

[Place, Date]

QUALITY SPECIFICATIONS

Buyer: _____, a Company duly incorporated under the law of _____ and having its registered office at _____

Seller: _____, a Company duly incorporated under the law of _____ and having its registered office at _____

(hereinafter also referred to individually as “Party” and collectively as “Parties”)

PREAMBLE

The present Quality Specifications are based on the Buyer Purchasing General Terms and Conditions (GTC-DIR-2020-REV.02) and shall apply to any and all supply relations between the Seller and Buyer.

When used in this Quality Specifications, the words and expressions which have initials with capital letter shall have the same meaning given to them in the Buyer Purchasing General Terms and Conditions (GTC-DIR-2020-REV.02).

The present Quality Specifications shall apply to:

- a. all supply contracts entered into between Marelli Europe S.p.A. and Seller;
- b. all supply contracts entered into between any Subsidiaries of Marelli Europe S.p.A., Marelli Holding USA LLC and/or any of its own Subsidiaries, Marelli Automotive Lighting Reutlingen (Germany) GmbH and/or any of its own Subsidiaries, on one side, and Seller (and/or any of its own Subsidiaries), on the other side, provided that a relevant opt-in letter has been entered into between such parties.
- c. all accepted Purchase Orders issued by Marelli Europe S.p.A. and/or any of its own Subsidiaries, Marelli Holding USA LLC and/or any of its own Subsidiaries, Marelli Automotive Lighting Reutlingen (Germany) GmbH and/or any of its own Subsidiaries to Seller (and/or any of its own Subsidiaries).

Seller must continuously ensure and demonstrate a full commitment to work on effective plans for continuous improvement, which is a key point to reach the zero (0) defect goal.

It is Buyer policy not to execute functional, visual and/or dimensional verification on in coming products supplied by Seller (“Products”), but to

demand to Seller to work in self-certification and deliver under 'Direct Acceptance' procedure; 'Direct Acceptance' means that Seller shall deliver the Product under his own responsibility in self-certification. Even in case Buyer would decide to execute any functional, visual and/or dimensional verification on in coming Products, Seller remains in any case fully responsible for the quality of the Products.

It is Buyer policy to apply the World Class Manufacturing methodology "8 stages" for in coming material, aimed to move controls from product to process causal parameters, by considering Buyer & Seller as a unique and common process to be tuned to satisfy customer quality and minimize the costs. In case of quality concern, the Parties will jointly cooperate in order to determine each Party's liability and all the related costs to be charged.

Type of non-quality costs, typical unit cost and automotive rules for calculation of warranty costs, are described in the Exhibit B "Non Conformance costs & Liabilities".

Buyer may at its discretion keep defective Products until the debit note is closed between Buyer and Seller, unless the case of a pending legal action or suit between the Parties or unless otherwise agreed upon between the Parties. After the closure of the debit note, Products are scrapped by Buyer at Seller's expenses, unless otherwise agreed upon between the Parties.

Seller must ensure to respect and to follow global worldwide and local rules, Directives and Regulations that the Products and the final application of Buyer must comply with, also by providing documentation in the agreed format and medium.

Directives and Regulations, as well as the format and medium to be used, are listed, as a reference which does not exclude the applicability of not listed Directives/Regulations, in the Exhibit C "Conformity to Directives and Regulations".

1. AUDITS

1.1 Quality System

The quality system of Seller has to be certified to ISO/TS - IATF16949 by an external certified body. Seller must provide copy of certifications and each extension, suspension or removal.

In other cases, an official planning (i.e. an official schedule issued by a third party certified body) to reach this certification, within PPAP 18 months from signature date of these Quality Specifications or upon Buyer request, must be provided.

Seller's failure to provide a certification plan and to achieve the certification within the specified timeframe is a material breach of these Quality Specifications.

In case of companies not subjected to ISO/TS – IATF 16949, ISO 9001 certification (last applicable revision) is the minimum accepted requirement.

Buyer requires Seller to source its Products, in turn, from certified sub-Suppliers having a Quality System certified according to ISO TS - IATF 16949 or having an official planning to get ISO TS - IATF 16949 within 18 months from signature date of these Quality Specifications or upon Buyer request (means an official schedule issued by a third party certified body).

Sellers certified ISO 14001 are preferred. A plan to reach this certification must be provided if certification is not yet reached.

Buyer also suggests Seller to apply rules according to OHSAS 18001.

For Seller that delivers a Software (SW) a product or a component / module with SW embedded, Buyer requires that Seller shows the maturity of its SW development process through a SW assessment (according to AUTOMOTIVE SPICE standard, perimeter HIS), realised by an external certified body.

Buyer requires level 3 as minimum maturity level of Seller SW development process.

The standard reference perimeter to be covered is the “HIS scope”. If the specific project constraints introduce additional processes that should be covered, they must be explicitly indicated by Seller in writing and agreed.

1.2 Process Audits and verification of Production Capacity

Every process audit (“Process Audit”) shall be executed according to VDA 6.3 norm (Process Audit requirements are further described in Exhibit D entitled “Audits”).

In case Customer requests specific quality requirements, such as the application of AIAG Continuous Quality Improvement (CQI) Guide lines, the Parties agree and acknowledge that such requirements will be added to the verification done during the Process Audit by Buyer.

1.2.1 Buyer performs Process Audits typically, but not limited in the following cases:

- New components in project.
- New Supplier.
- New technology with a running Supplier
- Tools and Processes transfer:
 - Marelli to supplier
 - Supplier A to Supplier B
 - Supplier new facility transfer
 - Supplier BCC location transfer
- Components Carry over.
- Important Process modifications and changes.

- New Testing equipment/station.
- Capacity increase:
 - Duplication of production lines
 - Addition of workstations
 - ...
- Degradation of Quality Performance.
- Non-compliance with customer or legal requirements.
- Product and Process development

Buyer informs Seller for the Process Audit minimum 4 weeks in advance, unless shorter notice in case of urgency.

Buyer may request Seller to perform a self-evaluation according to Buyer reference Guide Line.

A corrective action plan is provided to Buyer for all questions with partially positive or negative evaluations.

The Process Audit assessment to Sellers must reach the class “A”.

Only in case Seller is evaluated class “A” or class “B”, with a corrective action plan approved by Buyer, Seller can be used for new business attribution.

1.2.2 Buyer keeps the right to perform a verification of production capacity to prove that Seller’s manufacturing process, while operating under normal operating conditions, and in compliance with all Buyer requirements, is

- capable to produce products/systems/modules, with quality / characteristics and performances as stated in the Production Part Approval Process (PPAP)
- capable to meet or exceed the contracted capacity within one production day on a sustained basis.

Buyer may request Seller to perform a self-evaluation according to the Buyer reference guideline.

Reference form (“One Day Production”) and guideline are described in Exhibit D “Audits”.

Duration of 1 DP shall be enough to verify that the process can meet the contracted capacity while producing parts fully compliant to all Buyer requirements, unless for different requirements defined by Buyer on a case by case basis.

The reference productive capacity during the evaluation shall take into consideration contracted capacity plus the quota expected for the spare parts (specified for each products family) plus an over capacity of 10% to compensate possible surplus request, for a limited period of time.

1 DP shall be performed before component PPAP interim or full approval and, in any case, within 4 weeks before Buyer start of production.

