Automotive market expectations for Quality, Cost, Service, Technology and Delivery require supreme business efficiency and resourcefulness for profitable growth and long-term survival. Android Assemblies (Android) plan to maintain their business strength by working closely with its supply base to make sure that requirements and expectations are clearly understood and that its suppliers share and act with a common sense of urgency that our customers demand.

Android Purchasing strategies address detailed supplier commodity strategies, cost reduction plans, innovative and efficient new program development, and flawless product launch via robust Safe Launch Planning. Supplier performance is closely monitored, and supplier status is result-based. To assist our suppliers in helping us achieve our strategies, Android Purchasing will utilize the necessary Quality Product Engineering, Operations, Supplier Quality Assurance and Supplier Development Engineering personnel necessary to help both the supplier and Android to be successful. We recognize that Android cannot succeed without the superior quality, cost, service, and technology offered by its supply base.

Android has a commitment to ethical and integrity in our business dealings across the globe; with those values embedded in our company purpose to "Build a Better Everything". This commitment is cascaded to our Supply Chain and requires the same commitment from our partners. In addition, Android is committed to the ESG goals that several of the OEM customers have identified. The Tier partners in those areas are outlined as well in this manual.

Mary Blair
Head of Supply Chain

Rebecca McHenry
Head of Quality and Business Systems

1.0 Introduction

1.1 Vison & Policy

It is Android' s policy to achieve a clear competitive advantage through continuous improvement in quality, cost, service, technology, and delivery from our suppliers in the total supply chain. It is the expectation of Android that suppliers shall:

- Flawlessly launch using planning, preparing, and being trained to supply quality products and services.
- Maintain this flawless performance over time by protecting against changes that would be detrimental to product quality and service by rapidly addressing all concerns and learning from mistakes so that they are not recurring in nature.
- Continually improve by proactively improving the quality and value of products and services over time.

1.2 Purpose

The purpose of this Supplier Quality Manual (SQM) is to specify **Android** quality system requirements for our suppliers. These requirements extend from supplier qualification to new product development, to serial production, and to service. The requirements noted within this SQM reflect **Android** and/or **Android** Customers' requirements that shall be "Customer Specific Requirements" for the purposes of Quality System conformance and audit purposes.

The SQM defines the expectations for all **Android** suppliers. The supplier shall meet or exceed the requirements and guidelines defined in this manual if it provides products and/or services to **Android** and its customers. Adhering to the guidelines established in this manual, the supplier should continually improve the processes used to design, manufacture, and deliver products or services to **Android**. Throughout this manual, the word "shall" or "must" indicates a requirement. The word "should" indicate a recommendation.

1.3 Scope

This SQM applies to all direct material and service external suppliers. This manual applies to indirect material suppliers only when it is required by an **Android** Purchase Order.
This manual is part of the Purchase Order issued by **Android**, and acceptance of the Purchase Order constitutes acceptance of this SQM. The supplier's obligations can only be waived by **Android** in writing.

1.4 Responsibility

Suppliers are responsible for meeting the requirements of this SQM. Failure to meet these requirements may result in the loss of existing and/or future **Android** business, in addition to reimbursement of the cost to **Android** resulting from those failures. Suppliers shall ensure that their direct material and/or service suppliers comply with the requirements of IATF16949:2016 or ISO9001:2015 (whichever applies). Suppliers shall adopt the standards of Zero Defects and 100% On Time Delivery to **Android**. Suppliers shall understand that any established PPM target is not an Accepted Quality Level but represents an intermediate continuous improvement step toward shipment of components/materials meeting the Zero Defects requirement.

Nothing in this SQM shall, in any way, limit the supplier's obligation to ship 100% defect-free parts.

In addition, the appendixes in this document have additional requirements based on the final customer for parts used in modular assemblies. In addition, supplier shall have ability

1.5 Language

Android's official language is English. All official communication with Android will be done in English. Documents may display the native language when integrated in parallel translation. In this instance, the English is the only valid version. The English version has precedence in the event of discrepancies with this SQM translated into different languages.

1.6 Government Regulatory Compliance

Suppliers shall comply with all applicable governmental regulations. These regulations relate to the health and safety of the workers, environmental protection, toxic and hazardous materials, and free trade. Suppliers should recognize that the applicable government regulations might include those in the country of manufacture, as well as the country of sale. For products brought into the United States, all federal standards must be met. International suppliers should be Customs Trade – Partnership Against Terrorism (C-TPAT) or country equivalent certified.

1.7 Environment Protection

1.7.1 Environmental Guidelines

Android is convinced that the future and permanent protection of our environment, land, water and air can only be achieved through the joint efforts of Industry, Government and Society. Top priority will be to strive for continuous improvement in our environmental performance. Android suppliers are encouraged to actively implement globally recognized Environmental, Health and Safety management systems. A robust Environmental, Health & Safety Compliance (EH&S) program reduces operational impact on human health and the environment in a sustainable manner should include targets to improve environmental protection and documentation of their fulfillment such as:

- Improved energy and water conservation
- Prevention and reduction of environmental pollution and emissions
- Reduction of expendable packaging
- Compliance with all automotive regulations regarding materials and substances
- Decreased use of hazardous substances
- Have a recycling program.
- Safe and healthy work environments that prevent accidents and injuries
- Continuous improvement in EH&S performance

Recommended programs include, but are not limited to:

- Occupational Safety and Health Administration (OSHA)
- ISO 14001
- ISO 45001

The supplier shall work with Android to reduce the impact of packaging waste through:

- Reduction or elimination of unnecessary over packaging
- Implementation of returnable packaging
- Substitution of current packaging materials for recyclable materials

The supplier shall comply with all applicable governmental regulations. These regulations relate to the health and safety of the workers, environment protection, toxic and hazardous materials, and free trade. Suppliers should recognize that the applicable government regulations might include those in the country of manufacture, as well the country of sale

The techniques and methods below are those that Android believes to constitute the prerequisite to reach the above-mentioned environmental targets:

- Written guidelines regarding the environmental performance
- Regular review of production, maintenance, supply and disposal processes and products to determine their environmental impact
- An emergency plan

The use and consumption of energy and raw materials should be managed effectively and with a minimum of logistics and transport over the entire vehicle/component life cycle. For a quantitative assessment of resource efficiency by way of life cycle analysis, the requisite data shall be provided upon request (material consumption, water consumption, total energy consumption, transport -raw materials-, and emissions).

1.9 End-of-Life Vehicle - International Material Data System (IMDS)

The End-of-Life Vehicle (ELV) Directive, 2000/53/EC, was enacted by the European Commission "to minimize the impact of end-of-life vehicles on the environment." The use of lead, mercury, cadmium, and hexavalent chromium are prohibited in vehicles and their components, except for certain exemptions published in Annex II of the Directive. This is a mandated requirement for European Union (EU) Member States and also required by North American, and some Japanese, vehicle manufacturers. Additionally, other legal requirements, such as EU Directives 2002/95/EC, 2002/96/EC, and 2003/11/EC restrict the use of certain flame retardant substances: polybrominated biphenyls (PBBs) and polybrominated diphenyl ethers (PBDEs). PBBs or PBDEs shall not be present in components or materials supplied to Android. Suppliers in all regions shall ensure that all components and materials supplied to any Android facility comply with the above-mentioned legal requirements.

To ensure compliance with the various legal and customer requirements, Android requires its suppliers to report information on materials within their respective components. The International Material Data System (IMDS) has been developed by vehicle manufacturers to collect and manage this data. Suppliers shall submit the required ELV/IMDS data to Android as soon as possible upon award of new business, but in any case, prior to the Production Part Approval Process (PPAP) submission. The supplier, as part of the PPAP submission, shall provide confirmation to Android' s acceptance of the ELV/IMDS data. Android requires suppliers to submit ELV data by direct entry into IMDS via the Internet (www.mdsystem.com). The supplier shall be responsible for requesting the IMDS submission ID from Android purchase team. Please see customer specific specifications in the Appendixes.

2.0 Android Requirements

Android bases its supply management requirements on four key processes. These are:

1. The supplier selection process
2. New product launch
3. Serial Production Processes
4. Continuous improvement

These key processes are global in nature, as are any of their referenced procedures. In some instances, because of unique system configurations, product lines and regions may have specific processes, procedures, and/or forms that may only pertain to conducting business with them. Android expects the supplier to:

- Abide by our Code of Conduct available on our supplier portal
- Provide high quality products that meet or exceed expectations.
- Provide products at a competitive price
- Deliver products on-time
- Maintain financial strength to support current business and promote growth.

