



Supplier Quality Manual **CHASSIX Inc.**



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Quality Requirements for Supplier Organizations / Suppliers

1.0 INTRODUCTION

CHASSIX's success is based upon the quality, performance, and economics of our products. The quality of our products depends on **Zero Defect product** purchased from **supplier organizations / suppliers**.

To assure the highest product quality possible, CHASSIX considers its **supplier organizations** as valuable team members in the automotive supply chain.

1.1 CHASSIX QUALITY POLICY

The objectives of our Quality Management System are to:

- E – Exceed Customer Expectations for Quality, Delivery and Service
- P – Prevent Product Defects through Process Adherence and Focus on Safety Critical Controls
- I – Inspire Continuous Improvement
- C – Cultivate Employee Job Knowledge and Performance

Through our focus on:

- Customers and Stakeholders
- Team Member Engagement
- Metrics and Priorities Established by Leadership
- Evidence-based Decision Making
- Optimization and Control of Business Processes
- Continuous Improvement and Reassessment

1.2 CHASSIX SUPPLIER QUALITY MANAGEMENT SYSTEM REQUIREMENTS

Minimum quality system requirements for supplier organizations to CHASSIX, unless otherwise specified, are:

- Third party registration to **ISO 9001:2008 or ISO 9001:2015** by an accredited third party certification body
- Conformance or registration (preferred) to the automotive industry standard **ISO/TS 16949:2009 or IATF 16949:2016** latest revision

Copies of certificates shall be submitted to CHASSIX Purchasing. Acceptance of accreditation(s) shall be communicated to the organization. Should the status of any accepted accreditation change, (i.e. new certification, de-certification, reassessments, etc.) the organization shall notify the CHASSIX Sourcing Team.

1.3 CHASSIX SUPPLIER QUALITY MANUAL

The purpose of this **CHASSIX Supplier Quality Manual** is to serve as a supplement providing additional CHASSIX specific requirements which supplier organizations / suppliers (sub-suppliers) shall follow.

This supplement, along with automotive industry standards, includes both supplier and CHASSIX responsibilities.

Material supplied to CHASSIX shall be produced, controlled, inspected, and tested according to the requirements set forth in these documents and other applicable specifications.



2.0 DEFINITIONS

When referring to this CHASSIX Supplier Quality Manual and associated automotive industry standards, the following applies.

- The word '**shall**' indicates mandatory requirement.
- The word '**should**' indicates a mandatory requirement with some flexibility allowed in compliance methodology. Organizations choosing other approaches to satisfy a '**should**' must be able to show that their approach meets the intent of the current **ISO 9001 and IATF 16949**.
- '**Product**' is defined as any part, product, service, etc. supplied to CHASSIX Automotive or its subsidiaries for which this standard is applicable.
- '**Customer**' = CHASSIX
- '**Supplier Organization**' = Supplier to CHASSIX
- '**/ Supplier**' = Supplier to CHASSIX Supplier Organizations (sub-suppliers)
- '**CHASSIX Sourcing Team**' = CHASSIX representatives Quality / Supplier Quality, Purchasing / Buyer, Finance, Engineering, etc.

3.0 DOCUMENTATION

3.1 GENERAL

The organization shall maintain and conform to the latest revision level of the required or referenced Purchase Order documentation.

3.2 CHASSIX SPECIFIC DOCUMENTATION

CHASSIX specific documentation related to Product conformance may include, but is not limited to the following:

- Purchase Order
- Parts list, Product structure (bill of materials)
- Math model
- Blueprints
- Order specifications
- SOR/SOW
- ES Specification
- PPAP Checklist
- Other supporting specifications/documentation (i.e. DINs, JIS, CHASSIX Matrices, OEM customer,

etc.)