1.2.3 Process Audit type, participants and their functions are announced in time before the Process Audit.

1.2.4 Seller is required to perform a Process Audit yearly self-assessment.

In case Seller is not anymore covered by a valid VDA 6.3 Process Audit performed by the Buyer (3 years for the ranking A & B), Seller has to provide on an yearly basis a VDA6.3 audit report covering the chapter 2 to the chapter 7.

In case Seller is covered by a valid VDA 6.3 Process Audit performed by the Buyer, Seller has to provide, on an yearly basis, a VDA 6.3 report covering the chapter 5 to the chapter 7.

1.2.5 The information exchanged during a Process Audit is confidential. A Process Audit report shall not be shared or passed to third parties without mutual agreement from all parties involved.

1.3 SW Assessment

Buyer executes, by internal resources or by external Consultant, SW assessment according to one of following references: AUTOMOTIVE SPICE assessment, SCAMPI (Standard CMMISM Appraisal Method for Process Improvement), MM SW ASQA assessment check list.

As result of the SW assessment, a scoring is provided according to following 3 levels:

A - Qualified

B - Qualified conditioned

C - Disqualified

Disqualified: it means that Seller cannot be used for business attribution.

Qualified conditioned: it means that Seller can be used for new business attribution in condition to submit a corrective action plan that is approved by the Buyer.

Qualified: Seller can be used for new business attribution

1.4 After the Process Audit / SW assessment:

Upon completion of a scoring and a Process Audit / SW assessment, a report shall be provided. At the end of the Process Audit / SW assessment a common wrap-up discussion is done with the involved participants who will in turn share and comment upon the strengths and weaknesses of Seller. Said strengths and weaknesses will be documented in a final report. The formal and official Process Audit / SW assessment report is submitted from Buyer within two (2) weeks after completion of Process Audit / SW assessment. The

content of the report must be reviewed by both Parties before its official publication.

1.5 Seller will have lead time for developing and providing a corrective action plan to Buyer within two (2) weeks after the publication of the Process Audit report.

Sharing of Process Audits / SW assessment:

Buyer may share Process Audit / SW assessment results with parent companies, controlled companies, subsidiaries and joint ventures of the respective Parties.

1.6 In agreement with Seller, Buyer has the right to perform a Process Audit / SW assessment at sub-supplier or sub-contractor, according to cases described in Article 1.2 and 1.3. Verification performed by Buyer does not substitute or replace, in any case, the activities that Seller is in charge to apply. Seller is also responsible to implement and follow up all the needed corrective action plans.

2. ADVANCED PRODUCT QUALITY PLANNING (“APQP”)

2.1 APQP is a key element for new part introduction at Buyer.

Following procedure applies during Products’ development by Seller and, in any case, until the Product is qualified by Buyer.

Each time Seller desires to introduce a modification (including fixing bugs and changes to the material) on a Product under development a formal change request (Engineering Change Notification request) must be requested by official Notice in written form with updated documents (including, but not limited to, data sheets, drawings, lay outs, facility information, SW releases, etc.) to Buyer’s R&D and Purchasing Interfaces. The Product / process evolution history must be provided by Seller together with each delivery of applicable samples or prototypes.

Seller shall track each change, by P/N (Part Number) modification, if the evolution has an impact on Form Fit and Function 1 or in reliability.

Every modification proposed by Seller or Buyer shall be documented in an official document entitled “Supplier Feasibility Commitment” (see form in Exhibit E).

¹ *Form is the shape, size, dimension, mass, weight and other visual parameters which uniquely characterize an item. Fit is the ability of an item to physically interface or interconnect with or become an integral part of another item. Finally, Function is the action or actions that an item is designed to perform.*

2.2 Seller shall cooperate with Buyer, upon request, to work on the System FMEA of the application.

2.3 Buyer requires an APQP for all new Product requests. The APQP is considered confidential information and may be reviewed by Buyer on regular basis.

2.4 Requested APQP details shall be defined prior to sourcing with Seller. The Parties shall consider the necessary qualification path respecting the application requirements.

2.5 Starting from the APQP phase Seller shall develop and apply all tasks, tests, firewall and screening in order to move towards the zero (0) defect goal.

Starting point or minimum requirements are proposed by Buyer in relevant documents, as defined in Exhibit F.

Seller shall apply all actions derived by Buyer's Commodity Quality Checklist, a document that collects actions deduced from Buyer's experience capitalization on Products of same commodity that must be implemented on all new Products of the same family/same technology and, when required, also on all running Products.

2.6 Seller shall deliver the Products in suitable shipping packaging (and according to Buyer requirements, when specified), in order to prevent damages and quality impairments.

Products that arrive at Buyer's facility with damaged packaging may be rejected by Buyer and sent back to Seller at Seller's cost.

2.7 Seller deliver any Products with the conformity declaration inside the box (including the communication of list of materials used), until Buyer notifies the grant of "Direct Acceptance" condition.

2.8 The Seller declares that it shall supply the Product in compliance with the ISO 26262 (last edition), if required. If the Product is subject to the application of the ISO 26262, the Seller, according to the Automotive Safety Integrity Level (ASIL) requirements as specified for the Products' component(s), must produce all the evidences necessary to demonstrate the compliance with the ISO 26262 prescriptions (including reliability analysis data for all the ASIL level). The Products, as defined by MARELLI as safety relevant for the vehicle but for which ISO26262 is not applicable, shall be developed and made through safety risk analysis, risk mitigation actions including the so called "safety analysis" (e.g.: FMEA, FTA, etc...) and risk assessment to confirm the efficiency of the risk mitigation actions, also in the design and the manufacturing phases. Products shall be tested, qualified, verified and produced in compliance with the "State of the Art" of functional safety applicable to the specific technology of the Product and recorded for 15 years (including the documentation related to the whole project, the test results and all information related to the safety of

the Products, even during manufacturing) after end of life of the project. The Seller shall be liable vis-à-vis the Buyer for any ISO 26262 non compliance.

The Development Interface Agreement (DIA) that defines the responsibilities for activities, evidence and work products to be exchanged by each Party, in accordance with ISO 26262, shall be defined on a Product basis.

The Buyer is entitled to perform preventive audits in the Seller's plants and design centres in order to verify the Seller's ISO 26262 compliance capability. The Buyer may, at its own discretion, request that Seller be audited by a third party provider, at Seller expenses, appointed by the Seller and finally approved by the Buyer; in such case Seller will provide to Buyer the results of such third party audit.

The Buyer will be entitled to perform/have performed by third parties assessment sessions in order to verify the fulfilment of Seller's preventive audits.

2.9 For Seller that develops a SW Product or a component / module with SW embedded, Seller agrees to apply all rules and best practices as required by the internal SW development process. Additionally Seller agrees and acknowledges that it will perform regular checks regarding activity progress by the application of the "SW Quality Plan" (as described in the Exhibit E which is entitled "Advanced Product Quality Planning").

3. PRODUCTION PART APPROVAL PROCESS ("PPAP")

3.1 Seller agrees to perform PPAP testing prior to the start of general production for any Product. Unless otherwise specified in writing by Buyer, all PPAPs will meet the requirements of ISO/TS - IATF 16949 certification as documented by an independent and generally accepted PPAP certification organization that is recognized by the Automotive Industry Action Group ("AIAG"). Unless otherwise specified in writing by Customer, Seller will reach the "Level 3" (as defined in the AIAG PPAP manual) in its PPAP. The specific Buyer technical requests are described in Exhibit F.