Android shall verify compliance during the selection and assessment process.

2.1 Criteria for Selection as an Android Major Supplier 2.1.1 New Major Supplier/Location Qualification

New suppliers who wish to be added as a supplier to Android shall:

- Demonstrate compliance, at a minimum, to IATF16949:2016 (for component suppliers) or ISO9001:2015 (for service suppliers) requirements. New suppliers, who have not completed their registration process, may be awarded business on the condition, unless otherwise specified by a customer to Android, that they successfully pass the Android Supplier Assessment, and have a reasonable plan to meet the requirements of this SQM Manual and IATF16949:2016 or ISO9001:2015 requirements (as appropriate). Android reserves the right to complete 2nd party audits at these facilities.
- Meet all commercial and financial requirements of the Android purchasing group.
- Successfully passed a Supplier Assessment with a minimum score of 80%, with no individual Section rating of less than 50%.

New locations for approved suppliers to Android shall:

- Demonstrate compliance, at a minimum, to IATF16949:2016 (for component suppliers) or ISO9001:2015 (for service suppliers) requirements. Uncertified locations with more than 12 months of operation experience are eligible for certification to IATF16949:2016 or ISO9001:2015 (as appropriate).
- Android reserves the right to complete 2nd party audits at these facilities.
- Successfully pass a Supplier Assessment for that location, with a minimum score of 80%, with no individual Section rating of less than 50%, if a 2nd party assessment is required.

Questions receiving a score of 1 or less may require a written Corrective Action Plan.

- **Conditionally Acceptable:** assessment rating between 51% and 79%. Supplier Corrective Action Plan required within 30 days of receipt of the request.
- **Unacceptable**: assessment rating of 50% or less.

Suppliers directed for use by Android's customers shall meet the criteria defined by this document.

During the supplier selection and assessment phase, Android will perform various audits to confirm supplier capability, beyond the certification level. The primary focus areas are:

1. General Organization and Management Structure
2. Advanced Product Planning and PPAP
3. Product Realization, Measurement, Analysis & Improvement
4. Material, Facilities, Logistics & Tooling

Suppliers that initially do not score acceptably may be allowed to develop action plans and timelines to correct any deficiencies and then request a re-audit to verify implementation of these actions

2.1.2 Quality Management System Development

Android' s goal for all suppliers of materials and services affecting production material is to demonstrate compliance to IATF16949:2016 (for component suppliers) or ISO9001:2015 (for service suppliers). Suppliers shall also comply with Android specific requirements defined in this SQM. Suppliers to Android shall have a plan to achieve conformity to IATF16949:2016 or ISO9001:2015 (as appropriate). Unless otherwise specified, conformity may be demonstrated by third party certification to IATF16949:2016 or ISO9001:2015 (as appropriate). This is consistent with the expectations of Android's customers and our business system that complies to IATF16949:2016 requirements. The scope of the requirement affects subassembly, sequencing, sorting, and rework and calibration services in addition to direct material suppliers.

Additionally, suppliers shall, at minimum, maintain and update their certification status, once per year. Suppliers shall immediately communicate any change in certification or status to your respective Purchasing Manager and Quality Manager of the site. Certification status is also accessible to suppliers through their scorecard. The scorecard is updated monthly.

Note: Customer-directed certification does not replace the requirement to have an IATF16949:2016 conformity plan, nor does it replace certification to either IATF 16949:2016 or ISO9001:2015. Android recommends for its suppliers to continue using the latest Automotive Industry Action Group (AIAG) versions of the Advanced Product Quality Planning and Control Plan (APQP), Potential Failure Mode and Effects Analysis (FMEA), Measurement System Analysis (MSA), Production Part Approval Process (PPAP), and Statistical Process Control (SPC) manuals as guidelines for their system development. At any time, Android reserves the right to complete a 2nd party audit of the supplier's management system.

2.1.3 APQP Practices

Android recommends that its suppliers use the latest Automotive Industry Action Group (AIAG) versions of the Advanced Product Quality Planning and Control Plan (APQP), Potential Failure Mode and Effects Analysis (FMEA), Measurement System Analysis (MSA), Production Part Approval Process (PPAP), and Statistical Process Control (SPC) manuals as guidelines for their system development. Other manuals may be relevant and used as specified by Android.

2.1.4 e-Business Capabilities

Suppliers shall have e-mail, fax, Internet access and Internet browser as a minimum for e-Business capability. Suppliers are responsible for maintaining current key contact information to their respective Purchasing Manager. These contacts include the top management representatives, and the required information includes phone numbers and e-mail addresses.

If required, suppliers must be able to access Android Supplier Portal and submit documentation as requested and monitor this website on a regular basis.

The supplier portal address is Supplier Portal - Android Industries (android-ind.com)

2.1.5 Communication

Suppliers are responsible for maintaining contact information. These contacts include the top management representatives, and the required information includes phone numbers and email addresses. Additionally, suppliers shall, at minimum, maintain and update their certification status, once

per year. Suppliers shall immediately communicate any change in certification/registration or status to your respective commodity or purchasing manager.

The supplier shall communicate essential business information to Android. Such information may pertain to contractual issues including, but not limited to:

- Inquiries, orders, bids, amendments, and invoices
- Product quality issues relating to design, specifications, changes, and notifications.
- Delivery delays and/or shortages
- Customer feedback and information

Other elements of essential information relating to changes in the supplier's business environment must be communicated immediately, such as:

- Acquisitions
- Partial sale
- Change of control/Executive Management
- Pending litigation
- Restructuring
- Bankruptcy

The effective transmission of such information requires that all suppliers identify and register key points of contact with their Android counterparts. Most of the communication shall be handled through electronic documents and systems. The supplier should adopt the necessary electronic systems to manage these processes and improve communications with Android. The supplier is responsible for the validity and accuracy of the documents submitted electronically and must comply with all applicable legal requirements regarding electronic signatures.

All communications, both electronic and otherwise, with Android shall be in English. A specific Android facility may allow exceptions for direct communications meant for that facility only

2.2 New Product Launch

2.2.1 Introduction

New Product Launch initiates with the supplier being awarded the new business and receiving product drawings and specifications from the **Android** customer and runs through the production launch phase of the new component. When specified by **Android**, suppliers shall use the **Android** Supplier Development Process (Figure 1). There is a high level of **Android**' s involvement in the APQP and launch process of suppliers. All suppliers, regardless of component priority, shall use a disciplined launch and APQP process.

2.2.2 Advanced Product Quality Planning (APQP)

Suppliers shall provide Advanced Product Quality Planning (APQP) status reports for a new product with regard to meeting the program objectives of quality, cost, performance and timing. **Android** will provide the frequency and the required content of these reports. **Android** prefers their suppliers use the forms included in the AIAG Advanced Product Quality Planning and Control Plan (APQP) manual.

Suppliers whose components/materials **Android** has designated as Category A shall use the forms

contained in the AIAG manual mentioned in the paragraph above and shall complete those forms in English.

Suppliers providing Category B and C components/materials must also make sure all APQP and PPAP documentation is submitted in English but can use an alternative format if approved by the Android SQE. Suppliers to Android are responsible for managing their new product introduction process per the guidelines provided in this document. Android's APQP process consists of four phases as shown below. Figure 1 shows the deliverables for the four phases.

Please note that these are the minimum requirements for APQP. The supplier may have to meet additional requirements depending on the nature and complexity of their product or process. We expect the supplier to follow the best practices and standards of the automotive industry and deliver high-quality products that meet or exceed our expectations.

