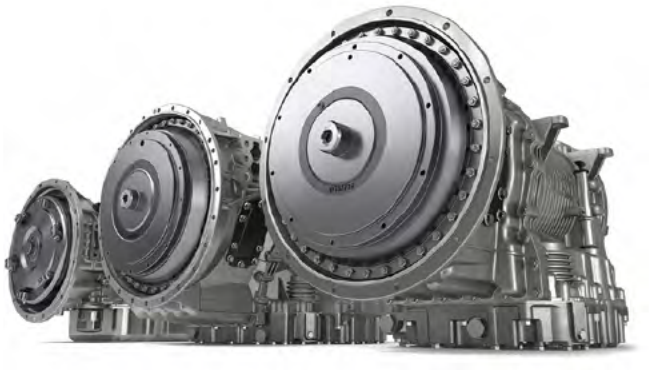
Fourth Edition | November 2022

Global Supplier Quality Manual



Allison Transmission

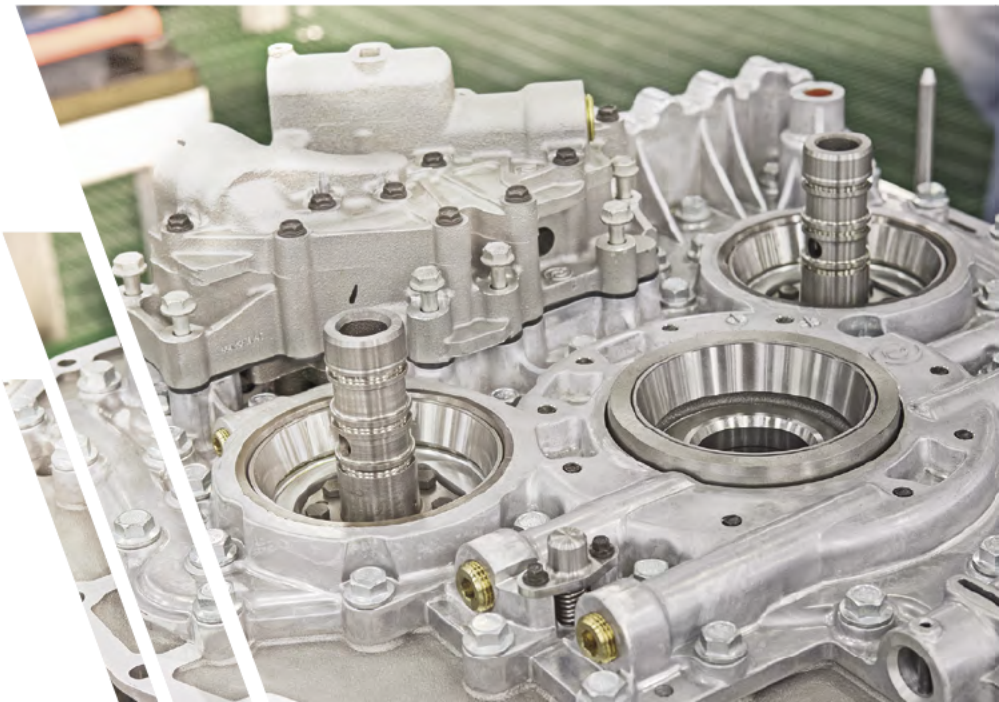
Allison Transmission is the world's largest manufacturer of commercial-duty automatic transmissions and a leader in electric hybrid propulsion systems. Our brand promise is to provide the most reliable and valued propulsion solutions in the world to enable our customers to work more efficiently. In support of our promise, we team with suppliers to provide high-quality products and services for our customers.

The purpose of this manual is to describe the process and requirements of suppliers doing business with Allison Transmission. This manual and Allison engineering design records detail customer-specific requirements referenced in ISO-9001/IATF16949.

As a supplier to Allison Transmission, your commitment to meeting these requirements is vital to the continued growth and success of our mutually beneficial relationship.

Sincerely,

\Christopher McCleland
Executive Director, Supplier Quality and Development



The **Allison Promise**

Provide the most reliable and valued propulsion solutions in the world to enable our customers to work more efficiently.

Quality
Customer Focus
Integrity
Innovation
Teamwork

The **Allison Vision**

Be the global leader in commercial-duty propulsion solutions that improve the way the world works.

The **Allison Quality Policy**

Allison Transmission is committed to high-quality products and services that generate customer enthusiasm. This goal will be achieved by executing and continuously improving the Allison Quality Management System in support of the Allison Promise.

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1. Scope

The Global Supplier Quality Manual applies to direct material suppliers to Allison Transmission, Inc. (Allison).

Supplier responsibilities are defined in the Allison general terms and conditions and in this supplier quality manual.

In the event requirements stated in this Supplier Quality Manual conflict with Allison's General Terms And Conditions, the General Terms And Conditions will take precedence.

2. Quality Systems Requirements

Unless exempted by Allison, all providers of on-highway products and services directly to Allison Transmission must be certified to IATF16949. Suppliers of off-highway, service only and regional value-added services (VAS) parts shall be certified to at least ISO-9001. Suppliers shall submit a copy of their Quality Management Systems certification to Allison at certsandreps@allisontransmission.com.

Allison Transmission utilizes Quality Issue Management (QIM) as the system to support many of its supplier quality related processes. All direct material suppliers to Allison shall maintain a registration profile to QIM. Instructions for registration are located on the Supplier Forms section at www.allisontransmission.com.

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3. Forms And References

AIAG Manuals

Note: *Automotive Industry Action Group (AIAG) documents can be obtained by contacting AIAG. Documents can be ordered at* ***aiag.org.***

- Advanced Product Quality Planning & Control Plan (APQP) Reference Manual
- FMEA Handbook (AIAG & VDA)
- Fundamental Statistical Process Control (SPC) Reference Manual
- Measurement Systems Analysis (MSA) Reference Manual
- Production Part Approval Process (PPAP) Manual

Allison-specific forms/procedures can be obtained at **allisontransmission.com** under the supplier forms link.

Pre-Production/Prototype Forms

AT-1820	GP-11 Pre-Production/Prototype Procedure
AT-1826-1	GP-11 Supplier Warrant Of Material
AT-1827	GP-11 Pre-Production Prototype Container Label
AT-1828	GP-11 Pre-Production Prototype Part Tag

Supplier Quality Forms

AT-1411	Interim PPAP Form
AT-1927-02	APQP Timing Chart
AT-1927-05	Open Issues Template
AT-1927-13	Tech Review Checklist
AT-1927-14	Kickoff Meeting Checklist
AT-1927-16	Process Control Plan Audit
AT-1927-19	Manufacturing Feasibility Letter
AT-1927-30	Supplier Product Change Evaluation
AT-1927-66	I-Chart
AT-1927-85	Impregnation Audit Procedure

AT-1927-86	Heat Treat Approval Procedure
AT-1927-87	Allison Heat Treat Supplier Approved List
AT-1927-88	Heat Treat Certification Addendum
AT-1960-C3	Run At Rate Worksheets
AT-1804/1810	Supplier Piece Cost Breakdown Worksheet And Production Tooling Cost Line Up
AT-101522	QMS (Quality Management System) Waiver Form
AT-101659	IMDS Requirements

Transportation and Packaging

AT-0048	Production Trial Run (PTR) Label
AT-1387	PPAP Part Sample
AT-1700	Allison Packaging And Identification Requirements
AT-1703	Container Assumption
AT-1724	Shipping Parts ID Label Standard
AT-101658	Deviated Part Tag
AT-101106	Allison Transportation Routings (secured form; reference section 10.3)
AT-101370	Returnable Container – Dunnage Request