3.3 REFERENCE DOCUMENTS

The following is a list of **AIAG / ISO / ANSI** documents referenced in this standard:

Note: Refer to the latest versions

	<u>Manual</u>	<u>Published by</u>	<u>Description</u>
	ISO/TS16949:2009	IATF	Technical Specification (expires 9/14/18)
	IATF 16949:2016	IATF	Automotive QMS Standard (new 10/1/16)
9/14/18)	ISO 9001: 2008	ISO	Quality Management System Requirements (exp
(9/15/15)	ISO 9001:2015	ISO	Quality Management System Requirements
Plan	APQP	AIAG	Advance Product Quality Planning and Control
	FMEA	AIAG	Potential Failure Mode and Effects Analysis
	MSA	AIAG	Measurement System Analysis
	SPC	AIAG	Fundamental SPC
	PPAP	AIAG	Production Part Approval Process
	ANSI Y 14.5	ANSI	GD&T
	AIAG CQIs	AIAG	CQI as applicable

To obtain information of these publications, contact the following websites:
www.AIAG.org, www.iso.org, www.ansi.org

3.4 CUSTOMER SPECIFIC REQUIREMENTS

The organization shall adhere to referenced Customer Specific Requirements as communicated per CHASSIX documentation.

4.0 CHASSIX / ORGANIZATION INTERFACE

4.1 GENERAL

The organization shall communicate through the CHASSIX Buyer during serial production unless otherwise specified. The official business language for all documents referenced in this quality standard shall be English. Other languages may be used with prior CHASSIX approval.

Note: The organization shall communicate any management or ownership changes to the CHASSIX Buyer immediately.

CHASSIX suppliers will be required to comply with OEM customer specific requirements and pass down to sub-suppliers any such requirements as deemed necessary including MMOG/LE, EDI/Web requirements, Capacity verification sheets, APQP and change documentations.

4.2 COMMUNICATION

Communication is the key to any successful partnership. CHASSIX involves the organization from product concept through mass production.



4.3 PRODUCT VERIFICATION

CHASSIX and its customers shall be afforded the right to verify the supplier organization's products, processes and systems at CHASSIX's or organization's locations.

5.0 ADVANCED PRODUCT QUALITY PLANNING (APQP)

5.1 GENERAL

The supplier organization shall utilize the planning procedures from the **AIAG Advanced Quality Planning and Control Plan (APQP)** manual. All elements of the **APQP** must be incorporated into the planning process, unless waived in writing. All documents (including **Process Flow Diagram, PFMEA, Process Control Plans**) shall include all processes for the manufacturing of components, including incoming inspection, internal transportation, secondary operations, rework, outside services and packaging.

All operations shall be keyed to the Process Flow Diagram, PFMEA and Process Control Plan.

Suppliers are required to evaluate their risk and reactions as supplier contingency plans which may include as necessary contingency plans for EDI, transportation, packaging, equipment failure, etc.

5.2. PROJECT MANAGEMENT TIMELINE

The organization shall develop a **Project Management Timeline** which contains (at minimum) program events, target dates and assigned responsibilities (refer to **Appendix A: Advanced Product Quality Planning Status Report Form**).

The purpose of the **Project Management Timeline** is to assure the timing of programs as defined by the CHASSIX Sourcing Team.

The **Project Management Timeline** shall be maintained at the organization at all times. Updated copies shall be submitted to the CHASSIX Sourcing Team as required.

The **Project Management Timeline** shall be structured in the following phases:

- Phase I: Design Program Approval
- Phase II: Prototype
- Phase III: Pilot (Pre - Launch)
- PhaseIV: SOP (Launch) should include the PPAP process (see section 6.0)

The **Project Management Timeline** should be identified by defining:

- Product part number and/or description
- Organization name
- Originator
- Date and revision level

5.3 APQP FOLLOW-UP

The status of the effectiveness and progress of the program should be followed up and documented after each phase.

As required, a copy of the **Project Management Timeline** shall be submitted to



the CHASSIX Buyer and Supplier Quality Representative at requested intervals.



5.4 NON - PRODUCTION TRIAL SAMPLE MATERIAL

Non-production trial samples (i.e. prototype, etc.) shipments shall be identified with the appropriate label and shipped separately from production intent material.

5.5 SPECIAL CHARACTERISTICS

'Special Characteristics' are selected by CHASSIX with the supplier organization through knowledge of product and process and identified as ∇ , ∇ with a circle, \diamond , 'SC' and/or customer specific symbols on the drawing, in the specification or other supplemental documentation. The presence of the 'Special Characteristics' is not intended to reduce the importance of other dimensions and/or characteristics selected by the organization. They shall be included on the PFMEA, Process Control Plan and process instructions unless otherwise agreed upon by the CHASSIX Sourcing Team.