Android's 4 Phases of APQP for Supplier

APQP - Phase 1	APQP - Phase 2	APQP - Phase 3	APQP - Phase 4
Supplier Kick-Off and Planning	**Product/Process Realization**	**Pre-PPAP**	**Product/Process Validation and Launch**
Identify Android and Supplier team contacts/roles/responsibilities	Supplier to start DFMEA (if applicable)	Pre-production trial run	Finalize complete PPAP submission package
Communicate and initiate Key Supplier Metrics	Supplier to start preliminary Process Flow Chart	Process Capability study	Cross functional key metrics review: Launch sign off
Initial Supplier Program plan and APQP timing	Supplier to start PFMEA and Pre-Production Control Plan	Finalize PCM: prepare for Launch	Launch Readiness Assessment
Conduct cross-functional process design review	Finalize PCM & use document for any preproduction part runs	Finalize PFMEA and Control Plan	Confirmation of full volume Run-At-Rate
Create preliminary Product Characteristics Matrix (PCM)	Confirm tooling and gage construction progress	Review Supplier Ramp-up Plan	Finalize component packaging review
Android defines APQP Requirements	Develop Standardize Work Instructions	Launch Readiness Assessment: document key metrics	Initiate production launch & review supplier's data for appropriate actions
Equipment Tooling & gage concept/design review	Create Process Capability study plan	Re-qualify equipment, tooling & gaging as it moves between supplier site(s)	Review Key Supplier Metrics
Review Android PPAP Requirements with the supplier (per Android PPAP Checklist)	Validation review of "1st Off" tool/part condition(s). Address any issues that can't be	Appearance Approval (if applicable)	Close-out previous phase open issues and key documents
Review supplier's manufacturing feasibility commitment and document(s)	Floor plan layout	Plant Readiness Review	Process Sign-off
Review preliminary capacity study & initial supplier master schedule plan	Update previous phase open issues and key documents	Review status of Key Supplier Metrics	APQP Package Approval
Initiate Supplier Open Issues List or Log	Safe Launch Plan	Update previous phase Open Issue and key documents	Start of Regular Production
Value Stream Map	APQP Progress Report	APQP Progress Report	Final Run at Rate
Supplier Design Process Review	Packaging Plan Review and Approval	Preliminary Run at Rate	

Component Criticality Rating	
A	Android SQE will conduct APQP 1 - 4 w/Supplier
B	Android SQE will conduct APQP 1 and 4 w/Supplier
C	PPAP only to SQE. Supplier is still responsible for maintaining APQP 1-4.

Figure 1

2.2.2.1 APQP Phase 1

This is the "Kick-off" phase. It begins once the supplier has been awarded new business. During this phase Android and the supplier define the key milestones, review the supplier's timeline, conduct, when applicable, a detailed process design review, and establish deliverables and expectations of the supplier for the given component and program.

It is also inclusive of the span of time during which the supplier completes designs for their tooling, assembly lines and assembly cells, gauging and identifies additional capital equipment required to manufacture the component/material. This activity creates the foundation for the phases that follow.

2.2.2.2 APQP Phase 2

This phase starts with the supplier's direction to their manufacturers of the tooling, capital equipment, assembly cells and/or gauging to proceed and ends with the approval to ship the completed items. The supplier shall collect data required to ensure that the manufactured items meet drawing, specification and capacity requirements before approval to ship is given. See Figure 1 for further detail.

2.2.2.3 APQP Phase 3

This is the Pre-PPAP or Pre-Validation phase. This phase starts with the delivery of the tooling, capital equipment, assembly equipment and/or gauging to the supplier's facility. It ends with the completion of the PPAP production run. The critical activity in this phase is the first parts off review, by the supplier, and subsequent tuning of the process to produce components/material that conform to the drawings and specifications. See Figure 1 for further detail.

2.2.2.4 APQP Phase 4

This phase is the Process Validation and Launch stage of the process. During this period the supplier completes and submits the PPAP package.

A final review requires the successful completion and sign-off of the Android PPAP Submission Checklist, for approval to ship.

As stated previously, regardless of component/material complexity, every supplier is expected to conduct and execute an APQP process. Suppliers who wish to use other reporting formats than the ones defined in this SQM shall have written approval from their SQE. A copy of the Manufacturing Feasibility Commitment Statement is required for every new or modified product design. Additionally, a Preliminary Capacity Study may be required for every new or modified product design or manufacturing process based on the nature of the engineering changes.

2.2.2.5 Key Android APQP Events/Forms

1. *Manufacturing Feasibility Commitment Statement* - A document that confirms the supplier's ability and commitment to meeting all specified design requirements.
2. *APQP Timeline* - A document that is used to track event timing to help insure on time PPAP submissions and successful launch.
3. *Key Metrics Report* - A document that the supplier will use to report on APQP progress via an agreed upon set of predefined metrics related to the APQP, PPAP, and Pre-Launch Process.
4. *Value Stream Mapping* - A pictographic layout of all the sub-tier contributors to any given component, or family of components, starting with the raw material supplier and ending with the Android using plant(s). This document shall include services that directly affect the production

material, including heat treat, plating or coating, secondary operations, 3rd party warehousing, etc.

5. *Safe Launch Plan (SLP)* - A joint effort between the supplier and **Android** to have similar Pre-Launch Control Plans at both the shipping and receiving facilities. Safe Launch Plan requires the creation of a Pre-Production Control Plan (PPCP), an enhancement to the supplier's Production Control Plan. The implementation of an elevated, short-term Quality Inspection process is required. SLP will be documented using the "Safe Launch Plan Data and Exit Approval" form and should be signed-off by the Supplier, the **Android** SQE and the **Android** Supplier Quality representative at the receiving facility. Suppliers will be required to submit data to the using plant(s) as part of this process.

   The exit criteria for the SLP are shipment of zero-defect parts that meet either the defined period of time or number of pieces. Any defect discovered during the SLP period restarts the event at "0" pieces shipped.

   Suppliers shipping parts under SLP shall create a separate label, placed on each container, showing "SLP" to indicating the nature of the parts. See **Figure 2** for an example. The noted dimensions are approximate so long as the actual side reflects the intent. This label will be affixed near the identification label on the container.

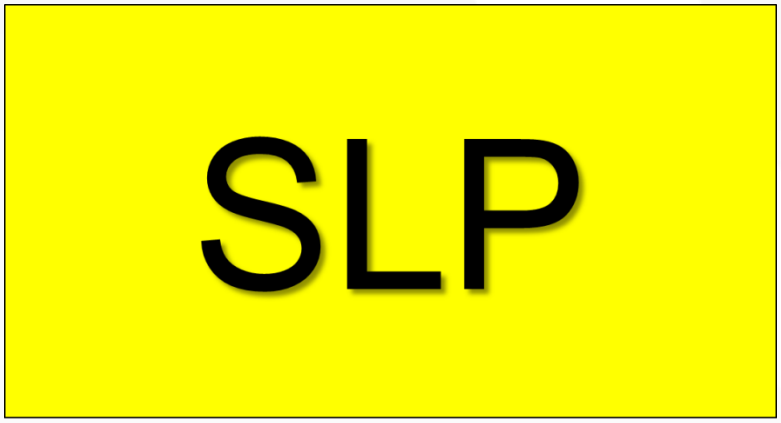

Figure 2

6. *The Supplier APQP Progress Report* - a supplier maintained document that summarizes the progress of key APQP deliverables for key events and multiple components. This status overview is used to document planned completion dates for significant deliverables throughout the APQP process.
7. *The Supplier APQP Open Issues Log* - Corrective Action Plan is the single form used document all open issues, and their respective corrective actions, that arise during the APQP process.

2.2.2.6 Key **Android** Process External to the APQP Manual

In addition to the forms included in the APQP Manual referenced before, there are three processes required by **Android**:

1. Supplier Process Design Review - a formal validation plan review involving an **Android** cross-

functional team and the supplier. This is a key event in the APQP process. Suppliers shall conduct an internal review before attending any held by **Android**. It is also beneficial for suppliers to invite representatives from their sub-tier suppliers to join their team for this meeting. The SQE shall generate an action plan based on the open issues discussed during the review and will be responsible for follow-up with all responsible parties to assure timely closure of those issues.

2. Launch Readiness Assessment – an assessment of the production process status and the supplier's plan to meet new production ramp-up. It allows **Android** to understand the state of readiness of the supplier's process and is a factor in the APQP Launch Summary Report.
3. Supplier Run at Rate - a formalized production capacity study that verifies proper cycle times, quality expectations and yields.