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4. Acronyms And Definitions

AGSQ	Allison Global Supplier Quality
AIAG	Automotive Industries Action Group (Organization formed by General Motors, Ford and Daimler-Chrysler to develop common standards and expectations for automotive suppliers)
APQP	Advanced Product Quality Planning
ASN	Advanced Shipping Notice
CI	Continuous Improvement OR Customer Impact
CIC	Customer Impact Characteristic
CM	Commodity Manager
CMM	Coordinate Measuring Machine
CP	Control Plan
CQI	Continuous Quality Improvement (AIAG-based forms for best practices)
CS1	Controlled Shipping Level One
CS2	Controlled Shipping Level Two
CV	Concept Validation
DEV	Deviation
DFMEA	Design Failure Modes And Effects Analysis
DFSS	Design For Six Sigma
DMR	Defective Material Return
DOE	Design Of Experiments
DR	Documentation Required Characteristic
DV	Design Validation
DVP&R	Design, Verification, Plan And Report
EAU	Estimated Annual Usage
EDI	Electronic Data Interchange
FMEA	Failure Modes And Effects Analysis
FV	Factory Validation
GD&T	Geometric Dimensioning And Tolerancing
GP	General Procedure
GSC	Global Supply Chain
JIT	Just In Time
KPC	Key Product Characteristic
LCL	Lower Control Limit
LCR	Lean Capacity Rate (Allison daily capacity requirement)
LSL	Lower Specification Limit
MCR	Maximum Capacity Rate (Allison maximum capacity requirement)
MRD	Material Required Date

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MSA	Measurement Systems Analysis
NBH	New Business Hold
OS	Opportunity Scenario
PCP	Process Control Plan
PCPA	Process Control Plan Audit
PDC	Process Dependent Characteristic
PFEP	Plan For Every Part
PFMEA	Process Failure Modes And Effects Analysis
PLT	Product Line Team
POCE	Process Of Concurrent Engineering
PPAP	Production Part Approval Process
PPM	Parts Per Million
PQC	Product Quality Characteristic
PSA	Potential Supplier Assessment
PSC	Process Significant Characteristic
PTC	Pass Through Characteristic
PTR	Production Trial Run
PV	Process Validation
QIM	Quality Issue Management
QMS	Quality Management System
R@R	Run At Rate
RFQ	Request For Quotation
RMA	Return Material Authorization
RPN	Risk Priority Number
SC	Standard Care Characteristic
SCoC	Supplier Code of Conduct
SCR	Supplier Capacity Rate
SPCE	Supplier Product Change Evaluation
SQ	Supplier Quality
SQE	Supplier Quality Engineer
TES	Transmission Engineering Specification
TIS	Transmission Inspection Specification
TMS	Transmission Material Specification
TPS	Transmission Process Specification
UCL	Upper Control Limit
USL	Upper Specification Limit

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5. Sourcing Process

There are three components of the sourcing process that are performed prior to the final sourcing decision and are critical to ensuring as-delivered part quality. These process steps are executed with cross-functional Allison teams.

5.1. Potential Supplier Assessment (PSA)

The PSA is an audit conducted at the potential supplier's facility by cross-functional Allison representatives and is utilized prior to the final sourcing decision. The PSA ensures Allison has confidence that the potential supplier has the facilities, personnel, equipment and quality management systems to supply parts to Allison's standards. The Supplier Quality Engineer (SQE) will notify the potential supplier that a PSA will be conducted. Allison will perform the on-site assessment, summarize assessment results and submit to the Commodity Manager (CM) and Supplier Quality Manager.

5.2. Best Practices

If an Allison Best Practice exists for the commodity, the supplier's proposed process must be reviewed for conformance. The supplier shall complete the Best Practice record and submit it to the SQE. Best practice reviews shall be completed prior to sourcing.

If the tier one or sub-tier suppliers will utilize a process that is covered by an AIAG CQI, the supplier shall perform a self-assessment to the appropriate CQI and provide those results to their SQE contact.

The following CQIs are currently available at AIAG.org:

- CQI-9 Heat Treat Assessment
- CQI-11 Plating System Assessment
- CQI-12 Coating System Assessment
- CQI-15 Welding System Assessment
- CQI-17 Soldering System Assessment
- CQI-19 Sub-Tier Management
- CQI-20 Effective Problem Solving Guide
- CQI-23 Molding System Assessment
- CQI-27 Casting System Assessment

5.3. Technical Review

The Technical Review is a meeting attended by the supplier and various cross-functional Allison representatives. The purpose of the meeting is to ensure all requirements in the request for quote (RFQ) package have been understood, and the supplier has potential to produce parts meeting Allison requirements (any item related to the manufacturability of the part, including timing, design, manufacturing capability, packaging, etc.).

The CM invites potential suppliers to Technical Review meetings. Technical Review meetings will typically include multiple Allison functions, including but not limited to: Purchasing, Supplier Quality (SQ), GSC, Manufacturing Engineering and Product Engineering.

The supplier should address topics related to timing, design capability (if applicable), manufacturability of the part as designed, traceability, validation, quality processes, capacity, packaging and transportation (Reference AT-1927-13). The required documentation shall include a completed copy of the Allison Transmission commodity-specific best practices acknowledgment.

Open issues as a result of the Technical Review should be captured on form AT-1927-05, or equivalent.

6. Quality Planning

6.1. Advanced Product Quality Planning (APQP)

Suppliers must use an Advanced Product Quality Planning Process that follows AIAG standards and ensures production readiness with parts that meet all of the product's specifications.

Allison uses the AIAG APQP manual as its primary guidance to its suppliers. In some areas in which Allison has additional requirements, Allison supplements the AIAG manual with additional tasks, procedures and forms as detailed in Table One. Tasks are detailed within this manual. General Procedures (GPs) and forms may be found at **allisontransmission.com.**

Table One: Allison Supplement to AIAG APQP Requirements

	APQP Activity	AIAG Process?	Allison Addition/ Requirements	Specific Allison Form
1	Technical Reviews	No	Section 5.3	AT-1927-13
2	Purchasing APQP Assessment & Sourcing	No	Section 5.1, 5.3	
3	Timing Charts/Open Issues	Yes	Section 5.1, 5.3	AT-1927-02 AT-1927-05
4	Feasibility & Manufacturing Assessment Letters	Yes	No	AT-1927-19
5	Flow Chart	Yes	No	No
6	DFMEA (Supplier Design Responsible)	Yes	No	No
7	Gage, Tool And Equipment Review	Yes	No	No
8	Pre-Production/Prototype (GP-11)	Yes	Section 6.3	AT-1826-1 AT-1827 AT-1828
9	PFMEA	Yes	Section 6.8	No
10	Process Control Plan	Yes	Section 6.9.6	No
11	Early Production Containment (GP-12)	No	Section 6.16	No
12	PPAP	Yes	Section 6.4	AT-1387 AT-101249 TMS-70007 AT-1411
13	Run At Rate	No	Section 6.18	AT-1960-C2C3
14	Production Trial Run	No	Section 6.15	AT-0048

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During the APQP process, the supplier should:

- Create and maintain an APQP Timing Chart and APQP Open Issues List
    - Each APQP Timing chart must include key program deliverables and payment milestones.
- Maintain detailed planning to complete each program timing event on schedule
- Develop recovery plans on issues impacting timing and drive the plan to stay on time for the program
- Identify and communicate any changes to SQE; supplier must utilize APQP Open Issues List to capture all issues, including lessons learned
- Identify and communicate key timing and program issues with PPM and SQE

The intent of the APQP Timing Chart and the APQP Open Issues List is to provide an example of how this information can be documented. An alternate format may be used as long as it contains the same information, as a minimum.

6.2. Design Verification, Plan And Report (DVP&R)

If a DVP&R or validation plan is required either at the supplier location or at Allison, those requirements will be communicated to the supplier representative.