3.2 For Design and Process FMEA, the AIAG methodology is the reference standard, unless Customer requires otherwise and in such case Customer's requirements will supplant those of the Design and Process FMEA.

3.3 Seller test equipment used for ISO TS – IATF 16949 self-qualification tests must be certified according to all applicable Directives (for ex., Directives requirement for EMC test labs). Alternatively, Seller may use external accredited laboratories for tests execution.

3.4 Seller shall store, as a reference, a representative quantity of initial samples and keep them at Seller's premises for the complete Buyer Product production life.

3.5 Insofar as a Seller delivers a SW Product or a component/module with SW embedded, the quality of each SW delivery must be documented by following updated deliverables:

Fault Tree Analysis or FMEA
Risk Analysis
SW requirement Specifications
SW Design Specification
Source code (including any configuration script)
SW Release notes with the indication of the degree of coverage of the contents released versus what planned
Report of tests plan/tests executed with the indication of obtained test coverage (including regression tests) and traceability
Known issues/bugs
Note about any risk on the project
Bill Of Material (BOM) to describe any Free and Open Source Software included.

3.6 Insofar as a Seller delivers a SW Product or a component/module with SW embedded Seller provides SW Validation plan that contains test cases to validate the right functionality versus:

reference Specification/Customer application
at every Temperature foreseen from the range (applicable only to Seller that delivers a component/module with SW embedded)
with parameter out of range
with external interrupt

Before every delivery of a SW release to Buyer, Seller will repeat the entire SW validation plan.

A SW release can be delivered from Seller to Buyer only if it satisfies following criteria, unless for different agreement between Buyer and Seller:

zero (0) bugs with an A level severity
Maximum of one (1) bug with a B level severity
Maximum of five (5) bugs with a C level severity

The severity levels are more particularly described as follows:

Severity A: the function cannot be used, and the malfunctioning causes an immediate substitution by the car dealer (herein after “Dealer”)

Severity B: the functionality is temporary degraded or usable only by a trickery of the normal usage

Severity C: minor defect that cannot be felt by the final User

In addition, for each SW delivery, Seller communicates the number of bugs discovered during its validation. This data will be used to perform final balance about the effectiveness of Buyer and Seller validation.

Buyer reserves the time to perform internal tests; any bug discovered during Buyer validation, that is under Seller responsibility, must be fixed and document by Seller.

4. PROCESS CONTROL AND PRODUCT MONITORING / PROCESS CAPABILITIES

4.1 Seller must ensure that the process capabilities will satisfy automotive quality requirements to meet the zero (0) defect target. Seller must implement, on one hundred percent (100%) of production and in addition to standard verifications, all checks as specified in Buyer Norms.

For important characteristics, as they are defined by Buyer in the related documentation (such as Products' specifications, Product drawings, etc.), or identified by Seller, Seller must measure Cpk and ensure it within the agreed target, during qualification phase and during the whole production.

Capability shall be determined during normal production condition and shall be continuously monitored over time to ensure process stability. Moreover, capability shall be re-calculated every time changes to Product or to Process are implemented, a significant machine maintenance is executed or the machine is moved from its original location.

In case of important characteristics where the capability cannot be demonstrated, 100 % inspection of delivered Products shall be applied by Seller.

Finally, fool proof solutions have also to be adopted.

4.2 To monitor the quality level specific process control methods shall be applied. By way of Example: Statistical Process Control - SPC, Statistical Bin Analysis - SBA, Statistical Bin Limit - SBL, Part Average Testing - PAT, etc. shall be used during manufacturing at Seller's facility.

Reference methodology for definition and implementation of SPC control is the AIAG standard. Eventual additional Buyer technical requests are described in specific document published case by case.

Every time Seller implements a significant improvement on series Products, by the implementation of additional specific controls, Seller co-operates to ensure as soon as possible state-of-the-art Products at Buyer Facility.

4.3 Unless Customer requires otherwise, Seller shall apply Measurement System Analysis ("MSA") according to AIAG reference standard, to determine the extent to which the variation within the measurement process contributes to overall process variability. To the extent that Customer requires something other than MSA to determine variation the extent to which the variation within the measurement process contributes to overall process variability such Customer requirement shall supplant the MSA.

4.4 In accordance with ISO TS – IATF 16949, during the production ramp up, Seller must ensure the quality of Products with a reinforced and enhanced control plan, in order to reduce the risk until quality performance becomes stable and conform to Buyer goals. The reinforced control plan must be provided to Buyer, before the start of production, for approval.

Upon Buyer's request Seller shall provide technical support at Buyer's facility, in order to provide support related to any technical or quality issue.

4.5 Seller must provide internal data about process control, on demand.

4.6 Any changes to a control plan must be sent via Notice from Seller to Buyer and formally approved by Buyer.

4.7 Seller must plan and perform periodical requalification to guarantee the conformity to Buyer's specifications of the Products over the time; periodical re-qualification is the regular and planned repetition of PPAP qualification test contents, including dimensional, Cpk measurement and verification of reliability features and parameters, unless for different agreement between Seller and Buyer; the activity shall be formalized in the related Control Plan and result shall be submitted to the Buyer; minimum frequency for periodical re-qualification is one year, unless otherwise agreed with the Buyer.

5. FAILURE RATES

5.1 The Warranty Period is forty-five (45) months from Seller's Products date code.

The common goal of Buyer and Seller is to reach a zero (0) defect quality standard. In order to accomplish this target, defects will be measured by number and type of concerns occurred.

C1 identifies any incident occurred at final customer production line (0 km). The first main target is to have 0 Km concerns, means C1 equal to 0.

C2 identifies any incident detected at Buyer production line.

C3 identifies any incident occurred at Buyer In Coming.

C0 identifies any incident detected in warranty.

Ppm : number of defective parts per million produced ("PPM rates"). Such PPM rates are considered upper limits and are intermediate milestones to reach the zero (0) defect target.

5.2 Defects are measured in absolute or relative numbers (pieces or PPM and/or number of incident).

Seller shall manage Buyer rejects as well as the internal rejects through a structured data collection process. Data coming from internal rejects shall be used both to prevent any quality degradation at Buyer side and to continuously work for quality improvement. This includes also the possibility for Seller to notify in advance any quality risks on parts delivered / under delivery to Buyer, based on internal data analysis.

5.3 Buyer may consider a Product lot defective, and refuse the entire lot, when two or more faulty Products with the same defect are found by Buyer upon inspection of incoming Products as well as those found in the Production line of Buyer.

5.4 For the failure rate evaluation all returned Products shall be used. Returned defects not caused by Seller are taken out of Seller statistics.

5.5 Buyer Supplier Quality Portal (“SQP”) is the automatic tool in place for automatic publication of Failure Analysis Request, Seller 8D report, Seller performance, Seller Quality System updated certification, quality target, plus other documents and information that can be added to the SQP in the future.

Seller shall use the SQP to regularly review reports and have a real-time understanding of Failure Analysis Request, provide 8D reports, as well as to communicate Quality System updated certifications and any further information as required by Buyer.

5.6 Quality target are defined by Buyer every year and communicated to Seller through SQP for formal acceptance. Performances are continuously monitored according to defined target.