2.2.2.7. Process Flow Diagram

The Process Flow Diagram shall define the entire process flow starting with receiving inspection and finishing with packaging and shipping. It shall include the rework, repair, and reprocess activities. Shall include machine numbers or unique identifiers that reflect what has been approved as part of the process. Suppliers shall identify those operations linked to the manufacturing of features identified by special characteristics

2.2.2.8. Process Potential Failure Mode & Effect Analysis

Unless otherwise specified, suppliers shall use the AIAG Potential Failure Mode & Effect Analysis (PFMEA) manual as the basis for creating this document. The PFMEA shall follow flow established in the Process Flow Diagram. Failure modes shall specifically address designated special characteristics from the **Android** or the **Android** customer drawing in addition to the process and tooling based items. It is strongly recommended that suppliers consider the 8 most common errors for each process step including:

1. Too much (excessive)
2. Too little (omissive)
3. Missed/by-passed
4. Uneven (within part)
5. Intermittent/Erratic application (part to part)
6. Wrong type and Contamination
7. Too fast
8. Too slow

The PFMEA shall be used as a continuous improvement tool. Suppliers shall have a process in place to internally understand and react to their highest risk area. This report may be in the form of a Pareto chart, displaying the RPNs from highest to lowest or a similar approach. This system shall include documentation of recommended actions, and verification of their implementation and effectiveness. Suppliers shall be able to document continuous improvement efforts derived from RPN rankings below their target value for improvement actions.

2.2.2.8. Control Plan

The Control Plan shall appropriately reflect the same steps and flow established by the Process Flow diagram and PFMEA. The Control Plan shall include all features denoted in the Product Characteristic

Matrix, characteristics and notes that are designated as special characteristics. The Control Plan shall include those features, characteristics and notes that are used to create the annual revalidation package.

2.2.2.9 Ford Sub-tier Suppliers

All Ford sub-tier suppliers shall comply to the additional APQP and PPAP requirements available on the Appendix A – Ford Additional Requirements

2.2.2.10 Stellantis Sub-tier Suppliers

All Stellantis sub-tier Suppliers shall comply to the additional APQP and PPAP requirements available on the Appendix B – Stellantis Additional Requirements

2.2.3 Packaging and Labeling

Android and suppliers shall agree upon the packaging plan during APQP, including the following requirements.

There shall be only one part number in a box or packaging unit. All packaging units shall be labeled, and the label shall include:

- **Android** part number with engineering level and part description
- Quantity
- Supplier name and **Android** supplier code
- Lot traceability number and date -this number shall have a direct relationship with the Delivery Note (ASN) supplied. Starting with the Delivery Note, the supplier shall be able to trace all the documents and record. **Android**, at its discretion, may specify additional traceability requirements
- A barcode label applied to each packaging unit. **Android** facilities may specify their own bar coding formats
- Suppliers shall meet the bar code requirements of the **Android** location they are shipping to

Suppliers, regardless of the manufacturing location, shipping to **Android's** facilities, shall meet the requirements found in the **Android** Packaging and Labeling Requirements.

Suppliers providing product to multiple operating units, on a global scale, shall work with each of the locations to assure that the packaging is sufficiently robust to withstand shipment by sea and arrive on time, without damage. **Android** expects their suppliers to conduct periodic dock audits on packaged materials. Evidence of these audits shall be retained with other lot inspection documentation.

2.2.4 Production Part Approval Process (PPAP)

Suppliers shall ensure that the Production Part Approval Process (PPAP) document and sample submissions are in accordance with the requirements of the AIAG PPAP Manual. Suppliers should also strictly adhere to the PPAP submission guidelines described in the **Android** PPAP Checklist. Note for Directed Buy Suppliers, please confirm if OEM or **Android** will be the approval body for PPAP.

Suppliers shall only submit PPAP packages for production-released drawings, and a copy of this drawing shall be included in the submission package. Each supplier is responsible for meeting all these requirements before submission to **Android**, including obtaining **Android** approvals for any

change requests.

Suppliers may be requested to submit the PPAP package in an electronic format by one or more of the product lines and regions. In these instances, suppliers must be prepared to comply with these requests.

Android has established a global PPAP validation requirement that further defines submission levels, including what the supplier submits and/or retains (see Figure 3). The order that the package is to be organized is indicated in the Android Number column. Suppliers should use the forms identified in the AIAG PPAP manual. Suppliers may use their forms only if they are equivalent to the AIAG forms and if they have the written approval of the Android SQE. Android may require their suppliers to submit a validation package that contains additional documents and forms beyond those required by AIAG. In addition, the supplier is responsible for all sub-tier PPAP submissions and approvals, including those suppliers Android has directed for use. An Android PPAP Checklist is available for suppliers to use; assuring that the submission meets Android's expectations.

For all new components, suppliers shall submit with the validation package a copy of ELV/IMDS Approval document. This form verifies the submission of End-of-Life Vehicle component content. Based on the absence of this document, Android will not approve the PPAP submission.

Suppliers of plastic components to Android are required to comply with regrind levels specified on the component's drawing. Components produced throughout the APQP process, including DV, PV, and PPAP, shall be representative of the maximum allowable regrind, and are confirmed by certified laboratory analysis. Additionally, suppliers are responsible to assure that the component's PFMEA and Control Plan specifically address and control this requirement (handling of the use of regrind).

Supplier submission of a non-conforming PPAP package may be recorded as a supplier performance failure and could affect the supplier's performance rating. Android will determine the Level of PPAP submission, and any special requirements if applicable. When applicable, suppliers shall include in the PPAP submission the Engineering Specification (ES) test plan results. An approved/accredited laboratory shall conduct the ES tests.

Note: Standard catalog purchased components that do not go through the PPAP process, based on a product line decision, are to be considered as approved components.

PPAP Submission Requirements

AIAG (Automotive Industry Action Group) PPAP Manual - 4th edition				PPAP Submission Level				
No.	**Document**	**Level**	**Form No. 4 Android in AIAG**	**1**	**2**	**3**	**4**	***5***
1	Design Record		All relevant drawings and specs noted on the drawings	R	S	S	#	R
2	Engineering Change Documents		Any associated relevant EC's to address nonconformance or changes	R	S	S	#	R
3	Customer Engineering Approval(s)		Android's Engineering Sample Evaluation Report; **previously** approved by Android PE	R	S	S	#	R
4	DFMEA (if design responsible)		DFMEA per the supplier's AIAG compliant format	R	R	S	#	R
5	Process Flow Diagram(s)		Process Flow per the supplier's AIAG compliant format	R	R	S	#	R
6	Process FMEA(s)		PFMEA per the supplier's AIAG compliant format	R	R	S	#	R
7	Control Plan(s)		Control Plan per the supplier's AIAG compliant format	R	R	S	#	R
8	Measurement Systems Analysis Studies (MSA)		Supplier's format, but must include part number and study date	R	R	S	#	R
9	Dimensional Results		Supplier's AIAG compliant format	R	S	S	#	R
10	Material and Performance Test Results		Supplier's AIAG compliant format	R	S	S	#	R
11	Initial Process Studies (Capability Studies)		Supplier's format, but must include part number and study date	R	R	S	#	R
12	Qualified Laboratory Documentation		Cert (TS, AL2A, SGS, etc..) and scope for labs performing material and performance testing	R	S	S	#	R
13	Appearance Approval Report(s) - AAR		Supplier's AIAG compliant format	S	S	S	#	R
14	Sample Product		Qty. Per Android SQE or PE Direction	R	S	S	#	R
15	Master Samples		Qty. Per Android SQE or PE Direction	R	R	R	#	R
16	Checking Aids		Drawings and photos of custom gages being used to determine drawing conformance	R	R	R	#	R
17	Records of Compliance w/ Customer Specific Requirements		Information required to support any OEM specific requirements	R	R	S	#	R
18	Part Submission Warrant (PSW)		AIAG or Android PSW form	S	S	S	S	R
	Additional Android Specific Requirements							
19	Safe Launch Control Plan - Product Characteristics Matrix (PCM)		Per the Android APQP Workbook	R	S	S	#	R
20	Evidence of ELV/IMDS Approval		Screen shot of IMDS Approval to support No. on PSW	R	S	S	#	R
21	Packaging Plan and Sample Label		Supplier's format is normally acceptable	R	R	S	#	R
22	Run-at-rate or Capacity Verification		Per SQE direction	R	R	S	#	R
23	Sub-Contractor PPAP Status		Signed & Approved PSWs for each subcomponent	R	S	S	#	R
24	Critical Process Approvals AIAG (CQI 9,10, or 11) for Heat Treat, Plate & Coatings		As required per OE Customer Specific Requirements	R	R	R	#	R
25	Certificate of Review (for EU Supplier PFMEAs)		Evidence of review by Android SQE, SQA, or PE if law prohibits submission.	R	R	S	#	R

S =	Must be included in the PPAP Package submitted to the Android SQE
R =	Must be retained on file per AIAG PPAP guidelinesand make available to Android upon request.
# =	Supplier shall retain and submit to Android upon request.