5.6 CONTROL OF DESIGNATED CHARACTERISTICS

Items specified as 'Special Characteristics' require manufacturing control to assure compliance. The control data shall be documented and retained at the organization's facility and shall be available for submission and/or review by CHASSIX Supplier Quality or Plant Quality upon request.

5.6.1 Unless otherwise specified, refer to the latest version of the AIAG PPAP manual for capability levels on designated characteristics at time of PPAP and serial production.

5.7 DOCUMENTARY ITEMS (Ⓢ)

Documentary items are safety items which are identified on the blueprints utilizing the above indicated symbol.

5.8 PRODUCT IDENTIFICATION AND TRACEABILITY

It is expected that the supplier organization insure traceability of their product throughout their processes.

Specific traceability and product identification methods will be established at launch. This traceability shall be connected to the bar code serial number of the shipping containers going to CHASSIX. Lot/heat codes shall not be mixed in the shipping containers except for the beginning and end of a run (max 1 or 2 containers).

In the case CHASSIX needs traceability information, the supplier organization will be expected to supply all pertinent traceability information requested in a very timely manner (see section 9.3).

Note: The supplier organization shall also require their sub-suppliers to have similar traceability requirements.



6.0 PRODUCTION PART APPROVAL PROCESS (PPAP)

6.1 GENERAL

The supplier organization shall submit an initial sample report in accordance with the **AIAG PRODUCTION PART APPROVAL PROCESS (PPAP)** manual, including a CHASSIX prescribed PPAP Checklist provided by the CHASSIX Sourcing Team unless otherwise specified.

6.2 SUBMISSION REQUIREMENTS

The organization shall submit specific PPAP requirements in accordance with the latest revision of the **AIAG PPAP Manual** and the CHASSIX PPAP Checklist.

The organization shall submit PPAPs to the level requirements as stated in the latest revision of the **AIAG PPAP Manual** and the CHASSIX PPAP Checklist. The submission level shall use level 3 as the default for all submissions unless specified otherwise by CHASSIX Supplier Quality or Plant Quality.

CHASSIX specific requirements related to the PPAP and documented in the CHASSIX PPAP Checklist include the following:

6.2.1 MATERIAL SAMPLE QUANTITY

Standard sample quantity for dimensional evaluation shall be three (3) products per cavity, (die, progressive die, etc. if applicable) unless otherwise specified.

6.2.2 STATISTICAL DATA

Supporting statistical data (i.e. SPC, process capability studies, etc.) for a PPAP submission should be taken from the PPAP run or from a 'significant material production run'; defined as at least 300 completed products.

6.2.3 MEASUREMENT RESULTS CORRELATION

All samples shall be sequentially numbered and correlated to the dimensional reports. Blueprints should be numbered in accordance with the latest revision of **ANSI Y 14.5** standards. All results shall be taken from master samples and these samples shall be tagged and retained at the organization's facility unless otherwise directed. Measurement method agreement, if defined, shall be attached to the organization dimensional evaluation report.

6.2.4 VISUAL DISCONTINUITIES

It is the organization's responsibility to attain CHASSIX approval for any visual discontinuities that are not defined on the drawing and not part of good standard manufacturing processes. This approval must be attained prior to shipping any visually sub-standard parts to CHASSIX. It is expected that the organization will attain agreement during the prototype, pre-production and launch phases and be clearly documented in an "evidence book" or similar fashion and signed off by both parties. Any visual discontinuities that are not agreed to prior to receiving will be totally at the discretion of CHASSIX to accept or reject.



6.2.5 CAPACITY VERIFICATION

The capacity for each program is indicated on the RFQ and/or blanket PO. The organization must verify that their process meets or exceeds this capacity and provide written confirmation of the capacity study. Typically, this should be done 8 weeks prior to Chassix production unless otherwise agreed to by Chassix. The organization will schedule the event and notify Chassix Program Manager when this event will take place. Chassix may elect to participate but this event should not be delayed.

6.2.6 PACKAGING AND LABELING REQUIREMENTS

The organization is responsible to assure that only approved packaging is used. The organization shall attain an approval through CHASSIX's assigned Program Manager and the receiving plant Representative.