6.3. GP-11 Pre-Production And Prototype Parts

To support design verification, planning and reporting, the supplier may be asked to provide prototype or pre-production parts. Allison's definition of pre-production or prototype parts are those parts that have not been PPAP approved. Procedure AT-1820 is located on **allisontransmission.com** under the supplier forms link and describes the requirements for pre-production or prototype parts.

The supplier shall develop a pre-production or prototype control plan to ensure parts are manufactured that meet the design record.

All pre-production or prototype parts containers shall be identified with labels AT-1827, and parts shall be tagged with AT-1828.

6.4. Production Part Approval Process (PPAP)

The purpose of production part approval is to determine if all Allison engineering design record and specification requirements are properly understood by the supplier and that the process has the potential to produce product meeting these requirements during an actual production run at the quoted production rate.

Suppliers are not approved to ship production material to Allison or its affiliates without at least an interim PPAP approval.

The supplier representative should work with their Allison SQE to determine the PPAP level of submission. Records to be submitted or retained by the supplier are defined by the submission level and the AIAG PPAP manual.

Note: *The supplier shall initiate a PPAP discussion with their SQE for any of the circumstances listed in the AIAG PPAP manual, Section 3.*

During PPAP, a bubbled print will be required with the dimensions identified that are affected by the reason for the PPAP. For new part PPAPs, all dimensions should be identified with a unique number on the bubbled print. This print shall be used to provide (1) dimensions results, and (2) a control plan that references each of the bubbled dimensions/requirements on the blueprint.

If the PPAP is not fully approved, it is the supplier's responsibility to submit interim PPAP form AT-1411 to their SQE.

Allison utilizes an electronic PPAP submission system. The supplier representative shall obtain a registered user ID and password and utilize the electronic system for all PPAP activity.

6.5. Master Part Samples

The supplier shall retain a master sample for the same period of time as the PPAP records, or until a new master sample is produced for the same part number for new approval.

The master sample shall be identified as such and shall show the customer approval date on the sample.

The supplier shall retain a master sample for each position of a multi-cavity die, mold, tool or pattern.

When the part size or production volume makes storage of a master sample difficult, the retention requirements may be modified or waived by the Allison SQE.

6.6. Casting/Forging Layout/Scan Requirements

Suppliers shall document the frequency of each casting/ forging layout or laser scan on each production tool cavity in their control plan. If the casting/forging is provided by a sub-tier supplier, the tier one supplier to Allison is responsible for ensuring the layout/scan is performed by the sub-tier supplier. The results of the layout at the supplier or its sub-tier suppliers shall be provided to Allison upon request.

Other circumstances that would require at least a partial casting layout or laser scan include:

- Design changes
- Tool repair/replacement

6.7. Design Failure Modes And Effects Analysis (DFMEA)

If the supplier is design responsible, they shall utilize the DFMEA process. Documentation of the supplier DFMEA will be a required input for PPAP approval.

Reference the AIAG & VDA FMEA Handbook for methods of prioritizing the reduction of risk and assigning the Risk Priority Number (RPN).

6.8. Process Failure Modes And Effects Analysis (PFMEA)

As a tool in risk evaluation, PFMEA is considered to be a method to identify severity of potential effects of failure and to provide an input for mitigating measures to reduce risk.

Reference the AIAG & VDA FMEA Handbook for methods of prioritizing the reduction of risk and assigning the Risk Priority Number (RPN).

PFMEAs shall be developed for all process steps identified in the process flow, from receiving to final shipment.

6.9. Special Characteristics

Special Characteristics are the features or properties of a part, component or assembly described on engineering part drawings, in engineering specifications or in other primary engineering information that are likely to affect product quality, reliability, form, fit, function or customer satisfaction.

6.9.1. Customer Impact (CI) ●

Any characteristic identified by the customer as critical to their process or application is a Customer Impact feature. These features are normally associated with vehicle assembly compatibility features. Characteristic must be within the tolerance, and immediate dissatisfaction will occur if parts are outside the tolerance.

6.9.2. Product Quality Characteristic (PQC) PQC

A characteristic where the reasonably anticipated variation within specification (target or tolerance) is likely to significantly affect safety, compliance with government regulations, fit, function or customer satisfaction.

The supplier must show continuous improvement until process capability meets standards defined below.

Note: *Older engineering drawings may identify special characteristic types: ◇ KPC (fit/function), KCC Key Control Characteristics or (S) TES 170 (critical features). The engineering drawings will be updated over time to change these to PQCs. During the transition, these characteristics shall be held to the requirements for PQCs outlined in this document.*

6.9.3. Process Dependent Characteristic (PDC) ◆

Process Dependent Characteristics cannot be defined physically (or are not readily measurable in a non-destructive manner) and are a function of the process. The intent of this designation is NOT to drive specific capability or documentation requirements, but rather to ensure that the manufacturing process that generates certain features is not changed without notification and approval from Product Engineering.

These features are designated by a black diamond, and an explanation will be documented on the drawing. Examples: “Must hob and shave,” “Must grind,” etc. Note that defining a specific process on an engineering drawing should be the exception rather than the rule, and should only be implemented where testing has shown that one process provides clearly better performance.

6.9.4. Process Significant Characteristic (PSC) ■

Process Significant Characteristics are the part features or process parameters which are known to have a significant impact on subsequent manufacturing operations and where reduced variation or targeting will provide needed improvement in the capability of subsequent operations.

6.9.5. Documentation Required Characteristics (DRC) (DR)

This characteristic designation appears on some Allison engineering drawings for parts that are unique to General Motors. This designation is not recognized in Allison process documentation or control plans, and characteristics identified with the symbol on engineering drawings will be treated as Standard Care Characteristics (unless deemed "Special" for some other reason).

Note: All part features not identified as "Special Characteristics" or "Process Dependent Characteristics" are Standard Care Characteristics. This category represents most part features.

6.9.6. Capability And Monitoring Requirements

6.9.6.1 For Standard Care Characteristics

Capability requirements at PPAP for Standard Care Characteristics will be determined by the SQE. There are no requirements for ongoing capability monitoring on Standard Care Characteristics.

6.9.6.2 For Special Characteristics

All Special Characteristics shall be identified in the control plan with the appropriate symbol placed adjacent to the characteristic on the verbiage sheet. See the definitions above for the appropriate symbols.

Special Characteristics must be specifically referenced in the PFMEA.

The supplier shall apply appropriate defect prevention and detection techniques to Special Characteristics to ensure that variation is maintained or minimized around the target value. Typically, this will be accomplished with a variable gage. Attribute gaging is acceptable, but should be used with "safe limits" (80% gages) where practical.

A quality record is required for Special Characteristics. A quality record may be a variable control chart or attribute check sheet.

Note: *Characteristics inspected with a 100% post process gage with data storage of results do not require an additional quality record. Mastering of the post process gage at least once per shift should be defined in the control plan.*

Special Characteristics shall be held to the following capability standards (for characteristics inspected with variable gaging):

- Cpk and Ppk (or Cp,Pp if centering is not desired): 1.67 at PPAP
- Cpk and Ppk (or Cp,Pp if centering is not desired): 1.33 Ongoing

Capability studies will include at least 30 pieces, either from a consecutive run or at the gaging frequency in the control plan.

Note: *Reference Statistical Process Control from AIAG for a discussion of Ppk and Pp calculations and definitions. Also, note the discussion of the use of these indices for unilateral tolerances. Special Characteristics shall be held to 100% pass for attribute gaging.*

If during Product/Process development you believe there will be difficulty meeting the above capability, you MUST immediately notify your SQE and develop a plan to assure compliance or obtain formal written approval to deviate from the capability requirements.