Figure 3

Android utilizes the PPAP requirements for product approval. All suppliers shall comply with these requirements for all new products and any approved changes to production parts. The Android PPAP owner shall work with the supplier to define the PPAP submission supporting data via the Part Submission Warrant (PSW) and the PPAP production run quantity. The PPAP run parts and the supporting data should be conducted utilizing production intent process. Refer to Figure 3 for

submission requirements.

Level 1	Parts Submission Warrant (PSW) only (and for designated appearance items, an Appearance Approval Report) submitted to Android.
Level 2	PSW with product samples and limited supporting data submitted to Android.
Level 3	PSW with product samples and complete supporting data submitted to Android.
Level 4	PSW and other requirements as defined by Android.
Level 5	PSW with product samples and complete supporting data reviewed at the supplier's manufacturing location. Requires onsite review by Android.

Note: Level 3 is the default level to be utilized for all submissions, unless otherwise specified by an authorized Android representative.

Android will provide a status of:

- Approved – the product or service meets all requirements, and the supplier is authorized to deliver production quantities.
- Interim Approval – the product or service may be delivered for a specific time or quantity while the supplier implements the required corrective actions. The supplier must re-submit the PPAP to Android for approval.
- Rejected – the product or service fails to meet the requirements and the Supplier is not authorized to deliver the product or service. After implementing the corrective actions identified, the supplier must re-submit the PPAP to Android for approval.

Android shall notify the supplier of the concerns and/or issues that result in a product status of Interim Approval or Rejected. Refer to the AIAG PPAP manual for additional information on product approval.

Note: For directed-buy parts where the Android customer is responsible for supplier PPAP approval, the supplier is responsible to send copies of the PPAP package to the Android SQE. The same requirement applies to any PPAP element that may change before, during and/or after the launch phase.

2.2.5 Traceability

Suppliers to Android shall have an effective lot definition and a traceability procedure. The shipper number will be linked to the lot traceability procedure in such a way that the delivered product can be traced back to the raw material. Unless otherwise approved in writing by the Android SQE a lot shall consist of one shift, or eight hours of production, whichever is smaller. Each lot shall be traceable back to the raw material used. The lot definition shall reflect all significant processes influencing the component/material, with the shipping lot number reflecting the last value-added operation. Suppliers shall ensure that their lot traceability system maintains its integrity throughout entire. extended supply chain, including not only raw material, but also purchased components/products. Many components lifeline begins and ends within the facility of the supplier.

There are those components, however, that do require processing by outside companies to finish the process stream. These may include heat treat, coining, grinding, coating, and other various processes. If the original lot were batch processed through the different secondary processes, then there would be no need to change the original lot number. However, if the batches are split at a

secondary processor, then the lot number for each of the batches should be unique. Once manufacturing/assembly begins, a lot number is changed if:

- Specific lot maintains a one-to-one relationship between the finished good serial number and the components' lot numbers traceability for certain programs. To clarify the difference between this and general traceability, consider a supplier who molds a given component. After molding, two rivets are pressed into the molded part.
- One shift of production or eight hours is reached.
- The lot number changes on the raw material being used.
- When the components undergo another value-added process and the original lot is divided during processing.
- The lot number changes on any one of the components being used.

When required, the supplier may need:

- To implement serialized (maintains a one-to-one relationship between the finished good serial number and the components' serial number) lot traceability, or
- General traceability is where there is no lot traceability between the molded component and the assembled parts. Specific traceability would be where the lot numbers of the assembled components are traceable through the lot number of the stamped component. **Android** will define the required retention time for Lot Traceability records for safety/critical parts.

2.2.6 Special Characteristics

At a minimum, suppliers shall implement process controls for Special Characteristics as designated on **Android** customer's drawings. Additional characteristics deemed relevant to be predictors of process stability and feedback, should also be identified in the supplier's Control Plan. These relate to product safety, government regulation, product performance, and the ability to assemble product or customer satisfaction features. These are identified by various symbols, requiring specific levels of special controls and process capability.

The supplier must calculate and report the process performance index, Ppk, as an estimate of the process capability. For those characteristics/features showing a Ppk of less than 1.67, the supplier must create an action plan that defines both containment and process improvements. Process capability can be conducted with both variable and attribute data. The minimum acceptable sample size for variable data is 100 pieces, and for attribute is 300 pieces, unless a sample size exception is approved by the **Android** SQE

2.2.7 Prototype Fabrication, Quality Evaluation, Pre-Production Process Changes

For the fabrication of prototype or pre-production parts, suppliers shall imitate the planned production process as closely as feasible. For these prototypes, **Android** may require that the suppliers provide material, dimensional, performance, or process data. If the prototype and production suppliers are different, the prototype supplier shall share with the production supplier the process knowledge gathered in prototype fabrication. Proprietary information may be withheld by prior agreement with **Android**. Once a supplier starts providing parts, as part of the process development and validation stage, any changes to the process require notification to **Android** of those changes. These changes may include:

1. Outside or sub-tier suppliers

2. Addition/deletion of capital equipment
3. Tooling and/or gages
4. Manufacturing methodology, and
5. Internal secondary processing

Suppliers of proto-type parts, when required, shall respond to material concerns and requests for Corrective Action.

2.3 Production Processes

2.3.1 Introduction

Once the manufacturing process for producing a component is successfully validated, the next phase encountered is that of serial production. During this stage there are several requirements each supplier should be fully aware of and follow. Key areas include change management, non-conforming material management, sub-tier supplier management and annual revalidation. Additional expectations are also detailed in the following sections.

2.3.2 Supplier Request for Change (SCR)

Suppliers shall submit a written request for process change and obtain Android approval prior to implementing the change. This includes changes at Sub-suppliers throughout the supply chain.

In general, suppliers shall submit a written request for all items listed in Table 3.1 of the AIAG PPAP Manual. Suppliers are also required to submit all supporting validation data including necessary dimensional reports, performance testing, before/after process parameters, updated APQP documentation (PFMEA/Control Plan) and a detailed timeline demonstrating proper change control that identifies necessary safety stock/bank requirements including timing for Android/Customer validation timing and designated resources to manage the change.

Android must act in accordance with all customer requirements for change notification and as such, Android expects the supply base to comply correspondingly. Change approval may take an extended period when Android and/or customer approval is required. **Changes shall not be implemented prior to the receipt of written approval from Android. VERBAL REQUESTS WILL NOT BE ACCEPTED.**

Below are the defined notification requirements, similar to Table 3.1 of AIAG 4th edition PPAP manual:

1. Use of other construction or material than was used in the previously approved part or product.
2. Production from new or modified tools (except perishable tools), dies, molds, patterns, etc., including additional or replacement tooling.
3. Production following refurbishment or rearrangement of existing tooling or equipment.
4. Production from tooling and equipment transferred to a different plant location or from an additional plant location or supplier plant location.
5. Change of subcontractor for parts, non-equivalent materials, or services (e.g., heat treating, plating, protective or functional coatings) that affect Android and/or Android customer fit, form, function, durability, or performance requirements.
6. Product produced after the tooling has been inactive for volume production for twelve months or more.

7. Product and process changes related to components of the production product manufactured internally or manufactured by subcontractors that impact fit, form, function, performance, and/or durability of the salable product. Additionally, the supplier shall concur with any requests by a subcontractor before submission to Android and its respective customer base.
8. Change in test/inspection method - new technique (no effect on acceptance criteria)

Suppliers ARE responsible to communicate and obtain approval for all tiers of supply chain within the manufacturing process!

Consequences of non-communicated or unauthorized process changes at the supplier manufacturing facility or any sub-supplier facility could result in any or all the following actions:

Written notification from Android to supplier requesting the supplier to contact their registrar of the nonconformance,

Supplier commercial status change to New Business Hold (NBH) or Bid Suspension for a period of 3-6 months, depending on root cause of non-conformance, issuance of a formal customer complaint (critical) and immediate third-party containment of affected component/product,

Potential request for independent, third-party audit of affected supply chain, including ALL affected sub-tier suppliers involved.

Reinstatement of supplier to 'Good Standing' will depend on suppliers' ability to develop effective preventative actions and subsequent verification by Android accordingly.