6.2.7 CUSTOMER SPECIFIC REQUIREMENTS:

The organization shall submit any applicable **AIAG CQI Assessments** for heat treat, plating and coating with the PPAP. Any assessment nonconformances must have an action plan and timing to resolve.

The organization shall submit any applicable customer tagging evidence to show compliance with any customer specific tooling tagging requirements with the PPAP.

Note: Before any PPAP submission, deviations from these requirements shall be agreed upon between the organization and the CHASSIX Sourcing Team.

6.3 IDENTIFICATION

All samples accompanying PPAP submissions shall be identified with the appropriate label on the carton or container. The label shall contain all required information and shipped separately from production material.

6.4 FIRST PRODUCTION SHIPMENT AUTHORIZATION

The organization shall ship production intent material to CHASSIX **only** if the **PPAP** submission has been approved in writing by the CHASSIX Supplier Quality Representative and written notification of approval was received by the organization.

Note: The organization shall not ship production intent material without prior PPAP approval by the CHASSIX Supplier Quality Representative.

6.5 ANNUAL DIMENSIONAL LAYOUT

An annual dimensional layout including all sub-components (once per calendar year) of the supplied material shall be performed by the organization unless otherwise specified by the CHASSIX Sourcing Team.

Questions regarding the annual dimensional layout should be directed to the respective CHASSIX Supplier Quality Representative. The results of the annual dimensional layout shall be documented and maintained at the Organization's site and available upon request.





7.0 PROCESS AUDITS

7.1 GENERAL

The CHASSIX Supplier Quality Representative (directed by the Sourcing Team) shall perform audits of the organization's manufacturing process as deemed necessary.

7.2 AUDIT CONDITIONS

Conditions which warrant audits may include: Quality issues, Engineering changes, Process changes, Plant / location changes (e.g. tool transfer) which require a new **PPAP** submission, Capacity verification.

7.3 AUDIT CRITERIA

The CHASSIX Supplier Quality Representative shall determine the appropriate criteria and communicate this information to the supplier.

8.0 ASSESSMENT OF QUALITY SYSTEMS

8.1 AUTOMOTIVE INDUSTRY QUALITY MANAGEMENT SYSTEM COMPLIANCE

Supplier organizations need to refer to the latest edition of the automotive industry standard with the goal of supplier conformity with this latest publication (i.e. transition from ISO/TS 16949 to **IATF 16949:2016 compliance by 9/14/2018**)

8.2 QUALITY MANAGEMENT SYSTEM ASSESSMENT

An assessment of the organization's quality management system will be determined by the CHASSIX Sourcing Team. Notification will be given to the organization prior to the assessment.

8.3 QUALITY MANAGEMENT SYSTEM RE-ASSESSMENTS

A re-assessment of the organization's quality management system shall be conducted by the CHASSIX Sourcing Team if deemed necessary (i.e. quality issues, engineering changes, certification, etc.).

9.0 QUALITY DATA SUBMISSIONS

9.1 The supplier organization may be required to submit Quality Data (i.e. SPC charts, process monitoring results, material certifications, preventative & predictive maintenance data, etc.) upon request by the CHASSIX Sourcing Team. Original documentation shall be retained at the organization.

9.2 Upon request all raw material suppliers (castings and forgings) shall send material certifications for each shipment/lot of parts to the Quality contact at the CHASSIX receiving plant during serial production. The shipments shall reference the lots (certifications) included with the shipment on the packing slip and traceable to the container bar code serial number.

9.3 The organization shall have lot traceability to each shipping container's bar code serial number unless other arrangements have been made with the Quality



Manager at the receiving plant (see also section 5.8).

10.0 SPECIFICATION / REQUIREMENT CHANGE / DEVIATION REQUESTS

10.1 GENERAL

Requests for deviations (temporary or permanent) to specifications or requirements shall be submitted to the CHASSIX Sourcing Team (which must include CHASSIX Engineering) for approval. The organization shall make no changes until Chassix approval has been granted. This request is to be documented on the **CHASSIX SREA Form PRC-002** (refer to **Appendix B**).