6.10. Pass Through Characteristics (PTC)

A Pass Through Characteristic is a part feature that is manufactured by a supplier to Allison and will "pass through" Allison's manufacturing and assembly process unverified. Pass Through Characteristics that are customer interface features shall be error-proofed or 100% inspected by the supplier. PTCs shall be identified during the Technical Review process.

6.11. Measurement System Analysis (MSA)

All families of gages referenced on the supplier's process control plan shall be verified with an MSA utilizing the AIAG MSA manual as guidance. MSA for gages on the supplier's control plan will be reviewed by the SQE during the PPAP.

6.12. Tooling, Gages And Fixturing

The SQE may request a review of gage designs prior to the start of construction. Gage designs shall incorporate approved Geometric Dimensioning And Tolerancing (GD&T) datum schemes.

Gage designs for attribute gages used to monitor Special Characteristics should, where practical, be designed to a maximum 80% tolerance.

Functional testing and final inspection shall ensure product performs as designed under actual vehicle conditions or as performance is defined on the Allison design record (blueprint).

6.13. Error Proofing

Suppliers shall implement error-proofing strategies for the control of materials, processes and labeling for all products provided to Allison. Suppliers shall implement error-proofing techniques to ensure mistakes are detected and corrected before becoming a defect (i.e. make it impossible to produce defective items even if an error occurs). Error-proofing requirements will be discussed at the pre-tech review, tech review and continued through APQP.

All error-proofing devices at the supplier shall have masters that the supplier utilizes at an appropriate frequency to ensure the error-proofing device is functioning properly. Error-proof verification checks with these masters shall be documented on a quality record by the supplier.

6.14. Product Identification And Traceability

A traceability scheme shall be developed. This scheme may include manufacturing date code, lot control and part serialization. Items to be traced shall be determined during the APQP process and may also be identified on the component or assembly design record.

Product shall be identified at appropriate steps during the supplier's manufacturing and assembly process and shall minimize the risk of mixed material.

The supplier shall identify all suspect material either by dedicated location or with identification tags. Rejected material shall be identified, and a method should be utilized to ensure the rejected material cannot be reintroduced into the manufacturing or assembly processes.

6.15. Production Trial Runs (PTRs)

The purpose of the PTR is to determine if there is an unintended logistics, machining or assembly impact caused by the item which has just been PPAP approved. The PTR is not an evaluation of the supplier's manufacturing process and/or its ability to capably produce parts within acceptable print tolerances (this is what the PPAP is evaluating).

If a PTR is rejected and it is found to be due to features or variation outside of acceptable print tolerances, the following consequences may occur:

- Issuance of an Allison 8D
- Revocation of PPAP approval
- CS1 or CS2

The supplier is notified by Allison of the PTR requirement, quantity and timing. The supplier prepares and ships required quantity and labels according to AT-0048.

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6.16. GP-12 Early Containment

GP-12 Early Production Containment requires a pre-launch control plan that represents increased inspection frequencies and redundant checks for targeted features compared to the supplier's production control plan and raises the confidence level to ensure all products shipped will meet Allison's requirements. The pre-launch control plan will also serve to validate the production control plan. The pre-launch control plan should take into consideration all known critical conditions of the part as well as potential areas of concern identified during PPAP. The purpose of GP-12 early containment is to:

- Validate the supplier's production control plan
- Protect Allison's assembly and manufacturing centers and service part warehouses from quality non-conformances
- Ensure any quality issues that may arise are quickly identified, contained and corrected at the supplier's location
- Increase involvement and visibility of the supplier's top management

The supplier shall work with the Allison SQE to define the duration of the GP-12 containment and the characteristics that will be inspected. The GP-12 plan shall be documented in the Allison Transmission quality system.The supplier shall designate a separate area in their facilities for the GP-12 containment activity.

6.16.1. GP-12 Plan Development

The supplier shall establish a GP-12 plan that contains the following elements:

- Identification of the staff person responsible for ensuring the development and implementation of the verification process
- GP-12 entry date, exit criteria and exit date as defined by Allison
- Containment stations which must be off-line; separate and independent checks from the normal manufacturing process and should be located at end of process. In-process containment stations may be utilized and must be documented and approved by the Allison SQE
- Additional inspections, testing and dimensional checks required at the GP-12 containment station based on Special Characteristics, critical measurement points, high RPN or issues identified during product and process development
- Trained personnel relative to the standardized work performed at the GP-12 containment stations
- An audit process of the GP-12 containment utilizing levels of management (layered audit), including site leadership, to ensure conformance to the pre-launch control plan

- The subcontractor (tier two) shall be included in the validation process
- Data submission to the Allison SQE for all Special Characteristics and critical measurement points
- An overall visual inspection of the part for gross manufacturing defects and general workmanship (e.g., surface defects, cast defects, discoloration, omitted part features, etc.)
- Increased frequency of sample size from that stated in the production control plan
- Verification of packaging and label requirements, including service and accessory part requirements, which may include country of origin labels on parts
- Verification of the effectiveness of error proofing
- Immediate implementation of containment and irreversible corrective action when a single non-conformance is discovered in the GP-12 containment area or at the receiving location

6.16.2. GP-12 Required Documentation

The supplier shall document:

- The pre-launch control plan using the control plan format referenced in the AIAG APQP reference manual. The pre-launch control plan is not a substitute for the production control plan but is an addition to the production control plan and is used to validate it.
- Inspection work instruction for the GP-12 containment station to ensure standardized work
- Evidence of execution and validation of the control plan utilizing the I-chart (AT-1927-66) or other format agreed upon by the Allison SQE. The SQE shall determine and communicate the required reporting frequency for the I-chart data. The data must be readily available at any time for review upon the SQE request.

6.16.3. Duration of GP-12

GP-12 must be implemented for a period of time or quantity of parts as agreed by the Allison SQE. At a minimum, GP-12 will remain in effect as follows:

- 30 days for the on-highway product lines
- The next two (2) production runs for all other product lines, as well as all service parts

GP-12 inspection is mandatory for 100% of all parts required during the GP-12 period. Based on documented acceptable performance, which includes no issues identified at GP-12 or at Allison, the Allison SQE may approve a reduction of the 100% inspection requirements after manufacturing validation builds at Allison. This must be documented and approved by the Allison SQE.

6.16.4. GP-12 Identification

To indicate compliance with the GP-12 requirements, attach to each shipping label a green circular sticker, approximately 25mm in diameter, signed or initialed by the staff person accountable for ensuring proper implementation of GP-12.

6.16.5. GP-12 Exit Criteria

The supplier will be eligible to exit GP-12 after validating the effectiveness of the Process Control Plan and shipping the number of pieces required to meet production requirements as specified by Allison for the GP-12 period with no problems identified in the GP-12 or at Allison. If the supplier is unable to meet the exit criteria or the supplier's GP-12 plan continues to identify non-conformances, the supplier shall continue the necessary containment measures to insulate Allison until the quality concerns have been resolved to the satisfaction of both the supplier and Allison, and the supplier's production control plan is validated.

If a problem is identified in GP-12 or at Allison, the duration restarts after corrective action is implemented, and GP-12 must remain in effect for the specified amount of time as originally designated. If the GP-12 plan continues to identify non-conformances, it must be kept in place until process controls and capabilities have proven effective, and the production control plan is validated.

Final exit of GP-12 will be completed by written acceptance of the final submission of the I-chart (AT-1927-66) or other document originally agreed upon by the Allison SQE.

6.16.6. GP-12 Consequences Of Shipping Non-Conforming Material:

Failure to execute GP-12 or shipment of non-conforming material during GP-12 may result in Controlled Shipping Level 2 (CS2) and other possible consequences.