For Seller that delivers a SW product or a component/module with SW embedded, SW quality target are defined and communicated in writing by Buyer every year and reported in the Seller quality plan.

5.7 After completion quality results shall be made available on demand in the SQP.

To the extent that Buyer determines that Seller is not meeting its quality commitments or that Seller’s quality performance is deteriorating Buyer may publish Seller’s quality metrics and reports on the SQP.

To the extent that Buyer publishes quality reports, based on the severity of the situation, Buyer may define the type of remediation required of Seller such as, by way of example and not limitation, any of the following: Seller action plans, special focus and other meetings, Supplier Quality Breakthrough programs, review of Seller’s production share, etc.

5.8 Linked to SQP, bid list is the Buyer tool to do a global evaluation of supplier quality performance and classify into following classes:

- Class A: supplier ok for new product release

- Class B: supplier conditionally ok: improvement program is requested for new products
- Class C: supplier not ok, cannot be chosen for new products

Bid list tool takes in consideration demerits for not respect of several parameters (missing quality certification, CSL1 / CSL2 / CSL3, C1 0 Km incidents, PPM vs target,).

Starting score at the beginning of each solar year is 100; this amount is decreased by considering the demerit for each parameter assigned for each notification. Performances are calculated over a reference rolling period.

Depending on the score obtained, Seller is classified into A – B or C class.

5.9 During production the condition of “Direct Acceptance” may be temporarily suspended by Buyer due to specific problems or needs. In these instances upon receipt of notice of “Direct Acceptance” suspension Seller shall deliver Products with the conformity declaration inside the box, and identify by an external label, with “conformity declaration inside”. Said “conformity” status shall be maintained until Buyer formally notifies Seller that such “conformity” status has been removed.

5.10 A crisis situation occurs when any of the following occur:

1. Buyer’s or Customer’s production is stopped or yield strongly impacted due to Seller’s performance issues
2. service campaign or recall campaign results (or is imminent or anticipated) from Seller’s performance issues
3. repetitive quality problems for Buyer or Customer result from Seller’s performance issues
4. Buyer has repetitive complaints about Seller’s performance
5. Existence of any yard hold condition
6. In addition, SDE evaluates the level of degradation in supplier performances and may determine the needs for CSL application based on high risk to generate supply quality problems, detected during execution of Process Audit or Line Review at Supplier Plant

In case of a crisis, Buyer may require Seller to put in place specific additional controls focused on the critical problems that have not been resolved in Seller’s production process such as, by way of example and not limitation, any of the following: Control Shipping Level 1, Control Shipping Level 2 or Control Shipping Level 3 (CSL1, CSL2, CSL3); different level apply depending on gravity / frequency of the situation.

Seller acts, on Buyer request, at Buyer facility with technical people, in order to perform a sorting, or a return of stocks, or a preliminary joint analysis.

The explanation of quality indicators used by Buyer, the Guide Line for CSL and the explanation of structured improvement programs Supplier Quality Breakthrough, are described in the Exhibit G “Failure Rates”.

6. TRACEABILITY

6.1 The aim of traceability is to minimize the impact and consequences of quality concerns. Seller and Buyer shall maintain an appropriate traceability data system.

The traceability program must be required to do the following:

Forward Trace: required information to identify already delivered suspect material, in order to minimize the quantity, which needs to be caught as early as possible.

Backward Trace: required information to identify suspect source material and origin at Seller.

Detailed traceability requirements are more fully described in Exhibit H entitled "Traceability".

In order to minimize the risks when Products shall be isolated or scrapped because of a quality problem, Seller is responsible to apply and respect First In First Out ("FIFO") accounting, production, and delivery methods and to plan the Products' production in coherence with Buyer's demand.

For electronic Products, total target shelf life ² of series Products shall be minimum 24 months from assembly date at Seller facility. Target residual shelf life of series Products after delivery in Buyer facility is minimum 12 months. Seller shall clearly indicate assembly date on labels.

For all other family classes, the shelf life must be defined and agreed, case by case, between Seller and Buyer.

For Products with expiration date three (3)(e.g. chemical components, led, etc.) it is required to have minimum six (6) months of residual validity after the delivery to Buyer's facility.

Seller must correctly define the storage condition (temperature, humidity, etc.) if the Products are not immediately shipped to Buyer.

The maximum time period to provide the traceability information shall be one (1) working day from Buyer's request for Products which are not older than two (2) years. Older information shall be available within two (2) working days starting from the date of Buyer's request.

Any concerned traceability file shall be provided to Buyer on demand.

² Shelf life is the allowable time for storage of a component inside its original packing under specified ambient conditions, after which the component is no more usable

³ Expiry date is the date after which there is not the guarantee that the component maintains its characteristics

6.2 To the extent that Seller delivers a SW Product or a component/module with SW embedded Seller shall ensure that the traceability through the application of Configuration Management mechanisms and Traceability Matrix that allows to trace each SW release and the history of the SW activities. This allows, in case of problems, to identify the problem origin and to identify also which SW deliveries are affected by the problem.

7. FAILURE ANALYSIS REQUEST (FAR) / CORRECTIVE ACTION REQUEST (CAR)

7.1 Defectives Products detected by Buyer or received from Customer may, at Buyer's sole discretion, be returned to Seller for analysis and root cause understanding. Buyer shall provide detailed information to Seller about all failure mode and analysis results already performed. Seller shall also provide analyses on all returned Products and provides root cause analysis. Different returned quantities can be mutually agreed upon between Buyer and Seller on specific cases (for example, for repetitive problem in the same lot).

To the extent that Seller analysis shows result no trouble found ("NTF") Seller is required to apply deeper tests and investigations to finally confirm the NTF result.

In case Seller analysis shows that the Product has been probably damaged by Buyer or by final Customer, Seller is required to provide maximum support and co-operation in joint analysis for final root cause investigation and understanding.

7.2 Buyer takes care to promptly return such Products or an evidence of the defect according to the FAR defined process (location, condition, failure description, interfaces, etc.). Seller and Buyer shall cooperate in minimizing the shipping time of such Products until the final receipt by Seller. For the optimization of the processes and for the avoidance of additional damages which increase the difficulty or make impossible to perform an analysis, the following can be agreed by the Parties:

1. to perform the analysis at Buyer facility or directly at Car Maker facility
2. different return conditions (e.g. on PCB or de-soldered components, on sub-assemblies, etc.).

7.3 Standard analysis flow shall meet the FAR cycle time of Buyer. The respect of defined lead time is a key point in order to minimise the impact on Buyer and Car Maker line. In case the analysis needs additional efforts and time (verification, preparation, physical analysis, etc.) Seller informs immediately and provides regular updates and estimated completion date. In case the defective Product has been detected on Buyer line, Seller is responsible to define containment actions (e.g. sorting, lot replacing, etc.) in 1 day from problem notification. The risk analysis is also required in order to quantify the impact at Buyer facility, final Customer facility and on the field.

7.4 The standard analysis answer required is based on 8D report (see Exhibit I “Failure Analysis Request (FAR)/Corrective Action Request (CAR)”) to define the Product problem, analysis flow, root cause, correctives and preventives actions. All these key milestones are tracked and periodically reviewed until the complete 8D is closed and agreed by both Parties. Specific goals may be determined between Buyer and Seller.