OEM specific change management procedures must be used when applicable (Ford- SREA, FCA – Forever Requirments, GM – Change Management, etc.)

CHASSIX suppliers will be required to document changes on the CHASSIX Supplier Change Request Form found in the Appendix. This form is to be submitted to appropriate CHASSIX representation.

10.2 DEVIATIONS

Note: Deviated product needs CHASSIX approval prior to shipping.

Deviations are time or quantity limited deviations from specifications. These concessions shall be temporary and are not considered permanent. This request is to be documented on the **CHASSIX SREA Form PRC-002** (refer to **Appendix B**).

All deviated parts are to be labeled with a description of the deviation. Prior to shipment, supplier must notify and receive confirmation to ship from the identified CHASSIX Supplier Quality Representative of the deviated shipment.

10.3 PERMANENT CHANGES

Permanent changes, either supplier organization (including sub-suppliers) or CHASSIX initiated, shall be appropriately documented. This request is to be documented on the **CHASSIX SREA Form PRC-002** (refer to **Appendix B**). Permanent changes shall require a new **PPAP** submission as specified by the CHASSIX Sourcing Team (if not specified, submissions shall default to the Level 3).

10.3.1 SUPPLIER (ORGANIZATION) REQUEST FOR ENGINEERING APPROVAL

Supplier organization initiated change requests shall be communicated and documented on the **CHASSIX SREA Form**. The organization shall make no changes until formal CHASSIX approval has been granted in writing.

10.3.2 CHASSIX INITIATED ENGINEERING CHANGES

CHASSIX initiated engineering changes, including all PPAP requirements, shall be communicated to the supplier organization by the CHASSIX Sourcing Team.

10.3.3 GENERAL CHANGE REQUIREMENTS

General changes (i.e. flow charts, control charts, etc.) shall be requested



through the applicable CHASSIX Sourcing Team Representative.

Note: No change to material shall be implemented until all proper authorization has been obtained. This includes PPAP submission requirements as specified by the appropriate CHASSIX Supplier Quality Representative.

11.0 NONCONFORMANCE, CORRECTIVE AND PREVENTIVE ACTIONS

11.1 REQUIREMENTS

When CHASSIX has notified the supplier organization of a 'nonconformance' issue, the organization is responsible for following a robust and methodical Problem Solving Corrective and Preventive Action Process to ensure there is irreversible corrective action implemented in a timely manner. Corrective Actions shall be submitted to the applicable CHASSIX Sourcing Team Representatives (i.e. receiving plant Quality Representative, Purchasing Buyer, and Supplier Quality based on initial correspondence).

12.0 ORGANIZATION QUALITY PERFORMANCE

12.1 GENERAL

12.1.1 It is CHASSIX's expectation that the organization shall meet **100% on-time delivery** as defined by CHASSIX logistics. The organization's PPM target for new business shall be determined during the APQP process. The PPM target for current (existing) programs is generally based on 50% of the actual PPM from the prior year to drive year over year improvement.

12.1.2 The supplier organization's performance shall be assessed by CHASSIX through ongoing supplier monitoring based on criteria outlined in **Appendix C**.

12.2 CRITERIA

Ongoing supplier monitoring may include, but not limited to, the following criteria:

- PPM
- Customer Disruptions at the Receiving Plant, including Yard Holds and Stop Shipments
- Delivery
- Incidents of Premium Freight
- Special Status Customer Notifications related to Quality or Delivery Issues (such as CS1, CS2, 3CPR, etc.)
- Warranty, Dealer Returns, Field Actions and Recalls

12.3 PERFORMANCE RESULTS

Results of ongoing supplier monitoring shall be documented by CHASSIX Quality Representatives and communicated to the supplier organization upon request.

12.4 CORRECTIVE ACTIONS FOR PERFORMANCE RESULTS

If a supplier organization's performance, based on supplier monitoring, is deemed unacceptable by the CHASSIX Sourcing Team, a CHASSIX Supplier Quality Representative shall require corrective actions by the supplier organization. Corrective actions shall be submitted to and approved by the respective CHASSIX Supplier Quality Representative.





13.0 STATISTICAL TECHNIQUES

The supplier organization shall monitor process performance utilizing the appropriate statistical techniques (i.e. First time yield, SPC, etc.) in accordance with the **AIAG Statistical Process Control manual**.