6.17. Layered Audits

A documented layered audit plan shall exist. Non-conformities shall be addressed immediately, and corrective action shall be documented. The audit plan shall include multiple levels of management. Site leadership shall verify compliance to the documented plan.

6.18. Run At Rate

The purpose of the Run At Rate is to verify that a supplier's manufacturing process:

- Is capable of producing quality components, systems or modules, as stated in the contract
- Includes adequate tooling and is capable of producing the daily contracted production rate in one production day (including scrap and unplanned downtime)

A Run At Rate may be requested in the following cases:

- Production of new components/systems or modules
- Change in existing capacity on previously contracted volume
- Tool and equipment moves to new locations
- Changes to existing processes where capacity of the system could be affected

6.18.1. Duration Of Run At Rate

The duration of the Run At Rate will be sufficient to verify that the process can meet the contracted production rate. The default length of the Run At Rate will be equal to the supplier's standard daily work hours. However, the Allison SQE may deviate from the default duration after taking into consideration the following factors:

- Product complexity
- Shelf life
- Storage and packaging
- Cost
- Production day length

6.18.2. Timing Of Run At Rate

The Run At Rate should be performed after the supplier has attained a PPAP status of "Full" or "Interim" and will be scheduled by the Allison SQE.

6.18.3. Supplier Preparation For Run At Rate

To ensure readiness before the formal Run At Rate is performed, it is recommended that the supplier conduct a practice Run At Rate and communicate the results to the Allison SQE. The supplier shall submit to Allison upon request:

- AT-1810 (Production Tooling Costs)
- Process Flow Diagram reflecting all internal assembly and sub component lines
- AT-1960-C3 (Run At Rate Worksheets)

EAR/ITAR part-related Run At Rate documentation shall be retained by the supplier.

6.18.4. Required Run At Rate Participation And Coverage

Supplier Monitored

The lead supplier representative is responsible for ensuring that the Run At Rate is performed as detailed in this requirement. The lead supplier representative or their designee must be present during the entire Run At Rate.

Within 24 hours of completing the formal Run At Rate, the supplier must complete the Run At Rate Worksheets (AT-1960-C3) and forward them to the Allison SQE.

Customer Monitored

Unless agreed to in advance by the Allison SQE, a representative from Allison is to be present for the entire Run At Rate.

Equipment suppliers or subcontractors may be asked to participate in either Customer or Supplier Monitored Run At Rates.

The supplier will not be deemed ready for a Customer Monitored Run At Rate until all required documentation has been properly filled out and forwarded in advance to the Allison SQE.

6.18.5. Subcontractor/Tier Two Run At Rate Requirement

Suppliers are required to ensure the capacity of their suppliers. Written confirmation of daily contracted requirements, as well as actual system performance for quality, capacity and delivery, must be provided to the Allison SQE upon request prior to the tier one Run At Rate.

6.18.6. Run At Rate Inventory

Finished inventory resulting from production runs to prepare for or complete a Run At Rate will be the responsibility of the supplier. This inventory will be held until scheduled for shipment by Allison.

6.18.7. Run At Rate Approval

During the Run At Rate, the supplier's manufacturing process will be assessed to verify its ability to meet the quality and capacity requirements as contracted and detailed in AT-1960-C3.

The Run At Rate will be assessed with one of the following results:

Pass
A status of "Pass" indicates that all Run At Rate requirements have been met and that the demonstrated capacity is equal to or greater than the Lean Capacity Rate (LCR) in the Scheduling Agreement.

- The AT-1960-C3 has passed
- The subcontractors' abilities to meet the capacity and quality requirements have been confirmed in writing by the supplier
- All parts produced meet Allison's quality and packaging requirements

Staged
A status of "Staged" indicates that the supplier is meeting the approved plan for the gradual introduction of tooling, machinery or shifts required to meet the LCR.

Fail
A Status of "Fail" indicates that a non-conformance exists in AT-1960-C3 that requires action by the supplier to correct, or the supplier failed to provide written confirmation of a subcontractor's abilities to meet the quality, capacity and delivery requirements.

6.18.8. Run At Rate Corrective Actions

Should the Run At Rate results fail to meet the requirements of this procedure for quality or capacity, a corrective action plan must be submitted to and approved by the Allison SQE.

Upon full implementation of the corrective action plan, the Allison SQE will determine the method of verification, which may require an on-site review or a new Run At Rate study.

6.18.9. Required Documentation for Submission and Retention

The supplier should retain original versions of AT-1960-C3 and submit copies to the Allison SQE.

7. Quality Management

7.1. Product/Process Change Requests

The supplier shall formally notify Allison of any process, product or sub-tier supplier change (reference AIAG PPAP Manual Table 3.1). Form AT-1927-30 (Supplier Product Change Evaluation, SPCE) shall be used by the supplier to request any change. The supplier shall submit the SPCE to the appropriate Allison Commodity Manager. Suppliers are not authorized to make product or process changes until the SPCE has been reviewed and approved by Allison.

7.2. Sub-Tier Supplier Management

Suppliers are responsible for the management of their suppliers. Suppliers should utilize AIAG CQI-19 as a guide for sub-tier supplier management.

Suppliers shall certify parts and processes from their sub-tier suppliers via the PPAP process.

Any change in a sub-tier supplier to Allison must be communicated in advance with an SPCE, form AT-1927-30.

7.3. Process Control Plan Audits (PCPAs)

PCPAs are comprehensive audits of the supplier's processes and manufacturing system and will be conducted by the Allison SQE. The purpose of the PCPA is to ensure the supplier is following the documented process flow diagram and executing the current Process Control Plan (PCP). It is also to ensure the supplier is maintaining and updating said documents, including process flow diagrams, PFMEAs and Process Control Plans, while executing continuous improvement. AT-1927-16 is the form for the audit and can be located at the Allison corporate website **allisontransmission.com** under the supplier forms link.

The Allison SQE will provide notice prior to visiting a supplier to perform a PCPA. The results of the PCPA will be presented by the Allison SQE after the completion of the PCPA. The supplier representative will be asked to sign the cover sheet of the PCPA, and a formal follow-up date and audit will be scheduled for any items that do not meet Allison's expectations.

7.4. Advanced Problem-Solving Methods

Suppliers should have the capability to solve complex problems using advanced problem-solving techniques, such as Design Of Experiments (DOE), Design For Six Sigma (DFSS), Shainin® Red X® and Kepner-Tregoe®.

7.5. Non-Conforming Product

In the event suspect or known non-conforming product has been or will be shipped, the suppliers shall notify their Allison SQE in writing immediately. The SQE will work with the supplier as well as the appropriate cross-functional personnel at Allison to review the non-conformity and determine if a deviation can be authorized. In the event a deviation is authorized, the SQE will coordinate the formal authorization with the supplier representative.

If a deviation is granted for the supplier to ship non-conforming material, the supplier shall mark all affected shipments on the exterior packaging with deviated part tag form AT-101658 filled out.

7.6. Production Support Requirements

Upon request of SQ or Allison Plant, the supplier will provide on-site support during all pre-production build phases and production activities.

The supplier shall designate a specific supplier representative that will support each production shift. At a minimum, the supplier designate should have the responsibility to:

- Implement immediate countermeasures to contain discrepant parts and to confirm defective parts are not shipped to an Allison plant
- Approve Allison requests for rework and sorting
- Coordinate and provide resources to rework and sort parts
- Provide sub-assemblies/components for required repair, as related to quality issues
- Provide clear information regarding any defective parts en route to an Allison plant, including how to identify the defect and provide disposition guidelines
- Coordinate expediting and/or special delivery of certified parts

The supplier shall provide quality-related data (e.g., historic inspection, first time quality, reject data) to Allison upon request. This data may be required to determine trends and to determine root cause for quality problems at Allison.