Authorization to ship production material after the change is communicated through a signed PSW after Android has approved the PPAP for the requested change, and that change is coordinated through the using Android facility or facilities.

Off-Line rework, not included in the original Control Plan, is considered a process change and suppliers shall obtain Android approval for it as specified above. Rework shall be supported by standardized work instructions and inspection instructions.

The inspection instructions shall be consistent with an updated production process Control Plan. Android will require special identification and segregation of the reworked product.

2.3.2.3. Non-Conforming Material

When the supplier's quality system detects lack of conformance to requirements, the supplier must immediately identify and segregate non-conforming material to prevent shipment of that material. The supplier must maintain a material disposition procedure that requires non-conforming material and scrap to be isolated from the normal production flow. Operations that produce non-conforming material shall be stopped immediately and promptly corrected. Non-conforming material must not be returned to the normal production flow until the material has been sorted and/or reworked, inspected, and approved. The supplier must obtain written approval from Android to use operations, which differ from the normal production process to repair or salvage non-conforming material. Reworked or sorted material must receive independent quality inspection before being returned to the production flow.

A specific containment area, well defined with limited access (secured) and segregated from the normal production flow, must be available. Specific identification must be attached to the non-conforming material.

Non-conforming material must not under any circumstances be shipped to Android!

The Android plant using the material is to be immediately notified if it has been discovered that non-conforming material has been shipped. Notification shall go to the Quality Manager and the Materials Manager, or in their absence, the Operations Manager. The suppliers shall notify all Android facilities receiving the same or similar affected product. The supplier's procedure shall provide a reaction plan that alerts all customers when quality issues/nonconformities are discovered with raw materials, parts, or services.

Non-conforming material detected at Android and/or at Android customer will be returned to the supplier except when schedules dictate an immediate sort is required to support production. Android determines that this sort will be performed on site either by the supplier or at the supplier's expense. The supplier will be immediately notified of the actions that will be taken, and when required, the supplier will have available personnel to sort on site to support production schedules.

Non-conforming material that cannot be reworked will be scrapped at Android after giving the supplier the opportunity to review it. Samples will be returned to the supplier when required for analysis. Another option is that the non-conforming material will be returned to the supplier at the supplier's expense. Ten (10) working days after supplier notification is considered ample time for final disposition. If the supplier fails to respond within this time period, Android will automatically scrap the material at the supplier's expense.

When a design change creates obsolescence, the obsolete material will be appropriately dispositioned as non-conforming material. Obsolete parts for which a rework procedure is deemed appropriate will be identified as non-conforming until the rework is complete. The rework procedure must have prior approval by Android upon receiving an Android concern for quality or delivery, and the supplier shall:

1. Implement a containment action within 24 hours or as directed by the Android SQE.
2. Within five (5) working days, unless otherwise specified, the suppliers shall submit a corrective action plan or a reasonable approach to developing one in case of complex issues. Corrective Actions must be implemented within fourteen (14) working days.
3. These targets are standard, but the concern creator can establish other target dates, if needed. Suppliers shall use a systematic problem-solving method such as 8D, 5 Phase, 7-Step, etc. Formal customer concern issuance, response and tracking are all online, and the suppliers shall participate in the Android online system.

The Materials Rejection process involves five steps:

1. Identification and definition of problem (Android)
2. Reporting and notification process (Android)
3. Response and corrective action (Supplier)
4. PPM defects and rate of occurrence (Android)
5. Supplier Chargebacks (Android)

Suppliers are responsible to use or develop their own systems that comply with Android's materials rejection reports and corrective actions requirements.

2.3.4 Supplier Deviation Request

Suppliers shall request, in writing, Android's approval before shipping material under deviation. A plan to return to normal production and the time required to do so shall be submitted at same time

as the written request. Material shipped under an approved deviation shall be labeled with the Deviation Number and its expiration date.

First shipment of parts using modified process and/or components shall be identified using A4 or A3-size label detailed in Figure 4 (each box and container):

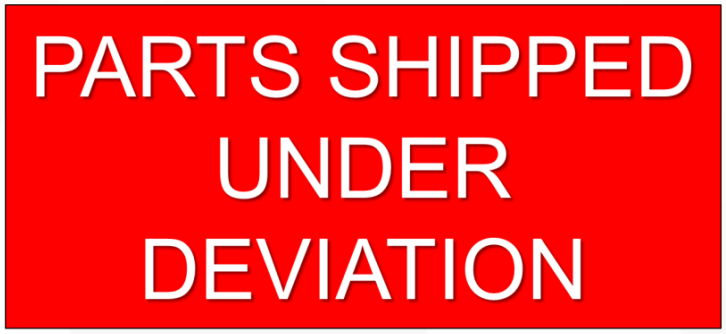

Figure 4

2.3.5 Corrective Action

The supplier is to provide timely corrective action when notified of non-conforming parts. An initial response from the supplier is required within twenty-four (24) hours from the time of notification with written corrective actions submitted within two weeks (14 calendar days). An extension of time may be granted by the **Android** SQE based upon the corrective actions required or the nature of the non-conformance.

The format of the written corrective action shall follow the 8D methodology.

2.3.6 Supplier Audits

Android employs several audit and assessment tools in its Supplier Development Process. This starts with the assessment of a potential new supplier who desires to enter a business relationship with **Android** to 2nd Party compliance audits to the latest version of IATF16949:2016.

The Audit hierarchy is as follows:

1. IATF16949:2016 or ISO9001:2015 Standard criteria
2. Supplier Assessment - An audit conducted with a potential supplier
3. Launch Readiness Assessment - An assessment conducted to determine a supplier's readiness for a flawless launch
4. Process Audit - An audit conducted to assess a supplier's process and quality system specific to a production part

Any supplier of production material to **Android** may be requested to participate in one, or more, of the audit types defined int the above hierarchy. When notified of a future scheduled audit the supplier, to best prepare, should conduct an internal audit before the **Android** audit team arrives. **Android** may, at its discretion, utilize independent auditors. These individuals represent **Android** and will audit the supplier's processes to establish conformance to validated quality systems. To ensure supplier processes continue serving their design purposes, **Android** will conduct annual Process Audits.

2.3.7 Sub-Supplier Management

Suppliers of Android shall have capabilities to manage their respective suppliers (regardless of how directed) including APQP disciplines, supplier scoring/rating and as appropriate periodic auditing. Android, when it deems necessary, will audit the critical processes of the sub-tier suppliers to assure that proper controls are in place throughout the entire supply stream. Suppliers of Android shall ensure they audit and manage critical processes such as heat-treating and plating and, when directed, use the designated AIAG CQI format(s).

Suppliers systems shall include a function that tracks and reports on their sub-supply base quality and delivery performance. Supplier shall be able to demonstrate that they manage their suppliers' issues through documented corrective actions and verification activities. A systematic and disciplined approach to problem solving shall be implemented; an action plan shall be set up by the sub-suppliers and verified by the supplier.

The supplier shall define expectations for each sub-supplier including:

- Support of APQP requirements
- Identification of their role in the supplier's and Android's products and processes
- Involvement in problem solving and corrective actions

The supplier shall work with sub-suppliers in order to meet the requirements provided in this SQM. Areas of emphasis include:

- Verification of purchased products
- Incoming product quality
- Sub-supplier monitoring, including run-at-rate events to determine actual capacity

The supplier should collect objective data on the performance of its sub-suppliers. This data should be used to generate a performance ranking or scorecard. Performance metrics with goals may include:

- Delivered product quality – Nonconforming Parts Per Million (PPM)
- Delivery schedule performance with incidents of premium freight
- Lead-time improvement
- Major Disruptions
- Special status notifications from sub-supplier pertaining to quality or delivery issues

Continuous improvement activities should be driven by a sub-supplier's performance against such metrics.

In some cases, sub-supplier performance monitoring may not be conducted due to the business, product or other quality considerations. The supplier may be required to notify Android of such exceptions. Refer to the Sub-tier Supplier Management Process Guideline (AIAG CQI-19) for additional information on sub-supplier management.

2.3.8 Annual Revalidation

Unless otherwise specified, a complete annual layout inspection, including all sub-components, is required for all parts. All suppliers shall annually revalidate their respective production components and be able to provide the results to Android within forty-eight (48) hours of the request. Suppliers shall compile revalidations and document this requirement in the Production Control Plan for all parts supplied regardless of the product line/region. Those features/characteristics/notes that will be part

of the revalidation package need to be designated such at the time of initial PPAP, but at a minimum shall also include a PSW and valid material certification report(s) not more than twelve (12) months old, a full dimensional report, and a capability study for all print designated special characteristics.