Additional areas in which statistical techniques may be applied are: Predictive maintenance programs, Gage R&R studies, Defect analysis, Continual Improvement Processes.

The results of the statistical techniques shall be documented and retained at the organization's location, and made available upon request by the CHASSIX Sourcing Team.

14.0 ANALYTICAL TECHNIQUES

The supplier organization should utilize analytical techniques to improve their process capabilities and problem resolution. Examples of analytical techniques are: Design of Experiment (DOE), Cause and effect diagram (fishbone), Benchmarking, Shainin (Red X), 3 legged 5 why, etc.

The results of analytical techniques should be documented and retained at the organization's location, and made available upon request by the CHASSIX Sourcing Team.

15.0 MEASUREMENT SYSTEM ANALYSIS (MSA)

The supplier organization shall perform measurement system analysis (frequency to be determined by the organization) in accordance with the **AIAG Measurement System (MSA) manual**. ANOVA is the preferred method of analysis. Other analytical methods and acceptance criteria may be implemented with approval by the CHASSIX Supplier Quality Representative. Results of **MSA** analysis shall be documented and retained at the organization's location, and made available upon request by the CHASSIX Sourcing Team.

16.0 ERROR PROOFING

The supplier organization shall utilize error proofing in accordance with automotive industry guidelines specified in IATF 16949 Clause 10.2.4 by utilizing a documented process and detailing the method through a process risk analysis (such as PFMEA) and test frequencies determined in the control plan. Testing of error-proofing devices for failure or simulated failure and associated records shall be documented and retained at the organization's location, and made available upon request by the CHASSIX Sourcing Team.

17.0 MAINTENANCE

The supplier organization shall develop, implement, and maintain a documented total productive maintenance system as outlined in the automotive industry standard IATF 16949 Clause 8.5.1.5. The organization shall document and maintain this program/system and associated records shall be retained at the organization's location, and made available upon request by the CHASSIX Sourcing Team.

18.0 CONTINUAL IMPROVEMENT PROCESS



The supplier organization shall have a documented process for continual improvement efforts throughout their entire organization as prescribed in the IATF 16949 standard. Results of the **Continual Improvement Process** shall be documented and retained at the organization's location, and made available upon request by the CHASSIX Sourcing Team.

19.0 APPENDICES

19.1 APPENDIX A

Advanced Product Quality Planning Status Report				Date:			
				Review No.:			
Supplier				Program:			
Location				Model Year:			
Supplier Code				Lead Part No:			
Risk Assessment				Part Name:			
New:	Site <input type="checkbox"/>	Technology <input type="checkbox"/>	Process <input type="checkbox"/>	Eng. Level:			
Other Risks				User Plant(s):			
Team Members		Company/Title			Phone/Fax		
APQP Elements	GYR Status	Program Need Date	Supplier Timing Date	Closed Date	Champion Initials	Remarks or Assistance Required	
1) Sourcing Decision							
2) Customer Input Requirements							
3) Design FMEA							
4) Design Review(s)							
5) Design Verification Plan							
6) Subcontractor APQP Status							
7) Facilities, Tools and Gages							
8) Prototype Build Control Plan							
9) Prototype Builds							
10) Drawings and Specifications							
11) Team Feasibility Commitment							
12) Manufacturing Process Flow Chart							
13) Process FMEA							
14) Measurement Systems Evaluation							
15) Pre-Launch Control Plan							
16) Operator Process Instructions							
17) Packaging Specifications							
18) Production Control Plan							
19) Production Trial Run							
20) Preliminary Process Capability Study							
21) Production Validation Testing							
22) Production Part Approval (PSW)							
23) PSW Part Delivery at MRD							
COMMENTS							