7.7. Formal 8D Notifications

Allison will issue the supplier an 8D Notification if non-conforming material has been identified.

In addition, a formal 8D notification may be issued for the following conditions, but are not limited to:

- Issues and concerns with the transportation and delivery of production parts or material to Allison
- Issues and concerns related to the delivery of parts according to Allison provided schedule
- Supplier responsible warranty for special cause concerns
- Supplier responsible engineering design issues
- Procedural or process non-conformity (e.g., failure to communicate in a timely fashion, failure to comply to procedures, failure to meet deadlines)
- Program management (i.e., timing, deliverables, execution)

Formal 8D notifications will be categorized based on their impact to the Allison business:

- Category 1 – a quality defect that results in a disruption, an OEM or end-user complaint or a transmission reliability audit teardown reject
- Category 2 – a quality defect that results in an assembly or manufacturing cell problem, where more than one part is involved in either the initial complaint or during the routine Allison containment activity, or a repeat quality issue
- Category 3 – a quality defect that results in an assembly or manufacturing cell problem where only one part is involved, and no additional parts are identified during the routine Allison containment activity

Formal 8D reports will be required for Category 1 and 2 8D notifications. However, Allison reserves the right to request a formal 8D report for a Category 3 8D notification.

Notification of the issuance of a formal 8D will be emailed to the supplier representative identified in Allison's SAP system. The supplier is expected to immediately begin containment activity for all 8Ds as well as an 8D problem-solving root cause and corrective action for a Category 1 or 2 8D, or as requested by Allison for a Category 3 8D. The supplier representative will be required to fill out the web-based 8D problem-solving form. At the discretion of the plant Quality Manager, the supplier representative will be required to submit the 8D, participate in a Fast Response teleconference to review the 8D or attend an Allison on-site Fast Response review of the 8D. The supplier representative will be notified which of the review options will be required.

7.7.1. Initial Supplier Response

The supplier shall provide an initial response consisting of the following:

- Immediate and ongoing containment actions to prevent further shipments of non-conforming parts or material. Containment shall include data collection and analysis.
- Rework or sorting as an immediate containment at each Allison location. Rework or sorting may be performed by Allison, supplier or a third party company.
- Disposition of the non-conforming parts or material at Allison locations and in-transit. The supplier must analyze the entire supply chain to identify any suspect material at any supplier location or in-transit to any Allison location. This should be documented and supplied to Allison via the containment summary worksheet in the 8D D3 step.
- Date of the next shipment of conforming parts or material, including how it will be identified. The supplier must consider that the conforming material ship date should reflect all Allison plants receiving the corrected parts or material.
- Name, title and phone number of the supplier representative who provided the above information

The supplier shall promptly complete appropriate problem-solving activities. Examples include, but are not limited to, capability studies, cause and effect diagrams and 5-Why analysis.

7.7.2. Final Response

The final response should include:

- Containment actions taken
- Methods used to evaluate the success of containment actions taken
- Root cause of the problem, including methods used to identify the root cause
- Identification of corrective and preventive actions and target implementation dates
- Elements of the proposed implementation process
- Contact information of those assigned responsibility for actions taken
- Verification method for the effectiveness of the proposed corrective actions
- How the solution is to be institutionalized with respect to other similar processes and products
- Dates when review process FMEA and Process Control Plan will be available. If no revisions were made, then enter today's date and make a note in the corrective action text field indicating that no revisions were made.
- Identification of the responsible tier two supplier, if applicable. This does not absolve the tier one supplier of any responsibility, but rather documents where the issue may have originated.

Failure to respond, without prior notification, may result in additional formal 8D notifications, entry of the supplier into Controlled Shipping Level One or Two (CS1 or CS2), New Business Hold (NBH) or entry into a supplier escalation program.

7.7.3. Formal 8D Notification Appeal Process

The supplier may appeal the issuance of a formal 8D or specific information contained in the formal 8D notification. To appeal, the supplier shall provide objective evidence, in writing, to the issuing location demonstrating rationale for the appeal. The appeal shall be documented in the 8D.

Any request to change a formal 8D notification due to an error should be submitted within 15 business days of issuance of the 8D.

If the issuing location and the supplier do not agree and the supplier wants to pursue the appeal further, the appeal should be directed to the applicable Supplier Quality Management, Materials Management or Quality Management personnel for revision or deletion.

7.7.4. Containment Requirements

All non-conforming and suspect material must be controlled, and the method must be clearly defined. All non-conforming material must be segregated and identified.

A list of every Allison plant or location the parts are shipped to, who was contacted at that facility and what was done to protect them from the issue shall be documented in the containment section of the 8D.

7.7.5. Containment, Response And Closure Requirements

The timing of initial containment, initial Root Cause And Corrective Action determination, and final closure for the 8Ds, in target business days, are listed in the table below. "Target RC And CA" represents the target, in business days, for the supplier's initial Root Cause And Corrective Action responses, while "Target Closure" represents the target for full implementation of all identified corrective actions and full formal 8D notification closure.

Category	Description	Target Containment	Target RC And CA	Target Closure
1	Disruption OEM or end-user reject Reliability audit reject	1 day	10 days	40 days
2	Plant issue, multiple rejected parts	2 days	15 days	80 Days
3	Plant issue, single rejected part	2 days	N/A	N/A

7.8. Special Processes

7.8.1. Heat Treatment

Suppliers and sub-tier suppliers that provide commercial heat treat services must be authorized on the Allison approved heat treat supplier list. For a complete listing of approved heat treat suppliers, reference the Allison corporate website **allisontransmission.com** under the supplier forms link.

Tier one and sub-tier suppliers utilizing heat treatment shall perform an annual AIAG CQI-9 or equivalent assessment. The Allison SQE may review this documentation at the supplier site.

The supplier may be required to submit metallurgical samples to Allison for analysis.

If a supplier would like to have a heat treat provider that is not on the approved list reviewed for authorization, they should submit an SPCE to their CM.

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7.8.2. Plating

For non-fasteners, the supplier shall utilize an approved material. For a listing of approved materials, contact your Allison SQE.

For fasteners, the supplier shall utilize both an approved material and applicator. For a listing of approved applicators, contact your Allison SQE.

Tier one and sub-tier suppliers utilizing plating shall perform an annual AIAG CQI-11 assessment.

The Allison SQE may review this documentation at the supplier site.

7.8.3. Other Special Processes

Tier one and sub-tier suppliers utilizing the following special processes shall perform an annual AIAG CQI assessment. The Allison SQE may review this documentation at the supplier site, and other key performance indicators.

- Coating CQI-12
- Welding CQI-15
- Soldering CQI-17
- Molding CQI-23
- Casting CQI-27

7.9. Continuous Improvement

The supplier shall have an ongoing process for continuous improvement of the product, related manufacturing processes, and other key performance indicators. The intent is to reduce variation and to ensure process stability and capability over time. Suppliers are required to measure their first-time quality, and update FMEAs, process flow diagrams and control plans based on actual performance. They must also have an ongoing RPN reduction process that drives error proofing. There must be a performance attitude for zero defects. Typical continuous improvement processes focus on:

- Scrap reduction
- First-time quality or process yield improvement
- RPN reduction
- Customer complaints reduction
- Customer or supplier warranty reduction
- Improvement in process throughput
- Reduction in set-up or lead time
- On time delivery

7.10. Supplier Scorecards

Supplier scorecards contain supplier performance metrics by vendor code and are available to suppliers on a monthly basis. Each vendor code receives a composite scorecard value based on the following metrics:

Quality

- 3-month supplied part PPM
- Formal 8D notifications issued in the past 3 months
- Formal 8D notifications in the past month
- 3-month formal 8D on time closure performance
- Number of disruptions and cases of Controlled Shipping or New Business Hold
- IATF16949 or ISO-9001 certification

PPAP

- Percent of targeted PPAPs scheduled to target
- Percent of PPAPs approved on-time

Delivery

- Percent on-time delivery in the past month
- Average percent on-time delivery in the past 3-months

Commercial Performance

- Payment terms
- Number of open cost recoveries
- Foreign exchange clause participation
- Long-term contract participation
- Financial rating

Suppliers are expected to develop an action plan to improve performance for any category not meeting Allison standards. If performance fails to improve over a period of time, such performance is subject to review by Allison leadership.

