is a database created by the automobile industry to collect and report material composition data for

components in a finished vehicle. IMDS enables vehicle manufacturers to meet national and international standards and laws, most notably the European End-of-Life Vehicles Directive.

IMDS collects material data via the internet on Material Data Sheets (MDSs) which are entered by Tier I suppliers and released to specific OEMs. IMDS allows Tier I suppliers to receive MDSs from their suppliers, who also provide the data directly through the IMDS, and so on throughout the supply chain.

ASYST Technologies, LLC requires suppliers to submit IMDS data as part of every PPAP submission unless otherwise noted on the PPAP Checklist. PPAP submissions will not be approved until IMDS data is received and accepted as adequate by Quality.

It is strongly recommended that suppliers access the IMDS website at www.mdssystem.com to learn more about the system, access help files, and to obtain information regarding training in using the system.

3.4.6 Appearance Approval Report

The supplier must submit a separate Appearance Approval Report (AAR) for each part if the product/part has appearance requirements on the design record. The AAR only applies to parts with color, grain, or surface requirements.

3.4.7 PPAP Checklist

The Supplier PPAP checklist- Form **842-08** or **Supplier Bulk Materials Requirements Checklist - Form 842-12** are used by ASYST to communicate submission requirements to suppliers. Suppliers should use this checklist to ensure a complete PPAP package is assembled prior to shipping documentation and parts. The PPAP checklist **MUST BE INCLUDED** in the package as well. Upon receipt, ASYST will evaluate the package and determine if approval can be granted. The PPAP checklist will then be updated with "Full Production Approval", "Interim Production Approval" or "Rejected Submission". A copy of the PPAP checklist with the appropriate approval or rejection signatures will be sent back to the supplier for their records.

3.4.7.1 Full Production Approval Status

The supplier has been granted full production approval and can begin shipping parts to ASYST.

3.4.7.2 Interim Production Approval Status

The supplier may be granted an interim approval for the following reasons:

- Incomplete or incorrect PPAP package (missing and/or erroneous documentation)
- Parts do not meet print requirements (dimensional and/or test failures identified and a corrective/preventive action plan documented)
- Material and/or performance testing not yet completed (long term environmental testing such as salt spray or corrosion testing)

3.4.7.3 Rejected Submission Status

The PPAP package may be rejected for the following reasons:

- Incorrect documentation does not match ASYST requirements as stated on the PPAP checklist.
- Parts do not meet print specifications (dimensional and/or test failures with NO corrective/preventive action plan documented)
- Material and/or performance test failures.



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Form 842-08: Supplier PPAP Checklist

This form shall be used to notify suppliers of items required for PPAP for a specific product or part.

Supplier Name:		Expected Submission Date:	
Product #:	Revision:	Revision Date:	
Product Description:		# of Cavities (If Applicable):	
Supplier Contact:		ASYST Contact:	
Name/Title:		Name/Title:	
Phone:	Fax:	Phone:	Fax:

COPY FOR REFERENCE ONLY
CONTACT ASYST FOR LATEST REVISION OF PPAP CHECKLIST

PPAP Item	Submit to Asyst	Rejected at Supplier	Withdraw	Comments
1. Part Submission Warrant (PSW)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Process Control Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Process FMEA (Failure Mode & Effects Analysis)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Process Flow Diagram	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Dimensional Results Referenced to Drawings/Prints	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Process Capability Studies on KPCs (300 pieces)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	KPC(s):
7. Gage R & R (Used to Measure KPCs)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Gage #/ID:
8. Customer and Supplier Design Records (CAD/CAM, math data, part drawings, specifications, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. IMDS Data (With Identification Number)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	IMDS #:
10. Material, Performance & Durability Test Results (Include all salt spray and water immersion data, if applicable)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11. Material Certifications	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12. Quality and Lab Accreditations (IATF; ISO; A2LA)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13. Tool Identification (With Photo if Possible)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Tool ID #:
14. Sample Parts: Five (5) per Cavity or As Noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15. Part Weights on 5 Parts (Before & After Plating or Coating Where Applicable)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15. PPAP Checklist Completed and Signed by Supplier	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other Notes or Requirements:				