8D report shall be written in English

8. PROCESS CHANGE NOTIFICATION (“PCN”)

8.1 All Products units must conform to the Products’ technical Specifications agreed by the Parties and to any other requirement requested by Buyer. Seller shall provide Buyer with the Products using the materials, manufacturing processes, equipment and location as released for series production by Buyer.

In case of any proposed Product/process change Seller shall notify Buyer in writing of the proposed changes. The notification shall be sent to the official Buyer interface (in the manner detailed in Exhibit L “Process Change Notifications / PCN”).

8.2 A written Buyer approval is mandatory prior to delivery of changed Products. Seller must track each modification and the first three (3) deliveries to each Buyer site, after PCN approval, and must be identified in the delivery documentation and packaging.

8.3 A PCN request must be communicated in writing, as required for official Notices herein, in advance to the intended date of implementation in order to take into account the qualification effort on Buyer’s side and final Customer approval; typical timing required is as follows:

- a. preliminary feedback, from Buyer to Seller, within thirty (30) working days from receipt of written notification; Buyer’s feedback consists in the requests of samples and documentation, or in the refusal of the proposed PCN
- b. typical timing for Buyer validation is twenty-six (26) weeks, starting from availability of all Seller requested Initial Samples and documentation at Buyer facilities
- c. typical timing for the start of final Customer’s validation can vary between twenty-six (26) and fifty-two (52) weeks, starting from availability of all Seller requested initial samples and documentation at Buyer facilities.
- d. typical timing for final Customer validation is thirty-six (36) weeks from the start of final Customer’s validation.

The above timing refers to a PCN approved at the first trial.

The detailed PCN activity flow, the related timing, as well as the detailed information requested, are described in the Exhibit “Product Change Notification L.1”.

A missing reply from Buyer to points a - b - c - d cannot be considered as an acceptance of the change.

8.4 Buyer's evaluation and approval is needed for each major modification (see list in the Exhibit L "Process Change Notification"), that could have an impact on form, fit, and function. All PCN types not listed in the Exhibit are considered minor modifications; for minor modifications Seller shall send information in writing according to the Notice provisions of this Agreement to Buyer together with proof of no impact on form, fit and function or on reliability; thereafter Seller may start in production without requesting Buyer approval.

Buyer reserves the right to request Seller to re-classify a notified PCN from minor to major.

To the extent that Buyer discovers the implementation of a major PCN without Buyer approval, Buyer shall consider the possibility to put Seller in New Business Hold condition.

8.5 Seller shall pay all Buyer's costs related to the validation costs sustained by Buyer for any PCN upon submission of documentation of such costs provided by Buyer.

9. ARCHIVING PERIODS FOR RELEVANT DOCUMENTS AND RECORDS

The Exhibit M "Archiving periods for relevant documents and records" defines the list of documents for which an archiving period is required and the relevant timeframes. Any difference about the time limit requested by the final Customer is communicated case by case from Buyer to Seller.

The destruction of quality records after the defined archiving period has to be ruled.

10. EXHIBITS

Each Exhibit hereto constitutes an essential and integral part of the Agreement:

- B. Non conformance costs & Liabilities
 - B.1 - Type of non Quality costs
 - B.2 - Warranty responsibilities & costs management
- C. Conformity to directives and regulations
 - C.1 - List of Directives & Regulations
 - C.2 - Declaration format & medium (IMDS)
- D. Audits
 - D.1 – Process Audit
 - D.2 – One day production
- E. Advanced Product Quality Planning
 - E.1 – APQP
 - E.2 – SW Quality Plan
 - E.3 – Supplier Feasibility commitment form
- F. Production Part Approval Process
 - F.1 – Specific Buyer technical requests
- G. Failure Rates
 - G.1 – Quality performance indicators
 - G.2 – Guide lines for Controlled Shipping Level 1 – 2 – 3 (CSL)
 - G.3 – Supplier Quality Breakthrough
- H. Traceability
 - H.1 – Requirements of traceability
 - H.2 – Splits Lots
 - H.3 – Limits of marking on the components
 - H.4 – Packaging
 - H.5 – Backward traceability
 - H.6 - Traceability format
 - H.7 – Traceability during component development
- I. Failure Analysis Request / Correctives Actions Request
 - I.1 – 8D Standard form
 - I.2 – Lead time for Failure Analysis
 - I.3 – Samples for actions verification
 - I.4 – Lot refusal
- L. Process Change Notification / PCN
 - L.1 – Activity flow
 - L.2 – PCN Notification
 - L.3 – List of Major modification for each family class
 - L.4 – Buyer interface for PCN notification & management
- M. Archiving periods for relevant documents & records
 - M.1 – Archiving Period

Seller

[_____]
Space for signature

Name _____

Title _____

Date _____

Buyer

[_____]
Space for signature

Name _____

Title _____

Date _____

B. NON CONFORMANCE COSTS & LIABILITIES

B.1 Type of non-quality costs

The following list provides the typical non-conformance quality costs; different non quality costs, not listed here, may be submitted and commonly agreed with Seller, when needed (for example, all costs supported to recover the production line to the normal situation):

#	Type of cost	Unit reference cost	Comments
1	Compensation for F.A.R. management	200 euro / F.A.R. Or 100 euro / F.A.R. (in case involved Buyer Plant is located in Asia or in South of America)	This is the amount that covers F.A.R. management activities: <ul style="list-style-type: none"> - Time for preliminary analysis - Time for preparation of technical documentation to explain the problem - Shipment preparation - FAR notification - Supplier monitoring - Analysis of 8D report - Evaluation of effectiveness of corrective actions
2	Additional effort at Buyer caused by Seller un-compliance with SW commitment	N/A	Un-compliance with SW commitment refers to SW releases in which: <ul style="list-style-type: none"> - project planning has not been respected - SW delivery is not complete - Quality of SW delivery is not in accordance with target assigned
3	Labour cost for Sorting	33 euro / h each Operator	The value gives an indicative cost. The exact value is communicated, on needs, from each Buyer site, in accordance with the hourly cost valid for Buyer Plant Country
4	Labour cost for rework at Buyer Line	33 euro / h each Operator	
5	Labour cost to manage suspected lots and parts in the Warehouse	33 euro / h each Operator	
6	Penalty for Warehouse occupancy	25 Euro / sqm each day	Daily cost of Warehouse space occupancy by suspected or rejected lots waiting for Seller intervention. The value gives an indicative cost. The exact value is communicated, on needs, from each Buyer site, in accordance with the hourly cost valid for Buyer Plant Country
7	Additional screenings (time & tools) at Buyer	N/A	It can vary according to the type of screening, as the price depends from the tools that could be