Grading Scheme:		
Green	90% or above in a category	*Supplier has met ATI's Goals.*
Yellow	61 - 89.9% in any category	*Suppliers are expected to review and improve their scorecard performance*
Red	0 - 60% in any category	*Supplier are expected to develop an action plan to improve performance for any category not meeting Allison standards.*

7.11. Cost Recovery Process

Allison uses a cost recovery process to recover costs incurred as a result of a supplied part quality or delivery issue.

Allison will gather costs associated with a supplied part issue, which may include the following, at a minimum:

- Labor costs at the affected Allison locations related to:
  - Containment, sorting and inspection of suspect material at Allison or our customers
  - Rework of suspect material, assemblies or transmissions at Allison or our customers
  - Downtime within the manufacturing cells, sub-assembly and main assembly line of the Allison plant
  - Activities related to evaluation of the supplied part issue and required interaction with the Allison supplier and customers
- Premium freight
- Expenses incurred by Allison for travel to our supplier or customer locations
- Incidental laboratory, machining or retrofit costs
- Allison warranty and field action expenses

The supplier shall provide a response to any cost recovery request issued to them by Allison within 14 calendar days.

Cost recoveries with no supplier response can be debited through the financial organization to the supplier after 14 calendar days from issuance of cost recovery request.

7.11.1. Cost Recovery Appeal Process

If the supplier does not agree and the supplier wants to pursue the appeal process, the appeal should be directed to the Commodity Manager within 14 calendar days. Failure to reply or appeal within 14 calendar days will be interpreted as acceptance of the cost recovery and may result in an automatic debit of the cost recovery amount.

The supplier shall provide objective evidence that the charge is inaccurate. If Allison and the supplier agree on a revised cost, the cost recovery request shall be amended and the revised amount shall be debited or invoiced to the supplier.

If no agreement is reached within six weeks of issuance of the cost recovery request and Allison has approved no extension, the original cost requested may be debited or invoiced to the supplier.

7.12. Controlled Shipping

Controlled Shipping Levels One And Two (CS1 and CS2) are enhanced containment processes that may be required when the supplier's normal containment process and prototype, launch or standard controls are not sufficient to protect Allison from receiving defective product. The redundant inspection must be in addition to normal controls, and the data obtained from the redundant inspection process is critical as both a measure of the effectiveness of the secondary inspection process and the corrective actions taken to eliminate the initial nonconformance.

Controlled Shipping One may be required as a result of:

- Unauthorized changes
- Repeat quality issues
- Dock audit failure at supplier location
- Internal/External supplier data
- Quality issue in the field
- Disruption at Allison

For CS1 the redundant inspection must be in addition to normal controls and is enacted by the supplier's employees.

Controlled Shipping Two may be required as a result of:

- Quality issue in the field
- Disruption at Allison
- CS1 failures
- Failure of GP-12

For CS2 the supplier is required to utilize a third party redundant inspection process to sort for a specific non-conformance while maintaining CS1. The supplier will contact a Controlled Shipping third party to perform the required certification and issue a purchase order for CS2 activities within 24 hours of receiving the CS2 letter. The supplier shall notify their registrar of their entry into CS2.

The supplier will be made aware of their entry into Controlled Shipping by Allison Transmission, and a Controlled Shipping entry letter will be provided to the supplier's Quality Manager.

The Allison SQE will conduct a kickoff meeting for the Controlled Shipping entry to review the following:

- The non-conformance
- The Controlled Shipping certification method
- Location of sort
- Certified part ID requirements
- Certified dunnage ID requirements
- Exit criteria
- I-Chart distribution list and timing

As a result of Controlled Shipping status, the supplier shall:

- Return the signed controlled shipment confirmation letter
- Immediately establish a separate containment activity area at their location that is acceptable to Allison
- Mark individual parts, materials and containers, as agreed upon by Allison, to identify parts certified for production
- Commence the sort activities and display the results in a public and visible location
- Perform a redundant inspection of all suspect non-conforming products per the agreed upon process, and ensure defect-free material is delivered to Allison
- Document containment data in I-chart format and distribute as agreed in the kickoff meeting
- Conduct a daily management meeting at the sort location to review the results, ensure the corrective actions taken are effective and plan required changes
- Communicate the action plan, inspection status and results of problem resolution activities to Allison in a format and with a frequency agreed to by SQE

7.12.1. Controlled Shipping Exit

The supplier can request exit from Controlled Shipping no earlier than 30 days (or approved exit plan) following implementation of corrective action with no additional findings.

To exit Controlled Shipping status, the supplier shall:

- Meet the defined exit criteria
- Request exit from Controlled Shipping and provide supporting documentation and assessments on corrective actions to the responsible SQE

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7.13. Allison Supplier Improvement Program (ASIP)

Suppliers with chronic warranty, quality or on-time delivery issues will be considered for placement in the focused program. Entrance will be communicated by the Allison Transmission team and can be as a result of the following:

- Quality-related disruption
- Significant or repeated warranty failures
- Loss of IATF16949 or ISO-9001 certification
- Failure to meet required milestones during APQP
- Repeat formal 8D notifications for the same quality or delivery issue
- Multiple formal 8D notifications for various quality or delivery issues
- Consistent poor delivery performance
- Continued Process Control Plan Audit failures
- Chronic poor supplier composite scorecard performance

Depending on the reason for entry into the ASIP, a cross-functional team from Allison, led by an Allison representative, will work with the supplier on systemic improvements. This cross-functional team may include representatives from one or more of the following functional organizations:

- Supplier quality
- Procurement
- Global supply chain
- Procurement program management
- Operations – manufacturing, production and scheduling
- Industrial engineering
- Manufacturing engineering
- Product engineering

The supplier's leadership and cross-functional resources are required to participate in meetings held at a frequency determined by the Allison representative until the supplier exits the program.

While in the ASIP, suppliers are required to work with their Allison representative to establish exit criteria. Completion of the exit criteria will be tracked with the Open Issues Template (AT-1927-05) as appropriate.

8. Control Of Customer-Owned Tooling

Refer to AT-101127, "Tool And Gage Guidelines," on the **allisontransmission.com** supplier section for requirements related to Allison-owned tooling and gaging.

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9. Packaging, Labeling, Preservation And Shipping

9.1. Packaging

Parts supplied to Allison will normally have a standard packaging plan. The pack design comprehends several factors including supplier location, rate of demand, Allison process design and part protection. In most cases, parts are received at Allison directly from containers as packaged by the supplier. It is critical to implement a design that properly protects parts from damage and contamination while avoiding excessive waste. Guidelines for packaging materials for Allison are included in the Allison Packing, Identification And Global Supply Chain Requirements document, AT-1700. Allison may request that suppliers utilize returnable containers or ship in expendable packaging. Supplier packaging plans are to be documented on the packaging assumptions form AT-1703 during the quoting process. While Allison may recommend use of specific returnable containers, the supplier is responsible for packaging plans that protect their parts from damage, contamination and corrosion for normal transportation conditions and storage for the lead time designated in AT-1700.

9.2. Labeling

Part shipments must be marked (labeled) for shipment in accordance with the Shipping Parts ID Label Standard, form AT-1724.

9.3. Shipping

When shipping parts to Allison, suppliers are expected to abide by the Allison Transportation Routings, form AT-101106.