SUPPLIER TO SIGN AND SUBMIT THIS FORM TO ASYST AS PART OF THE PPAP PACKAGE

Supplier Signature _____		Print Name & Title _____		Date _____
<input type="checkbox"/> FULL PRODUCTION APPROVAL - granted with signed supplier PPAP checklist and signed PSW	<input type="checkbox"/> INTERIM PRODUCTION APPROVAL - granted with signed supplier PPAP checklist and signed PSW REASON: RESUBMISSION DATE: INTERIM EXPIRES:	<input type="checkbox"/> REJECTED SUBMISSION - rejected with signed supplier PPAP checklist and signed PSW REASON: RESUBMISSION DATE:		
ASYST Approval:				
ASYST Quality Approval Signature _____		Print Name _____		Date _____
ASYST Engineering Approval Signature _____		Print Name _____		Date _____



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Form 842-12: Supplier Bulk Materials Requirements Checklist

This form shall be used to notify suppliers of items required for bulk materials requirements for a specific product or part.

Supplier Name:		Expected Submission Date:	
Product #:	Revision:	Revision Date:	
Product Description:		# of Cavities (If Applicable):	
Supplier Contact:		ASYST Contact:	
Name/Title:		Name/Title:	
Phone:	Fax:	Phone:	Fax:

COPY FOR REFERENCE ONLY

CONTACT ASYST FOR LATEST REVISION OF PPAP CHECKLIST

PRODUCT DESIGN & DEVELOPMENT VERIFICATION	Submit to Asyst	Retain at Supplier	Waived	Comments
1. Design Matrix	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Design FMEA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Special Product Characteristics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Design Records	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Prototype Control Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Appearance Approval Report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Master Sample	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Test Results	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. Dimensional Results	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10. Checking Aids	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11. Engineering Approval	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PROCESS DESIGN & DEVELOPMENT VERIFICATION	Submit to Asyst	Retain at Supplier	Waived	Comments
12. Process Flow Diagrams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13. Process FMEA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14. Special Process Characteristics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15. Pre-Launch Control Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
16. Production Control Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
17. Measurement System Analysis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
18. Interim Approval	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PRODUCT & PROCESS VALIDATION	Submit to Asyst	Retain at Supplier	Waived	Comments
19. Initial Process Studies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
20. Part Submission Warrant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other Notes or Requirements:				

SUPPLIER TO SIGN AND SUBMIT THIS FORM TO ASYST

Supplier Signature

Print Name & Title

Date

3.5 Shipment of PPAP Package

The PPAP parts and documentation must be packaged with sufficient care and planning in order to prevent damage to the contents. The package must be clearly identified/labeled as "PPAP Samples and Documentation".

3.5.7 The supplier must make every effort to ship sample parts and documentation in the same package. When this is not feasible, due to the potential for damage to the documentation, the supplier may ship the sample parts in a separate container. Parts may also be shipped in a smaller container within a larger shipment of parts. The label or identification should be affixed to the specific container holding the sample parts.

3.5.8 In all cases, the supplier must ship PPAP sample parts and documentation to the attention of the **ASYST Director of Supply Chain**.

3.6 Shipment of Initial Production

No shipment of parts will be accepted by ASYST until the PPAP package has been approved. In situations where the initial production order is shipped at the same time as the PPAP package, the parts shall be placed in a hold location until a decision is made regarding the submission. There may also be occasions where ASYST will order parts for sample purposes. These parts must be labeled as samples. In all cases, the supplier must label all cartons in the first shipment of new or revised parts with a bright-colored label stating "1st Shipment of New Parts" or "1st Shipment of Revised Parts".

If supplier receives releases for parts that are not PPAP approved, it is the supplier's responsibility to request deviation to ship prior to PPAP approval, using supplier's deviation request or ASYST's Form 870-05: Request for Deviation. These part shall meet all print requirements.

3.7 Shipment of Production

Shipments of production should include a certificate of compliance which includes: Part number, lot number, quantity shipper for each lot number, and shipment date.