2.3.9 Supplier Facility Access

By prior notice, suppliers shall allow **Android** and **Android** customers' access to both their facilities and those of their suppliers, for the purpose of evaluating parts, processes, documents (i.e., PFMEA, Control Plan, Instructions, records), methodologies and systems used in manufacturing of **Android** products. **Android** may, at its discretion, use a 3rd party independent company to perform such evaluation

2.3.10 Contingency Plan

Suppliers shall develop contingency plans for potential catastrophes disrupting product flow to **Android**, and advise **Android** immediately (within hours, not days) in the event of an actual disaster. In an actual catastrophe, suppliers shall provide **Android** access to **Android's** tools and/or their replacements.

2.3.11 Document and Product Sample Retention

Suppliers shall retain documents and product samples for the time the part is active (a part is active if it is being supplied to **Android** for original or service applications) in production plus a minimum period of seven (7) years. Parts used on multiple programs may require an exceptionally long retention period. The supplier shall retain a master sample from each cavity, die, and pattern for the length of time that the component/material is active plus one year. The master sample shall be identified as such and shall show PPAP submission reference and **Android** approval date.

2.3.11 **Android** Property – Tools

All tools, manufacturing, test, or inspection equipment belonging to **Android**, or their customers, will be permanently marked to clearly show that they are property of **Android** (ISO9001:2015-2015 8.5.3), or the customer. These tools will only be used for **Android** products unless an authorization in writing exists. Contact your Purchasing concerning questions and information regarding this subject.

2.4 Continual Improvement

2.4.1 Introduction

Android considers supplier continuous improvement to be an integral part of the overall quality management system continuous improvement process. At a minimum, suppliers should develop and present plans that improve internal systems that address and support flawlessly launching of new products/components/sub-systems, value enhancements and cost competitiveness, and achievement of agreed upon quality targets, with a plan to achieve zero defects in support of on-going operational excellence. These plans should be presented at least annually during the **Android** Annual Business Review process scheduled by **Android** Purchasing.

This plan should include Lessons Learned from previous launch, cost and quality issues, and how these lessons have been incorporated into respective continuous improvement projects. Suppliers should also be prepared to discuss their intent to maintain (or achieve) strategic status.

Android's suppliers shall use the fundamentals outlined in IATF16949:2016 or ISO9001:2015 requirements (as appropriate) as a platform for organizing continuous improvement plans, especially the use of the DFMEA and PFMEA as tools for targeted risk reduction and process and product improvement activities.

The supplier shall strive to continually improve its products, processes, and systems. The supplier shall conduct regular reviews of:

- Quality policy and objectives
- Audit results
- Data analysis
- Corrective and preventive actions

The process of continuous improvement must be included in the goals and objectives of the entire supplier organization. Continuous improvement can reduce potential risks and prevent possible non-conformances.

2.4.2 Supplier Scorecard

The Supplier Scorecard is a means to help communicate our expectations to the supply base. Suppliers are expected to use this tool to help identify opportunities for continuous improvement in the areas of quality, cost, delivery and service. Internally, these measures provide valuable data to assist Android Purchasing in sourcing decisions. Be aware that this scorecard is shared with our affiliate companies. Poor performance will result in new business hold and potential desourcing.

2.4.2.1 Access

All production suppliers to Android production facilities are expected to access monthly. The system provides data by Android plant as well as a roll-up of all reporting Android facilities. Suppliers are provided with a log-in password to allow access to the Supplier Scorecard. Passwords may be obtained through the Purchasing Department.

2.4.2.1 Scorecard Metrics

Depending on the type of components or services provided to Android there are different scorecard metrics.

Assembly Component - Supplier Scorecard Categories
Claims at Android
Past due delivery schedule
Premium freight
Downtime/Impact at Android assembly line
Claim at OEM customer
OEM customer Downtime
Plant disruption at OEM
Warranty claims / Recalls

Logistic Providers - Supplier Scorecard Categories
Reliability of Inbound Delivery
Equipment
Damage or Loss
Rates
Billing Accuracy

InDirect Providers - Supplier Scorecard Categories
Delivery Performance of Service
Quality of Service provided
Service Provider Accreditation

2.4.3 Supplier Improvement Process

2.4.4 Controlled Shipping

Controlled Shipping (CS) Level 1 and CS Level 2 will be levied against the supplier when the **Android** plant has determined that the supplier does not have the necessary safeguards preventing non-conforming products from reaching the **Android** manufacturing location or its customers.

CS1 is initiated by **Android** and performed at the supplier location by supplier employees. Controlled Shipping Inspection process must be performed in a controlled area of the plant. Secondary inspection data must be collected, and inspected product must be certified and data provided to **Android** receiving plant.

CS2 includes all of Level I, with an added inspection by an **Android**-approved 3rd party. Third party is selected by the supplier and approved by **Android** and paid by the Supplier. In some instances, **Android** may require that the 3rd party inspection to be performed outside the supplier facility.

Based on the severity of the incident, **Android** may elect to go directly to CS2. **Android** SQA will review irreversible corrective action and authorize removal or renewal of CS when appropriate, normally per the exit criteria noted in the CS2 induction letter. A record of CS incidents will be maintained for 12-month period on the Supplier Scorecard.

2.4.5 Cost of Poor Quality (COPQ)

Suppliers have financial responsibility for non-conforming parts, delivery delays, and their effects and for non-compliance with **Android** quality standards.

Supplier Cost Recovery (CR) will be initiated by **Android** when it has been determined that the supplier is responsible for quality and or delivery shortcomings. Cost Recovery will be communicated using the **Android** “Supplier Debits and Returns” system.

All costs that are incurred by **Android** due to failure of supplied products and services to meet quality and delivery requirements are documented and charged back to the supplier who is responsible for the failure. This process is outlined in five steps.

1) Confirm supplier is responsible for the rejection - Android
2) Notify supplier of rejection - **Android**
3) Document costs related to the rejection
4) Advise supplier of the rejection for a 10 calendar-day review
5) Debit the supplier for costs after 10-day review

Figure 5 outlines a non-exhaustive list of examples of occurrences when cost recovery will be generated

New Product Launch	Production or Assembly Processes	Delivery	Customer Issues
• Any cost incurred as a result of supplier failing at PPAP submission • Any costs incurred as a result of supplier failing at PPAP Run at Rate or other readiness milestone. • Costs incurred by unauthorized changes resulting in customer concern for Android or end customer.	• Lots rejected at Receiving Inspection • Downtime • Sorting/Rework • Overtime • Line speed Reduction • Additional manpower • Line changes due to material availability • Equipment breakage • Additional outside processing or inspection • Tooling and fixturing for rework • Premium costs paid to support production • Material and Process Value Added losses • Android or contracted outside personnel traveling to support problem resolution at supplier	• Any costs incurred as a result of supplier late delivery (i.e. premium freight inbound or outbound or any customer penalties) • Costs incurred due to part identification and labeling • Shipping document errors	• Rework at customer premises • Replacement of material at customer • Charges from customer • Internal containment to prevent quality issues at customer, such as quarantine, added inspection, certification of product, etc. • 3rd Party Inspection • Expedited freight • Recall activities • Warranty claims • Costs incurred by unauthorized changes resulting in customer concern for Android or end customer • Administrative costs from customer or Android complaints.

This pulled in some of the **Android** and Accuride concepts – I did add costs associated with unauthorized changes and not following PPAP change notification.

2.4.6 Warranty

Supplier has 10 days to complete a warranty complaint and/or part evaluation. After 21 days, the claim will be processed and the supplier will be responsible for internal and external charges to manage the closure of the customer claim. The evaluation period begins with receipt of the product for evaluation.

3. Code of Conduct

Android suppliers must adhere to and acknowledge Android's supplier code of conduct located on our supplier portal.