#	Type of cost	Unit reference cost	Comments
	facility before to deliver to final Customer		needed. The specific price is defined by the involved Buyer Plant
8	Scrap of not re-usable parts	N/A	Cost can vary according to the type of Buyer Product.
9	Buyer production Line stop	N/A	Cost can vary according to the type of Buyer line, Products and facility.
10	Special transportation to final Customer	N/A	It can vary for each transportation
11	Parts replacement (at 0 Km)	N/A	Cost charged by final Customer to manage replacement of faulty parts detected on his Line. Cost can vary according to Customer and Buyer Product
12	Final Customer production Line stop	N/A	Cost can vary according to the type of final Customer line, Products and facility.
13	Warranty costs	N/A	See chapter B.2
14	Service campaign and Recall campaign	N/A	Activity carried out, from final Customer / Buyer or Third acknowledged Party, to recover a critical quality concern on all parts potentially impacted: <ul style="list-style-type: none"> - on vehicle before to deliver to Dealer: Service campaign - on field: recall campaign Cost can vary according to Customer and Buyer Product Conditions are defined into the Buyer Purchasing General Terms and Conditions
15	Special packaging to send back the parts	N/A	It can vary for each transportation. The specific price is defined by the involved Buyer Plant
16	Shipment cost for parts analysis	Seller is normally responsible to organise the shipment back of parts to analyse and to take in charge the related shipment costs. In all other cases, Buyer has the right to charge Seller for shipment costs, which may change according to type of Product and transportation conditions.	
17	Emergency audit or visit to Seller facility	a. 1500 euro b. 2500 euro	Audit or visit to Seller facility due to a critical quality concern / process degradation a. Seller facility in the same continent of Auditor facility (max 2 people) b. Seller facility in a different continent of Auditor facility (max 2 people)
18	Additional analysis for root cause investigation	N/A	Technical analysis done internally by Buyer or trough external Laboratories.

#	Type of cost	Unit reference cost	Comments
			Cost can vary according to the type of analysis
19	Problem management	40 Euro / h each Engineer	Engineer cost to support the problem solving analysis. The value gives an indicative cost. The exact value is communicated, on needs, from each Buyer site, in accordance with the hourly cost valid for Buyer Plant Country

B.2 Warranty responsibilities & costs management

Calculation of warranty responsibilities

Each Car Maker has Dealer networks that manage intervention on field.
Due to extension of world market, Car Maker ships back for analysis to Buyer only parts collected in a restricted area that he defined as significant.

Products received from field are systematically analysed by Buyer technical experts in order to identify the failure responsibility.

The percentage of returned Products recognized under Buyer responsibility is defined as Buyer Technical Factor. Technical Factor is then applied by the Car Maker to the whole amount of interventions in the world market.

If defectiveness is due to supplied components, Buyer starts up the failure analysis process with Seller.

Whenever Seller recognizes the responsibility of the claimed Products, Buyer calculates the related Seller Technical Factor. Seller Technical Factor is then applied to the whole amount of interventions in the world market and represents Seller performance on warranty.

Technical Factor calculation may be done within a period that is calculated as follows =

= Warranty Period + 6 months due to potential delay introduced by the global Automotive supply chain

In special cases, Car Maker may decide to send back one hundred per cent (100%) of substituted Products (so called Field Management activities).

Calculation of warranty costs under Seller responsibility

For each intervention in warranty, the unit intervention cost is constituted by:

- cost of the spare part (means Buyer Product) replaced
- labour cost for substitution at Dealer
- additional costs (logistic costs for Products shipping to Dealer, handling fee, etc.)

The total warranty costs for a fixed period are calculated as the unit intervention cost multiplied by the total number of interventions in the world market.

The total warranty cost under Seller responsibility is equal to the total Buyer warranty cost multiplied by Seller Technical Factor. Seller refunds Buyer according to this calculation.

Buyer provides to Seller all relevant information's to allow the charge back calculation of warranty costs.

C. CONFORMITY TO DIRECTIVES AND REGULATIONS

C.1 List of Directives and Regulations

Seller must ensure compliance to following Directive and Regulations, including any subsequent update and Decision:

- European Directive 2000/53/EC “End of Life Vehicles” about the content of heavy metals (Cadmium (Cd), Chromium VI (Cr VI), Mercury (Hg), Lead (Pb))
- Directive 2013/028/EC as Annex II of Directive 2000/53/EC
- European Directive 2003/11/EC “Amending for the 24th time Council Directive 76/769/EEC relating to restrictions on the marketing and use of certain dangerous substances and preparations”
- The supplied part has been verified according to GADSL reference list (“Global Automotive Declarable Substance List”) [*]
- Information on IMDS declaration, whenever the supplied part contains declarable substances included on the GADSL reference list
- Commission Decision 2003/138/EC “Establishing component and material coding standards for vehicles pursuant to Directive 2000/53/EC”

[*] The GADSL reference list is shown at following Internet address:

<http://www.Gadsl.org>

- REACH Regulation EC/1907/2006 “Registration, Evaluation, Authorisation and restriction of Chemical substances”
 - Seller must provide needed documents to ensure and demonstrate the compliance with every REACH implementation step and related deadline

- For each supplied component, Seller must identify the related REACH category (substance, preparation, article) and send the documentation as defined by REACH
- If Seller Legal Entity is located outside from European Community and Seller sells substances, preparations or articles to Buyer facility located in Europe, Seller must nominate a unique European Representative for registration (Only Representative, OR) for registration and other REACH requirements.

Automotive Industry Guide Line on REACH is available at:

<http://www.acea.be/reach>

- CLP Regulation EC/1272/2008 “Classification, Labelling and Packaging of substances and mixtures”
- European Directive 1999/5/CE of the “European Parliament and of the Council of 9 March 1999, on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity”
- Commission Directive 2004/104/EC adapting to technical progress Council Directive 72/245/EEC relating to the radio interference (electromagnetic compatibility) of vehicles and amending Directive 70/156/EEC on the approximation of the laws of the member states relating to the type – approval of motor vehicles and their trailers

In addition to this list, Seller is required to be continuously aware about any new or additional applicable Directive or Regulation (ROHS evolution, other Directives, etc.).

C.2 Declaration format and medium (electronic file)

The IMDS declaration, with requirements as defined above, is given by Seller by publishing on IMDS data base:

<http://www.mdssystem.com>

by referring to Buyer component code.

This declaration must be sent to relate Marelli Division, by using the appropriate Marelli ID Number that is communicated by Buyer.

In addition, Seller must fill the standard Buyer IMDS form (“Conformity Declaration Form”).

Conformity Declaration Form has been sent by email by Buyer and accepted by Seller



conformity
declaration form

D. AUDITS

D.1 One Day production – Form and Guide Line

Form and Guide Line have been sent by email by Buyer and accepted by Seller



1 Day Production
form and guide line

E. ADVANCED PRODUCT QUALITY PLANNING

E.1 APQP

APQP is the planning of the component development tasks, which must be accomplished by Buyer and Seller to achieve the quality goals.

APQP must be shared by Buyer SQA and Seller and be periodically monitored by Buyer SQA.

APQP consists in a list of tasks. According to component criticalities, Buyer decides what tasks must be applied and monitored on the involved component.

The list of potential tasks is the following one:

1. Technical documentation & Quality Target
2. Feasibility study
3. Capitalization of Experience
4. Agreements
5. Roadmap of component technology
6. Project Timing
7. prototype planning
8. Design & Process Validation Plan
9. Sub-Supplier PPAP schedule
10. Design Validation
11. Process Validation
12. Design FMEA
13. Product & Process Key characteristics
14. Initial Capability Studies
15. Package
16. Lot Traceability Plan
17. Process Flow Chart
18. Process FMEA
19. Control Plan
20. Safe Launch Plan
21. Measurement tools, gauges and Poka yoke systems
22. Raw material and sub-Suppliers
23. Self-Qualification Tests
24. Cosmetic criteria
25. Compliance to EU Directive
26. PPAP submission
27. Volumes, ramp up mix
28. Date and quantity for first run, second run and SOP
29. Failure Analysis flow definition
30. Run@Rate
31. Production Process Audit
32. SOP (Start Of Production)
33. Any other point specific for the component

Seller must formally commit to APQP demand and apply it according to defined schedule.