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Form 870-05: Request for Deviation



Request for Deviation Form 870-05

Supplier

Internal

Customer

Date:	Customer:
Asyst Part Number:	Customer Part Number:
Supplier (if applicable):	Part Description:
Description of Deviation: <input type="checkbox"/> TEMPORARY <input type="checkbox"/> PERMANENT	
<p>ATTACH PHOTO IF APPLICABLE</p> <p>COPY FOR REFERENCE ONLY</p> <p>CONTACT ASYST FOR LATEST REVISION OF REQUEST FOR DEVIATION</p>	
ECR Necessary? <input type="checkbox"/> YES <input type="checkbox"/> NO	IF YES, ECR Responsibility:
Effective Date of Deviation:	Termination Date of Deviation:
Quantity Termination of Deviation:	Lot Numbers Affected:

ASYST APPROVAL SIGNATURES:

Quality Manager

Date

Engineering

Date

CUSTOMER APPROVAL SIGNATURE (ONLY WHEN APPLICABLE):

Customer Name / Title

Date

Cc: VP of Production, VP of Engineering & Quality, QA, (Supplier or Customer If Applicable)

3.8 Supplier Request for Engineering Authorization

The Supplier Request for Engineering Authorization (SREA), Form **842-09**, is a form that can be used to request a change in material, component or product specifications. Every attempt should be made by the supplier to correct any discrepancies prior to requesting a change through the submission of an SREA. In some instances when the supplier is unable to gain approval in time for production demands, this process can be used to gain interim approval.

Supplier shall provide a six (6) month notice of an event noted in 3.2.3, 3.2.4, 3.2.5 and/or 3.2.6. Upon such notice, supplier shall work with ASYST and its customers to allow for an interruption free transition, utilizing the SREA form 842-09.

- 3.8.1 The supplier must complete the top portion of the SREA Form and submit it to the ASYST Director of Supply Chain for evaluation. A copy is shown on the next page.
- 3.8.2 ASYST will review and approve or reject the request and notify the supplier in writing of the decision.



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Form **842-09**: Supplier Request for Engineering Authorization

Supplier Request for Engineering Authorization (SREA)

SUPPLIER TO COMPLETE THIS SECTION:		DATE:
SUPPLIER NAME AND ADDRESS:		
SUPPLIER CONTACT NAME, TITLE, PHONE, FAX		
ASYST PART NAME and PART NUMBER OF COMPONENT:		ASYST PURCHASING CONTACT:
		CONTROL ITEM AFFECTED <input type="checkbox"/> YES <input type="checkbox"/> NO
		CRITICAL ITEM <input type="checkbox"/> YES <input type="checkbox"/> NO
CHANGE:	<input type="checkbox"/> PERMANENT CHANGE	<input type="checkbox"/> TEMPORARY PERMIT
	<input type="checkbox"/> DESIGN	<input type="checkbox"/> MATERIAL
	<input type="checkbox"/> PROCESS	<input type="checkbox"/> DESCRIPTION
	<input type="checkbox"/> OTHER	QTY: _____ TIME PERIOD: _____
COPY FOR REFERENCE ONLY		
EFFECT OF CHANGE:		
CONTACT ASYST FOR LATEST REVISION OF SREA FORM		
INTERCHANGEABILITY AFFECTED:	TOOLING / FACILITY CHANGES REQUIRED: <input type="checkbox"/> YES <input type="checkbox"/> NO	
ASSEMBLY <input type="checkbox"/> YES <input type="checkbox"/> NO	IF YES, COST EFFECT \$	
COMPONENTS <input type="checkbox"/> YES <input type="checkbox"/> NO		
TIME TO INCORPORATE CHANGE AFTER APPROVAL:	PIECE COST AFFECTED: <input type="checkbox"/> YES <input type="checkbox"/> NO	
	IF YES, COST EFFECT \$	
WILL INCORPORATION OF CHANGE AFFECT SHIPPING SCHEDULE?	SIGNATURE: _____	
<input type="checkbox"/> YES <input type="checkbox"/> NO	(SUPPLIER REPRESENTATIVE)	