19.2 APPENDIX B

<h2 style="margin: 0;">Supplier Change Request Form</h2> <p style="margin: 0;">for Chassix Purchasing / Supplier Quality / Engineering / Plant Approval</p>				
Supplier - Basic Information				
Supplier Name:	Program Name:			
Supplier Address:	Part Name:			
	Part Number(s):			
Supplier - Sales Contact				
Name:	Supplier - Engineering Contact			
Phone:	Name:			
E-Mail:	Phone:			
Fax:	E-Mail:			
	Fax:			
Supplier - Description of Requested Change				
<input type="checkbox"/> Design <input type="checkbox"/> Process <input type="checkbox"/> Material <input type="checkbox"/> Heat Treat <input type="checkbox"/> Supplier <input type="checkbox"/> Site <input type="checkbox"/> Other				
Supplier - Reason for Change				
Supplier - Change Implementation Documents				
	YES	NO	N/A	
DVPSR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Supplier - Authorized Signature:
DFMEA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
PFMEA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Authorized - Name & Title (print):
Process Flow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Phone:
Control Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Date:
Bank / Inventory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Chassix - Approval / Rejection Section				
<input type="checkbox"/> Approved <input type="checkbox"/> Rejected (see comments)		<input type="checkbox"/> Re-submit (see comments)		<input type="checkbox"/> Sign-off Complete
Purchasing / Supplier Quality Comments:				
Chassix - Authorized Signature:			Phone:	
Authorized - Name & Title (print):			Date:	
Engineering / Plant Comments:				
Chassix - Authorized Signature:			Phone:	
Authorized - Name & Title (print):			Date:	

FRC-002 rev 5/4/17



19.3 APPENDIX C

Category	New Criteria	New Max Points																																
PPM	<table border="1"> <thead> <tr> <th colspan="2">General PPM</th> <th colspan="2">Cast/Forging PPM</th> </tr> </thead> <tbody> <tr> <td>0-25</td> <td>30</td> <td>0-500</td> <td>30</td> </tr> <tr> <td>26-100</td> <td>25</td> <td>501-1000</td> <td>25</td> </tr> <tr> <td>101-200</td> <td>20</td> <td>1001-2000</td> <td>20</td> </tr> <tr> <td>201-500</td> <td>15</td> <td>2001-3000</td> <td>15</td> </tr> <tr> <td>501-1000</td> <td>10</td> <td>3001-4000</td> <td>10</td> </tr> <tr> <td>1001-1500</td> <td>5</td> <td>4001-5000</td> <td>5</td> </tr> <tr> <td>>1500</td> <td>0</td> <td>>5000</td> <td>0</td> </tr> </tbody> </table>	General PPM		Cast/Forging PPM		0-25	30	0-500	30	26-100	25	501-1000	25	101-200	20	1001-2000	20	201-500	15	2001-3000	15	501-1000	10	3001-4000	10	1001-1500	5	4001-5000	5	>1500	0	>5000	0	30
General PPM		Cast/Forging PPM																																
0-25	30	0-500	30																															
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1001-1500	5	4001-5000	5																															
>1500	0	>5000	0																															
Customer Disruptions at the Receiving Plant, including Yard Holds and Stop Shipments	<p>0 = 20 points 1 or more = 0 points</p>	20																																
Delivery	<table border="1"> <thead> <tr> <th colspan="2">On Time Delivery</th> </tr> </thead> <tbody> <tr> <td>100%</td> <td>20</td> </tr> <tr> <td>95-99%</td> <td>15</td> </tr> <tr> <td>90-94%</td> <td>10</td> </tr> <tr> <td>85-89%</td> <td>5</td> </tr> <tr> <td><85%</td> <td>0</td> </tr> </tbody> </table>	On Time Delivery		100%	20	95-99%	15	90-94%	10	85-89%	5	<85%	0	20																				
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100%	20																																	
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Incidents of Premium Freight	<p>0 = 10 points 1 or more = 0 points</p>	10																																
Special Status Customer Notifications related to Quality or Delivery Issues (such as CS1, CS2, 3CPR, etc.)	<p>0 = 10 points 1 or more = 0 points</p>	10																																
Warranty, Dealer Returns, Field Actions and Recalls	<p>No issues - target met = 10 warranty over target with no field actions/recalls = 5 1 or more field actions/recalls = 0</p>	10																																



20.0 REVISION LOG

Revision Date	Revision Detail	Author
2014 (9/22/14)	Initial Release	Tom Paulan
2017 (6/26/17)	Updates for IATF Transition, including new supplier change request form and new supplier monitoring criteria	Chassix Team, changes made by Elizabeth Maze-Emery