It is Seller responsibility to participate in a proactive way to the deployment of the APQP tasks.

E.2 SW Quality Plan

For Seller that develops a SW Product or a component / module with SW embedded, Seller applies all rules and best practices as required by the internal SW development process. Seller realizes regular check about activity progress by the application of SW Quality Plan.

SW Quality Plan is the planning of the SW development quality checks, aimed to guarantee the correct execution of the different process development steps, which must be agreed between Buyer and Seller to achieve the quality goals.

SW Quality Plan must be shared by Buyer SQA and Seller and be periodically monitored by Buyer SQA.

According to SW criticalities, Buyer decides which quality checks must be applied and monitored on the involved SW.

SW Quality Plan Form has been sent by email by Buyer and accepted by Seller:

- in case Seller has not its own standard, Buyer asks Seller to use Buyer form
- in case Seller has its own standard, Seller is not forced to use Buyer form, if Seller form is clear and suitable with Buyer needs (suitability confirmation is up to Buyer SQA)



SW Quality Plan
Template

E.3 Supplier Feasibility Commitment Form

Supplier Feasibility Commitment Form is sent by email by Buyer and accepted by Seller.

F. PRODUCTION PART APPROVAL PROCESS

F.1 Specific Buyer Technical Requests

Specific Buyer requests are defined inside Buyer Norm issued for the different component families.

Seller must formally accept Buyer Norm as it is a part of the contract between Buyer and Seller.

Hereafter the list of Buyer Norms; this list is not exhaustive. Each Buyer Plant communicates to Seller the specific reference Norms:

Electronic components

MM AL	AEC Q100/Q101/Q200 Y300C00000 "Quality Requirements for electronic Products" SQA Manual 001
MM PWT	AEC Q100/Q101/Q200
MM SE	SE 130 000 0 G last revision

Led – relays, buzzer & speaker SE 130 000 0 G last revision

<u>PCBA</u>	IPC A 610 level 3 "Acceptability of electronic assembly"
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Printed Circuit Board

MM PWT	000 59 396.A1 "pcb general requirements and specifications"
MM SE	SE 130 000 3 G last revision

<u>Displays (LCD, LCD COG, TFT)</u>	SE 130 000 2 G last revision
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<u>Stepper motor PM20</u>	SE 130 000 1 G last revision
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Any Product sensitive to electrostatic discharge

ESD 61340-5-1 « Protection of
Electronic devices from
electrostatic phenomena—General
requirements »: application, respect
and certification by a Third Party
certified Body
ESD 61340-5-3 « Protection of
electronic devices from electrostatic
phenomena – Properties and
requirements classification for
packaging intended for electrostatic
discharge sensitive device»

Cosmetic parts

SE 010 000 0 G last revision
AL Quality Procedure No. 577 last
revision

Parts for Cofap

Marelli Cofap Supplier's Manual

Seller must comply with these Norms and with all eventual prescriptions as defined in Buyer specification or drawing.

G. FAILURE RATES

G.1 Quality performance indicators

Quality performance indicators that Buyer may use to monitor Seller, are defined as follows:

- *C3 - In Coming number of incident*: number of times material with quality problem is returned to Seller
- *C2 -MM in process (or MM End Of Line) number of incident*: number of incident issued for Buyer production line rejects
- *C1-0 Km number of incident*: number of incident for final Customer line rejects
- *Warranty number of issues*: number of incident for field rejects returned during the year
- *C0 - Warranty number of physical returned Products*: actual number of field rejects returned to Seller during the year.

These Products come from Dealer chosen as reference from final Customer, to monitor warranty performance, and represent a subset of the entire market.

The definition of incident may differ across the product classes.

The total Seller warranty performance has to be calculated by doing a projection of the physical Products returned during the year, from Dealer chosen as reference from final Customer (a subset of the entire market) and under Seller responsibility, over the total number of substituted Products on the entire market (see details in Exhibit B.2).

G.2 Guidelines for Controlled Shipping Level 1 – 2 – 3 (CSL 1 – 2 – 3)

Controlled Shipping Levels are articulated in three different levels: CSL1, CSL2, CSL3. These levels differentiate according to the gravity and repetitions of non-conformities detected in the supplies. According to that, Buyer may decide to assign directly CSL2 or CSL3 without passing through CSL1.

According to what stated in this document, the occurrences of CSL2/CSL3 require Seller to appoint a qualified third-party Certified Body (Service Provider or Service Company), that must be validated by Buyer.

CSL's shall be extended to all the Products that are produced using the same process that originated the non-conformity.

For the whole duration of the CSL, self-certification status is lost; therefore, Seller must send, together with each delivered lot, the CQC (Conformity Quality Certification) that contains the result of all controlled characteristics.

Until CSL is applied, Seller must carry out supplementary activities on one hundred percent (100%) of produced Products, by implementing **additional and dedicated** testing or checks, with trained operators. In case one hundred percent (100%) checks cannot be carried out (e.g.: destructive tests, ...), a reinforced frequency for these activities must be agreed with Buyer.

Seller shall identify the checked Products by use of appropriate identification marks, on the component and on the external packaging, unless for different agreement with Buyer.

Buyer reserves the right to perform, in any moment, control on checked Products.

Additional measures are foreseen in case of CSL2 and CSL3.

In case of CSL2, Seller must appoint a qualified third-party Certified Body that defines and carries out, in a dedicated area, the required activity.

CSL3 applies, in addition to CSL2, in case Seller demonstrates its inadequacy to problem solving and defect eradication.

In case of CSL3, Seller must appoint a qualified third-party Certified Body that, besides all the activities required in a CSL2, provides the necessary support to Seller, overall the entire process, for root cause and corrective action definition and defect eradication.

Buyer is regularly informed about the progress of CSL2 / CSL3, by the third-party Certified Body.

Buyer assigns the level of CSL by taking in consideration following criteria:

- evidence that one or more seller product key properties are out of tolerance because of supplier process out of capability => CSL1 opening
- detection, at either Buyer plant or at final customer line, of non-compliances related to characteristics that are already under CSL1 control => CSL2 or CSL3 opening (level to be determined according to gravity of involved characteristics)
- proved non-compliance in effectiveness or application of supplier quality procedures / Control Plan on the product key properties => CSL2 or CSL3 opening (level to be determined according to gravity of involved

characteristics)

- seller is not able to remove the root causes that generated the non-compliance and solve the problem => CSL3 opening
- re-occurring request for variance, due to supplier weaknesses => CSL opening (level to be determined depending on the gravity of the non-compliance)

Buyer officially notifies to Seller the intention to open a CSL and specifies several information's including:

- level of CSL to apply
- involved component or family
- reason for CSL application

In case of CSL2 or CSL3, Seller must notify, in 24 h from Buyer demand, the identified Third-Party Certified Body, for Buyer approval.

In 5 calendar days from Buyer demand, Seller and Buyer must agree the modalities for CSL execution (CSL location, acceptability criteria, eventual adapted logistic or production flow chart, Seller interface).

CSL has a minimum duration of 5 weeks, unless for different requirement from Buyer.