ASYST TECHNOLOGIES, LLC, PRODUCT ENGINEERING TO COMPLETE:	
<input type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED BY: _____ DATE: _____	SAMPLE OF CHANGED COMPONENT REQUIRED?
IF APPROVED, DATE ECN INITIATED: _____	<input type="checkbox"/> YES <input type="checkbox"/> NO
REASON FOR REJECTION OR QUALIFYING CONDITIONS OF ACCEPTANCE:	
CONCURRED BY:	
PURCHASING: _____ Date: _____	QA: _____ Date: _____
COST, DELIVERY	
MFG. ENG.: _____ Date: _____	MFG.: _____ Date: _____
INTERCHANGEABILITY	INTERCHANGEABILITY

*This approval is granted upon the understanding that it is advisory in nature and in no manner changes the Seller's original responsibility for insuring that all characteristics, designated in the applicable engineering specifications and / or inherent i

4.0 Label Requirements for Shipping Parts to ASYST

4.1 General Label Requirements

4.1.1 All suppliers, unless waived by ASYST, are required to use bar-coded labels when shipping to ASYST. Labels must be attached to the top right corner on the front of the box. Label elements must include the following information:

- ASYST PO #: Human readable and barcode with “K” data identifier in front of PO #.
- ASYST Item #: Human readable and barcode with “P” data identifier in front of item #.
- Lot #: Human readable and barcode with “L” data identifier in front of lot #.
- Quantity: Human readable and barcode with “Q” data identifier in front of quantity.
- Revision Level: Revision level that matches product (letter, number, etc.). Please reference section 3.4.2 for more information.
- Other Information: As specified by ASYST Technologies L.L.C.





4.1.2 Suppliers must also adhere to the following:

- The suggested label stock is 4.0” wide X 6.0” deep or equivalent.
- Barcode symbology should be Code 3 of 9.
- Data identifiers are alphanumeric characters that are imbedded in barcodes to identify the type of data contained in the barcode (e.g. part number vs. lot number vs. quantity). Generally, data identifiers are excluded from the human readable portion of the label. Data identifiers are specific to barcode symbology and/or industry standards (for example: AIAG for the Automotive Industry).
- AIAG or other format can be used; however, the label element list above in Section 4.1 should be considered as minimum requirements in addition to other ASYST label requirements. NOTE: a sample label should be sent to the ASYST Director of Supply Chain for review and approval prior to the first shipment.
- Packaging Requirements: Parts should be in corrugated containers. Containers should be taped, NO STAPLES ALLOWED. Containers

should also protect parts while in transit. Containers must not exceed 35 lbs.

- Parts Shipping Labels (container, master and mixed load) shall comply with the layout formats defined in the AIAG, B-3 standard – Parts Shipping Label. Customer specific information may be specified.

Example of Supplier Label:

PART NO. (P) 15444 	
QUANTITY (Q) 100 	DESCRIPTION GASKET, 3-LUG SULFUR FREE
SERIAL (S) 01658616 	MFG DATE 09/15/2016 ENG CHANGE C
SUPPLIER NAME (V) SUPPLIER NAME <small>Supplier Name, Address, City, State, Zip Code</small>	PO# (K) 5506017543  LOT # (1T) 2013652 

5.0 Suspect and/or Nonconforming Material

5.1 Suspect and/or Nonconforming Material Found at Supplier's Location

- 5.1.1 The supplier must have a written procedure for handling suspect and/or nonconforming material found at their location. Immediate containment actions must be implemented to ensure no defective product is shipped to ASYST. All lots and/or shipments that may contain defective product must be quarantined until product can be certified as defect-free.
- 5.1.2 The supplier is required to notify ASYST of any shipments in transit that may be affected. Advance notification of suspect and/or defective product will enable ASYST to deny the shipment and thus eliminate the need to issue a rejection which would negatively affect the supplier's PPM.
- 5.1.3 The supplier shall be held responsible for all costs incurred in sorting, reworking, or other corrective action steps taken due to supplier quality spills.