The supplier portal address is Supplier Portal - Android Industries (android-ind.com)

4.0 Glossary

AIAG	**A**utomotive **I**ndustry **A**ction **G**roup. A North American automotive organization, which publishes standards. Not-for-profit association where professionals from a diverse group of stakeholders work collaboratively to streamline industry processes via global standards development and harmonized business practices (www.aiag.org).
APQP	**A**dvanced **P**roduct **Q**uality **P**lanning. A structure activity that plans, tracks and reports the development of a process to manufacture a component/material/ assembly to meet customer requirements.
ASN	**A**dvance **S**hipping **N**otice.
Audit	Systematic, independent and documented process for obtaining and objectively evaluating evidence to determine the extent to which criteria are fulfilled.
CAR	**C**orrective **A**ction **R**equest. A formal request to take action to eliminate the cause(s) of an existing non-conformance or other undesirable situation in order to prevent recurrence.
Confidential Information	1) Information, knowledge or data disclosed by Purchasing to supplier, regardless of whether disclosed in written, tangible, oral, visual or other form, including, without limitation, sample products, equipment, software, or other objects or material, provided by Purchasing to supplier, and 2) information, knowledge or data which was obtained from visits to Purchasing facilities by supplier.
Control Plan	Methodology to ensure all process outputs remain in a state of control. The plan is used and maintained throughout the product life cycle and is responsive to changing conditions via written descriptions of the actions required at each phase of the process from receiving through shipping.
CR	**C**ost **R**ecovery. Similar to Supplier Chargeback.
CS	**C**ontrolled **S**hipping.
Defect / Non-Conformance	Non-fulfillment of a requirement related to an intended or specified use, including safety considerations and regulatory requirements.
Deliverable	See Product definition.

DFMEA	**D**esign **F**ailure **M**odes **E**ffect **A**nalysis. A document generated during the design phase that identifies and establishes controls for potential failures in a component/material/assembly.
DV	**D**esign **V**alidation. Testing that assures that a component/ material/ assembly meets the users' requirements.
ELV/IMDS	**E**nd-of-**V**ehicle-**L**ife / **I**nternational **M**aterials **D**ata System. **E**LV is a regulatory requirement to eliminate hazardous materials from current production components. IMDS is the data system used to collect and report on the materials that make up components and assemblies.
FMEA	**F**ailure **M**odes and **E**ffects **A**nalysis: A preventive analytical technique to methodically study the cause and effects of potential failures in a product or a process. The product or process is examined for all the ways in which a failure can occur. For each potential failure, an assessment is made of its effect on the system and its seriousness, and a review is made of the action being taken (or planned) to minimize the probability of failure or to minimize the effects of the failure.
ISO	**I**nternational **O**rganization for **S**tandardization: An international technical specification for quality management systems
LRA	**L**aunch **R**eadiness **A**ssessment. An assessment conducted one or more times throughout the APQP process to determine a supplier's state of readiness to start serial production.
Major Disruption	Special event resulting from products or services that do not meet the agreed quality and delivery specifications. Results in non-standard operations including: Quality Spills (product out-of-spec, stop shipments, production interruption, etc.) and Stock Outs (product not available).
NBH	**N**ew **B**usiness **H**old: A control that prevents suppliers from quoting or receiving new business until conditions are satisfied to address deficiencies identified by Android. The supplier may be removed from the approved supplier list.
PDP	Android **P**roduct **D**evelopment **P**rocess: Enterprise wide process to deploy world-class standard product development processes; use systematic feedback for continuous improvement; implement a common approach to project and program management; Invest in our employees' capabilities.
PFMEA	**P**rocess **F**ailure **M**odes and **E**ffects **A**nalysis. A team process that identifies and controls potential failures before the product goes into production.
PPAP	**P**roduction **P**art **A**pproval **P**rocess: Defines generic requirements for production part approval, including production and bulk materials. The purpose of the PPAP is to determine that customer engineering design record and specification requirements are properly understood by the supplier. The supplier shall demonstrate that the

	manufacturing processes have the potential to produce product consistently meeting these requirements during an actual production run at the quoted production rate.
Ppk	The performance index of a process. Normally used as part of the PPAP process and should be > 1.67.
PPM	**P**arts **P**er **M**illion: Reject rate determined by number of parts rejected divided by the number of parts provided times 1,000,000.
Preventive Action	Action to eliminate the cause of a potential non-conformance or other undesirable situations.
Process Capability	The maximum amount of inherent variation in a process. A statistical study performed on a process to determine if it is capable of meeting the precision and/or accuracy according to specifications (Cp, Cpk, Pp, Ppk and Sigma values)
Product	The term “product” used in the Android Supplier Quality Manual refers to any kind of product or service. This includes the physical “manufactured” product, a provided service, engineering work such as drawings and specifications or any other internal product provided in a series of processes. The term "deliverable" is used interchangeably with the term product in the Supplier Quality Manual.
PSW	**P**art **S**ubmission **W**arrant: The warrant contains supplier, part information, required documentation, the supplier application warrant and disposition. The submission approval authorizes the supplier to start production based on PO requirements.
PV	**P**roduction **V**alidation. Testing that assures that the manufacturing process produces product that meets the customer’s requirements.
Purchasing	Purchasing shall mean the Android legal entity identified as Purchasing in the applicable contracting document (e.g., purchase order or supply agreement).The term “Purchasing” is used interchangeably with the term "Android" in the Supplier Quality Manual. The term "Android" or "Purchasing", as defined above, may include one or more Strategic Business Units (SBU).
QMS	**Q**uality **M**anagement **S**ystem: A formalized system that documents the structure, responsibilities and procedures required to achieve effective quality management. It is based on the requirements detailed in ISO9001:2015:2008 with additional enhancements.
Service	A value-added action performed to fulfill a contracted demand.
SBU	**S**trategic **B**usiness **U**nit: Android is organized into different operating units, based upon products or customer types.
Shall	Use of the word “shall” indicates a mandatory requirement(s).
Should	Use of the word “should” indicates a recommended requirement(s).
SLP	**S**afe **L**aunch **P**lan. A supplier’s documented plan to provide increased assurance for products. This plan is on the Pre-Production

	Control Plan.
SQE	**S**upplier **Q**uality **E**ngineer. A quality engineer who is primarily responsible for APQP activity and development of a supplier's systems and who is responsible for suppliers' quality after the start of production.
Supplier	Shall mean the legal entity identified as the supplier in the applicable contracting document (e.g., purchase order or supply agreement).

Appendix A: Additional Ford Program Requirements

Based on the customer specific requirements for Ford Motor Company, there are additional requirements for suppliers that will have production parts that ultimately part of a program for Ford.

Additional Ford Specifications that need to be reviewed and assessed for applicability for Ford Programs. Supplier Quality team will determine applicability of these specifications for your program.

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1.7.1 Environmental Guidelines (additional requirements)

For suppliers of production parts that will end up on Ford modules, the customers commitment to the environment requires the following items:

- Suppliers must have or gain certification to ISO 14001.

2.2.4 PPAP (additional requirements)

Phased PPAP

The PPAP for a part utilized on a Ford program will be required to complete a phased PPAP approach.

PPAP Phase 0

Objective - To verify that the supplier can produce parts at the quoted production rate for one hour, using production tooling, equipment, and personnel.
Deliverables - Run-at-Rate report, including process flow diagram, process FMEA, control plan, measurement system analysis, dimensional results, material performance results, appearance approval report, and engineering change documentation.

PPAP Phase 1

Objective - To verify that the supplier can produce parts that meet all Ford engineering design record and specification requirements.
Deliverables - Quality Verification report, including all the deliverables from Phase 0, plus initial process studies, bulk material requirements checklist, and IMDS submission.

PPAP Phase 2

Objective - To verify that the supplier can produce parts consistently at the quoted production rate for eight hours, using production tooling, equipment, and personnel.
Deliverables - Production Verification report, including all the deliverables from Phase 1, plus process capability studies, functional trial requirements, and customer-specific requirements.

PPAP Phase 3

Objective - To verify that the supplier can produce parts at the required production volume for the life of the program, using production tooling, equipment, and personnel.
Deliverables - Capacity Verification report, including all the deliverables from Phase 2, plus capacity analysis, contingency plans, and lessons learned.

Deliverable timing will be defined by Android to suppliers based on launch timing expectations

Appendix B: Additional Stellantis Program Requirements

Based on the customer specific requirements for Stellantis, there are additional requirements for suppliers that will have production parts that ultimately part of a program for Stellantis.

1.7.1 Environmental Guidelines

For suppliers of production parts that will end up on Stellantis modules, the customers commitment to the environment requires the following items:

- Suppliers must have or gain certification to ISO 14001.