Note: AT-101106 will only be accessible to suppliers once they have been granted access to the Allison supplier extranet. Suppliers are required to provide advanced electronic notification (ASN) at the time of shipment. Suppliers have two current ASN communication options available: via manual web portal entry using Allison third party logistics (3PL) provider Ryder Integrated Logistics, or via electronic data interchange (EDI) directly to Allison.

9.4. Schedule Performance

Suppliers are expected to ship on time per their Allison release schedules. If suppliers are not able to meet on-time deliveries, they are required to notify Allison so an alternative mutually agreeable delivery plan can be made.

Failure to conform to Allison requirements associated with packaging, labeling, shipping and schedule performance could result in the creation of a formal 8D notification for corrective action.

10. Revision History

Edition	Change	Previous Section	Previous Page	New Section	New Page	Changed By	Date
Fourth	Updated cover, branding, edition number, date		a		a	D. Wagner	Nov '22
	Updated Christopher McCleland title		b		b		
	Removed From Allison General Terms And Conditions: line			1	3		
	Updated Supplier responsibilities paragraph 3			1	3		
	Added "Unless exempted" line and email contact			2	3		
	Added QIM paragraph			2	3		
	Removed AT-101249 Added AT-1927-87, AT-1927-88 w/ descriptions Replaced AT-101522 description Added AT-101659, AT-101658 with descriptions			3	5		
	Added AGSQ Allison Global Supplier Quality Deleted ASIP, DCR entries			4	6		
	Added PFEP Plan For Every Part, QIM Quality Issue Management, SCoC Supplier Code of Conduct, SQE description is now Supplier Quality Engineer; Deleted PPM Purchasing Program Manager			4	7		
	Changed assessment results and submission line recipients to CM and SQM			5.1	8		
	Added CQI-19 and CQI-20 with descriptions			5.2	8		
	Replaced items 8, 9, 11, 12 and entries			6.1	10		
	Added sub-bullet (APQP) , deleted second bullet			6.1	11		
	Replaced paragraph (DVP&R or validation plan)			6.2	11		
	Deleted paragraph "If engineering validation is required...."			6.4	12		
	Replaced first sentence and second bullet, removed word annual			6.6	13		
	Added new paragraph (AIAG & VDA FMEA Hand-book...assigning RPN)			6.7	13		
	Deleted " The only acceptable reason...." sentence, deleted 2nd bullet			6.15	18		
	Added sentence regarding GP-12 plan			6.16	19		
	Replaced first sentence (GP-12 implementation)			6.16.3	20		
	Replaced entire paragraph			6.16.6	21		
	Changed altered to affected			6.18	22		
	Added description to AT-1810			6.18.3	23		
	Deleted Conditional Pass heading and text			6.18.7	24		
	Replaced first paragraph, delete last paragraph, moved back one page	6.18.8	25	6.18.8	24		
	Moved back one page	6.18.9	25	6.18.9	24		
	Added AIAG to CQI-19		26	7.2	25		

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Edition	Change	Previous Section	Previous Page	New Section	New Page	Changed By	Date
Fourth (cont'd)	Replaced second paragraph (now references deviated part tag form AT-101658)		27	7.5	26		
	Deleted word "launch"first paragraph		27	7.6	26		
	Deleted second sentence and all bullets		28	7.7	27		
	8D conditions text additions and replacements		28	7.7	27		
	Replaced 7th bullet, Replaced "development" with "escalation"		30	7.7.2	29		
	Deleted On-Site Fast Response Review heading and paragraph below		32	7.7.6	31		
	Replaced text paragraph 1 regarding forms link and added AIAG paragraph 2		32	7.8.1	31		
	Added AIAG paragraph 3		33	7.8.2	32		
	Replace heading and text with new heading "Other Special Processes" and new text	7.8.3	33	7.8.3	32		
	Added new bullets with CQI numbers		33	7.8.3	32		
	Added "and other key performance indicators"		33	7.9	32		
	Added bullet "On time delivery"		33	7.9	32		
	Edited Suppliers paragraph before table and yellow and red grading descrptions in table	7.10	33	7.10	33		
	Added "and field action" to last bullet		35	7.11	34		
	Added two paragraphs "For CS1..." and "For CS2..."		36	7.12	35		
	Deleted Sections 7.12.1 and 7.12.2		38		37		
	Renumbered section, replaced first paragraph	7.12.3	38	7.12.1	37		
	Deleted section 7.13	7.13	39	N/A	N/A		
	Deleted section 7.13.1	7.13.1	40	N/A	N/A		
	Renumbered section	7.14	40	7.13	38		
	Changed ASIP to focused program, communication team change, functional organizations updated	7.14	40	7.13	38		
	Back cover branding updates and date		45		45		

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Edition	Change	Previous Section	Previous Page	New Section	New Page	Changed By	Date
Third	Changed terminology from Supplier Quality Notification, SAP Quality Notification, SQN to either formal 8D notification or 8D				Various	D. Wagner	Oct '19
	Changed from Potential Failure Mode and Effects Analysis Reference Handbook to AGIG and VDA FEMA Handbook				4,13		
	Removed references to Run at Rate Summary Form AT-1960-A				5,10,22, 23,25		
	Replaced IPM Integration Program Manager with PPM Purchasing Program Manager				6		
	Replaced SD Supplier Deviation and SP Special Production Release with DEV Deviation				7		
	Removed reference to iPPAP system				12		
	Removed reference to SQN with reference to 8Ds			7.7	28-31		
	Rewrote section on supplier scorecards			7.10	34		
	Removed section on Quality Systems Basics	7.2	14	N/A	N/A		

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Edition	Change	Previous Section	Previous Page	New Section	New Page	Changed By
Second	Revised SQ Manual Introduction Letter	N/A	N/A	N/A	N/A	D. Wagner
	Revised Allison Quality policy	N/A	N/A	N/A	N/A	
	Revised Quality System requirements	2.0	3	2.0	3	
	Updated Forms and References	3.0	4-5	3.0	4-5	
	Removed Section 5 - Allison Key Supplier Contacts	5.0	8-9	N/A	N/A	
	Revised wording to state best practice to be completed prior to sourcing	6.2	10	5.2	8	
	Rewrote section on APQP	7.1	11-13	6.1	9-11	
	Removed section on Quality Systems Basics	7.2	14	N/A	N/A	
	Added requirement for bubbled print and corresponding dimensional results and control plan documentation	7.5	15	6.4	12	
	Reworded paragraph related to Engineering documentation	7.5	15	6.4	12	
	Removed references to Allison PFMEA ranking charts. Removed part and process cleanliness requirement for PFMEA process	7.9	17	6.8	13	
	Removed requirement that supplier should have ability to check a completed assembly	7.13	20	6.12	17	
	Removed paragraph 5 related to fixtures and CMM fixtures	7.13	20	6.12	17	
	Removed Process Control Plan Audit requirement during Run At Rate	7.19.7	28	6.18.7	24	
	Removed "Pending PPAP" as a potential Run At Rate outcome	7.19.7	28	6.18.7	24	
	Removed paragraphs 4-7	7.19.9	29	6.18.9	25	
	Removed statement for sub-tier suppliers to be certified at a minimum to ISO-9001	8.2	30	7.2	26	
	Rewrote Supplier Quality Notification section	8.7	32-34	7.7	28-32	
	Rewrote Supplier Scorecard section	8.10	36	7.10	34	
	Rewrote Cost Recovery section	8.11	37-38	7.11	35	
	Rewrote Controlled Shipping and New Business Hold sections	8.12/8.13	38-43	7.12-7.13	36-40	
	Rewrote Allison Supplier Improvement Program section	8.14	44	7.14	40-41	

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