5.2 Nonconforming Material Found at ASYST

- 5.2.1 ASYST shall initiate a Product Hold & Rejection Notice (Form 870-03) and notify the supplier when nonconforming material is detected.
- 5.2.2 An initial written response to the rejection is required within 24 hours. The rejection notice may be used to respond and it MUST include containment actions to prevent additional defective product from being shipped to ASYST.
- 5.2.3 Replacement stock is required in all cases unless specifically directed otherwise by ASYST Purchasing.
- 5.2.4 A sort at ASYST may be required if replacement stock is not available or production needs parts. On-site sorting needs will be communicated by ASYST. If ASYST employees sort supplier product, the supplier shall be billed at an appropriate rate per hour. The supplier may contract a local sorting facility to perform the sort at ASYST at their own cost or they may be charged back for the service as part of the Cost Recovery Process detailed in Section 7.
- 5.2.5 ALL shipments to ASYST of the defective part number MUST be inspected and labeled as "Certified" (containing no defects). Certification labels are required until permanent corrective action is implemented and verified.
- 5.2.6 Corrective action implementation and elimination of the root causes of the defects is required within 15 days. The supplier MUST contact the ASYST Quality Department when resolution will take longer than 15 days.

- 5.2.7 The supplier shall be held responsible for all costs incurred in sorting, reworking, or other corrective action steps taken due to supplier quality spills.

5.3 Corrective and Preventive Action

5.3.1 General Requirements

Suppliers are required to use a disciplined problem-solving method to investigate and eliminate the root causes of defective product. ASYST strongly recommends the use of a process similar to the *Ford Eight Discipline Method* (8D) when addressing the problem. At a minimum, the written supplier corrective action report must include the following information:

5.3.1.1 Assemble a Cross-Functional Team to Investigate

Provide the names and functions of team members associated with the corrective action effort. A cross-functional team including personnel with solid product and process knowledge is recommended to ensure effective long-term resolution.

5.3.1.2 Describe/Define the Problem

Describe the problem symptoms as experienced by the customer. Determine the extent of the problem and its effects in technical and quantifiable terms. Include the *Five "W's" and Two "H's"* (who, what, where, when, why, how and how many) of the problem.

5.3.1.3 Plan, Implement and Verify Immediate Containment Actions

ASYST cannot emphasize enough the critical importance of planning, implementing, and verifying effective containment actions for preventing the shipment of defective product to ASYST. These actions must be immediate and should only be in place until permanent corrective actions are implemented and verified. The supplier should note that containment actions will not be considered by ASYST to be a permanent solution to any problem. Common containment actions include:

- 100% Inspection to sort out defects
- Increased measurements of key characteristics (above the normal frequency shown on the process control plan)
- Manual processing when automated equipment is suspected to be part of the problem
- **Labeling cartons as "100% Certified" until permanent corrective action is implemented and verified.**

5.3.1.4 Define and Verify Root Cause(s) of the Problem

Identify all potential causes which could explain why the problem occurred. Isolate and verify the root cause(s) by testing each potential cause against the problem description and test data. ASYST recommends that the supplier use root cause analysis tools such as a “Cause and Effect Diagram” (Fish Bone) and/or the “Five Why” approach (asking why at least 5 times until you can no longer reasonably ask why). An example of the “Five Why” approach is shown below:

Question #	Question	Response
1	Why did the machine stop?	Because the fuse blew due to an overload.
2	Why was there an overload?	Because the bearing lubrication was inadequate.
3	Why was the bearing lubrication inadequate?	Because the lubrication pump was not working properly.
4	Why wasn't the lubrication pump working properly?	Because the pump axle was worn out.
5	Why was the pump axle worn out?	Because sludge got into the axle.
6	Why did sludge get into the axle?	Because there is no filter on the lubrication pump to keep sludge out.

By asking “why” at least five times (six in the example above) the supplier is able to get to the root cause of the problem.

5.3.1.5 Plan, Implement and Verify Permanent Corrective Actions

Once the root cause of the problem has been identified the supplier then needs to plan, implement and verify corrective actions to permanently eliminate the cause of the problem. The supplier must also verify that the selected actions will resolve the problem for the customer without causing undesirable side effects (for example, changing to high-impact plastic resin without verifying the shrink rate effect on the parts).

Some examples of effective verification methods include:

- Short and long-term capability studies on key characteristics
- Statistical process control (SPC) charting and analysis
- Designed experiments
- Destructive Testing (internal or external)

Verification should take place prior to implementation whenever possible.

5.3.1.6 Plan and Implement Preventive Actions

The supplier should plan and implement actions intended to prevent recurrence of the problem. Prevention methods include modifying management or operations systems, modifying procedures and/or work instructions, monitoring process or SPC data, and evaluating similar processes and/or products.

Suppliers are required to submit a written initial response to all **rejection notices** issued by ASYST. The supplier is also responsible for submitting a written plan detailing their permanent corrective actions within 15 days of receipt of a **rejection notice**. If more time is needed, the supplier must contact the ASYST Quality Department prior to the original due date.

6.0 Supplier Performance Expectations

6.1 General Requirements

6.1.1 Supplier performance will be evaluated by ASYST on a regular basis. Suppliers not meeting the minimum performance expectations may be required to present a detailed plan to ASYST outlining actions that will be taken to correct any deficiencies. Supplier performance expectations have been defined by ASYST for on-time delivery, quality, and responsiveness to key issues.

6.2 On-Time Delivery

6.2.1 ASYST suppliers are required to achieve 100% on-time delivery (defined as minus four days early plus zero days late). Suppliers delivering less than 100% on-time **may** be required to submit a corrective action plan to improve and meet the requirement.

6.2.2 Suppliers will be responsible for all costs incurred by ASYST as a result of late shipments.

6.2.3 Suppliers consistently failing to meet the 100% delivery requirement may have their status changed to "Probationary". The supplier **may** not be eligible for additional business until the supplier is removed from probation and their status changed back to "Approved".

6.2.4 If the supplier is unable to ship product as scheduled, an e-mail should be sent to ASYST by the supplier indicating the reason for the delay and the target date for supplying the product.

6.3 Quality and Compliance

6.3.1 ASYST suppliers are required to provide product that is defect-free and complies with all specifications. Suppliers delivering product that is defective or does not meet all specifications will be required to submit a corrective action plan for each problem. In addition, ASYST may require that the supplier engage an outside source to provide Level II Containment and Shipping if they fail to prevent additional defective product from reaching ASYST.

6.3.2 Suppliers will be responsible for all costs incurred by ASYST as a result of a quality spill or the supplier's failure to meet specifications.

6.3.3 Suppliers consistently failing to provide defect-free product that complies with all specifications may have their status changed to "Probationary". The supplier will not be eligible for additional business until the supplier is removed from probation and their status changed back to "Approved".

6.4 Responsiveness

- 6.4.1 ASYST suppliers are required to provide timely responses to key issues including **rejection notices** and PPAP submissions.
- 6.4.2 Suppliers that consistently fail to provide timely responses may have their status changed to “Probationary”. The supplier will not be eligible for additional business until the supplier is removed from probation and their status changed back to “Approved”.

6.5 Performance Reporting

- 6.5.1 The ASYST Director of Supply Chain and Quality Manager are responsible for evaluating and reporting supplier performance. The performance evaluation shall include the following metrics:

Performance Element	Expected Performance Level
On-Time Delivery	100% On-Time
Quality and Compliance	Zero PPM (# of Rejects / # of Parts Received X 1,000,000)
Responsiveness to Key Issues	1. 100% On-Time (Initial 24 Hour Response to Rejections) 2. 100% On-Time (PPAP Submissions)
Incidents of Premium Freight	Zero Dollar Value Per Incident of Premium Freight

- 6.5.2 Periodic performance ratings will only be provided to quality critical suppliers (defined as those supplying components and/or materials). The report shall be documented and sent to the supplier on Form **842-07**, Supplier Performance Report.

6.6 Supplier Improvement and Development

ASYST is committed to helping suppliers maintain and improve their overall systems. The ASYST Quality Manager shall provide assistance to suppliers when needed to ensure effective quality system development and continuous process improvement. Other supplier development or improvement initiatives may include, but are not limited to:

- Training on Quality System (**IATF 16949**) elements
- Conducting a Second-Party Audit on the supplier’s quality system
- Training or assistance on Advanced Product Quality Planning (APQP)
- Training on problem-solving methods

7.1 General Considerations

7.1.1 Cost Recovery Process

7.1.1.1 The supplier shall be held financially responsible for all costs incurred as a result of a nonconforming product and/or late shipments to ASYST.

7.1.1.2 The ASYST Quality Manager shall document all associated costs on a detailed Cost Recovery Worksheet (Form **842-10**) and send it to the supplier. Associated costs include, but are not limited to:

- Labor Costs: Total cost to sort, rework, repair, etc.
- Production Overtime Premium: Total cost.
- Scrap Cost: For parts and/or assemblies up to the point in the process where the defect was discovered.
- Premium Transportation Costs: Inbound and Outbound
- Outside Services: Third Party Sorting, Travel Costs
- Customer Costs: Costs Incurred by ASYST Customers

7.1.1.3 If the supplier believes that they should not be responsible for part or all of the costs assigned, they have five working days to notify ASYST and request a review with applicable personnel. After five working days, or after a discussion where costs are reviewed and assigned to the supplier, a debit memo will be issued for the amount shown on the final version of the worksheet.

8.0 Revision History

8.1 Revision History

Revision Level	Effective Date	Revision Detail	Revised By
1-5		Previous revisions were not carried over with the update to the new IATF 16949:2016 Standard.	
6	11/14/17	<ol style="list-style-type: none"> 1. Changed President contact to VP, Engineering & Quality contact information and changed Quality Manager contact information. 2. Updated Table of Contents with new section 2.4 and all page numbers. 3. Added sections 2.1.6, 2.1.7, 2.1.8 and 2.1.9 to section 2.1. 4. Added section 2.4: Normative Reference Documents 5. Removed RPN language from section 3.4.4.1 6. Included Form 743-09: Supplier PPAP Checklist for reference 7. Underlined and bolded "ASYST Director of Supply Chain" in section 3.5.8 8. Section 3.6 – added language re: parts that are not PPAP approved and requirement to provide supplier deviation form or complete Form 830-07: Request for Deviation 9. Section 3.7 – added language requiring 6 month notice of requests for change 10. Included Form 830-07: Request for Deviation for reference 11. Section 4.1.1 – removed chart from label element information 12. Section 4.1.2 – removed chart from supplier label requirements and added language re: AIAG B-3 standard parts shipping label 13. Section 4.0 – added an example of the Supplier required label 14. Section 6.5 – removed "Quarterly" from title and "on a quarterly basis" from paragraph 15. Section 7.1.2 – entire section struck from document 16. Added acknowledgment page at end of document. 17. Updated "Materials Manager" to "Director of Supply Chain" throughout document. 18. Updated Form/Document numbers throughout document to conform to new IATF 16949 numbering system. 19. Updated "ISO/TS 16949" to "IATF 16949". 	Heather Schulz Director of Supply Chain
7	7/6/18	<ol style="list-style-type: none"> 1. Section 2.1.6 added requirement for suppliers to submit updated quality system certificates. 2. Section 3.7 inserted requirement for certificates of compliance with shipments. 3. Section 3.7 renumbered to Section 3.8 4. Section 3.4 and 3.4.7 added requirement for bulk materials PPAP. 	Heather Schulz Director of Supply Chain



Supplier Quality Manual

ACKNOWLEDGEMENT

Please complete this form to acknowledge that you have received, read, understand and agree to the procedures outlined in the ASYST Supplier Quality Manual. Please submit it to the Director of Supply Chain.

Company Name: _____

Name: _____

Position: _____

Date: _____

Signature: _____