CSL can be closed only as soon as Seller proves that, during CSL application period, production process non-compliances have been recovered. This happens by means of following steps:

1. diffusion of control results (CSL1: distribution from Seller, CSL2 / CSL3: distribution from Approved Company)
2. (when reputed necessary) execution, with positive result, of a process audit or line review by Buyer to check the implementation and effectiveness of implemented corrective actions
3. positive achievement of closing criteria set during the kick off meeting
4. written Buyer approval to close the CSL

The non-respect of one of these conditions impacts on the duration of the CSL, or in the change of CSL applied level.

In case of negative result, despite of all CSL activities, Buyer shall consider the possibility to put Seller in New Business Hold condition.

G.3 Supplier Quality Breakthrough

Buyer Supplier Quality Breakthrough program (SQB) is a structured program designed to re-focus Seller by addressing detailed root cause analysis, removing all the potential and systematic causes that have led to deterioration in delivered quality to Buyer plants and to final Customers and also to guarantee the experience capitalization on the new project under development.

SQB program is regular data driven process that requires immediate, significant, measurable and sustainable improvements in quality.

The SQB program consists in the constant monitoring of Key Performance Indicators defined by Buyer. Seller presents on monthly basis, during specific meetings, its performance for each KPI identified.

The program is also quarterly presented to Buyer Executive Committee during Buyer internal Management meetings.

SQB may be managed by a third party company appointed by the Buyer, being the related costs borne by the Seller.

The exit criteria from SQB program are defined and communicated as soon as an SQB program is launched.

In case of negative result, despite of all SQB activities, Buyer shall consider the possibility to put Seller in New Business Hold condition.

H. TRACEABILITY

H.1 Requirements for traceability

Traceability requires an appropriate choice of following items:

- Customer Part Number: identifies Buyer part number and/or Buyer specification number
- Supplier Part Number: identifies Seller ordering code
- Reel / Tube Lot Number: identifies single packaging unit
- Date Code: Year & Week of Assembly (typical format: yyww), days can be added (yymmdd)
- Trace Code: individual code which allows a trace of wafer, assembly and test lot and must be linked to the date code
- (For SW products) SW Release ID: unique identifier of SW product (if technically feasible with appropriate label if released in a Configuration Management repository).

Traceability needs per family class				
Class	Customer P/N	Supplier P/N	Date Code	Trace Code
IC packaged	Packaging	Packaging + Component	Packaging + Component	Seller Data base (**)
Passive	Packaging	Packaging	Packaging	Seller Data base (**)
led	Packaging	Packaging	Packaging + component (*)	Seller Data base (**)
Plastic moulding	Packaging + component (*)	Packaging	Packaging + Component	Seller Data base (**)
Mechanic part	Packaging + component (*)	Packaging	Packaging + component (*)	Seller Data base (**)
Electro-mechanical	Packaging	Packaging + Component	Packaging + Component	Seller Data base (**)
Printed Circuit Board	Packaging + Component	Packaging	Packaging + Component	Seller Data base (**)
LCD	Packaging	Packaging + Component	Packaging + Component	Seller Data base (**)

Traceability needs per family class				
LCD chip on glass	Packaging	Packaging + Component	Packaging + Component	Seller Data base (**)
TFT	Packaging + Component	Packaging + Component	Packaging + Component	Seller Data base (**)
Sub-contractor (PCBA)	Packaging + Component	Packaging + component (*)	Packaging + Component	Seller Data base (**)
Radio	Packaging + Component	Packaging + Component (*)	Packaging + Component	Seller Data base (**)
CD Driver	Packaging + Component	Packaging + Component	Packaging + Component	Seller Data base (**)
GSM	Packaging + Component	Packaging + Component	Packaging + Component	Seller Data base (**)
Hard Disk Drive	Packaging + Component	Packaging + Component	Packaging + Component	Seller Data base (**)
Telematic front-face	Packaging + Component	Packaging	Packaging + Component	Seller Data base (**)
Stepper motor	Packaging + Component	Packaging + Component	Packaging + Component	Seller Data base (**)
Serigraphy and esthetical finishing	Packaging + Component (*)	Packaging + Component (*)	Packaging + component (*)	Seller Data base (**)
Raw material	Packaging	Packaging	Packaging	Seller Data base (**)
Chemical	Packaging	packaging	Packaging	Seller Data base (**)

(*) In case traceability at component cannot be fulfilled, Seller must request a dispensation agreement

(**) Seller Data Base must trace every Seller process, raw materials and sub-process.

(***) For metallic parts the Product must be identified through the marking of the traceability data in accordance with what requested/indicated in the drawing / technical specifications, when provided. In all other cases, traceability has to be made according to above table's requirements.

Notes

- Mechanic parts includes pressure die casting, screws, silver box, LCD box, clips, etc.
- Electromechanical includes connectors, lamps, switches, relays, SIM card, buzzer, etc.
- Sub-contractors concerns the electronic assembly process
- Esthetical finishing includes stamping operations (on needles, logos, etc.), painting process (of buttons, etc.), flockage, glasses, ring, etc.
- Metallic parts and components (stamped parts, tubes, bolts, bushing , machined parts, cast iron parts), include also foundry and steel milling products batches.

H.2 Split lots

If production requires to split lots for processing, those new sub-lots will be traced as separate lots and not be mixed again. One lot per packing unit is required with one exception: in order to facilitate deliveries of full packing units, it is allowed to use the subsequent lot to complete the packing units (e.g. reel) or a maximum of 2 trace codes per packing unit (for example: reel, tray, tube, etc.) is required.

H.3 Limits for marking on the component

For components without sufficient marking possibilities on the component itself (bare die, small package size, moulding parts, etc.) the data on the unit packing label are applicable.

H.4 Packing

Traceability information is visible on the label of the packing (Box, Drypack...).

H.5 Backward traceability

Backward traceability requires as minimum information the part number and additional information like trace code, lot number or date code and lot dimension.

H.6 Traceability format

Format for traceability information (bar code, alpha numeric code, etc.) are defined in agreement between Seller and Buyer.

H.7 Traceability during component development

For samples and Products delivered during Product development, before Start Of production, Seller is required to provide also following additional traceability information:

- detail if the production process used to realise the Products is or not the final one
- detail if the tools used to realise the Products are or not the definitive ones
- detail if the materials used to realize the Products are or not the definitive ones
- detail the use allowed for Products delivered (e.g. prototypes for functional test, initial samples, first delivery for production, etc.)
- detail the reference Customer specification or drawing (when applicable)
- under Buyer request, Seller shall provide preliminary samples with unique identification number per each unit

I. FAILURE ANALYSIS REQUEST AND CORRECTIVE ACTION REPORT

I.1 8D report

Seller performs the failure analysis and problem solving by applying each step of 8D report and traces each result into 8D report section of SQP.

Buyer standard 8D report form has been sent by email by Buyer and accepted by Seller. This document, given for reference, shows the 8D problem solving methodology to apply:



8D report standard
form

I.2 Lead Time for failure analysis

Lead Time (in working days) for detected problems and faulty Products analysis is defined according to following 4 steps:

- containment action (1 day, starting from FAR notification): define and implement containment action
- final analysis (10 days, starting from Products or technical information receipt): final root cause identification and finalisation of corrective action plan
- problem fixing (40 days max, starting from Products or technical information receipt), implementation and validation of corrective actions

I.3 Samples for actions verification

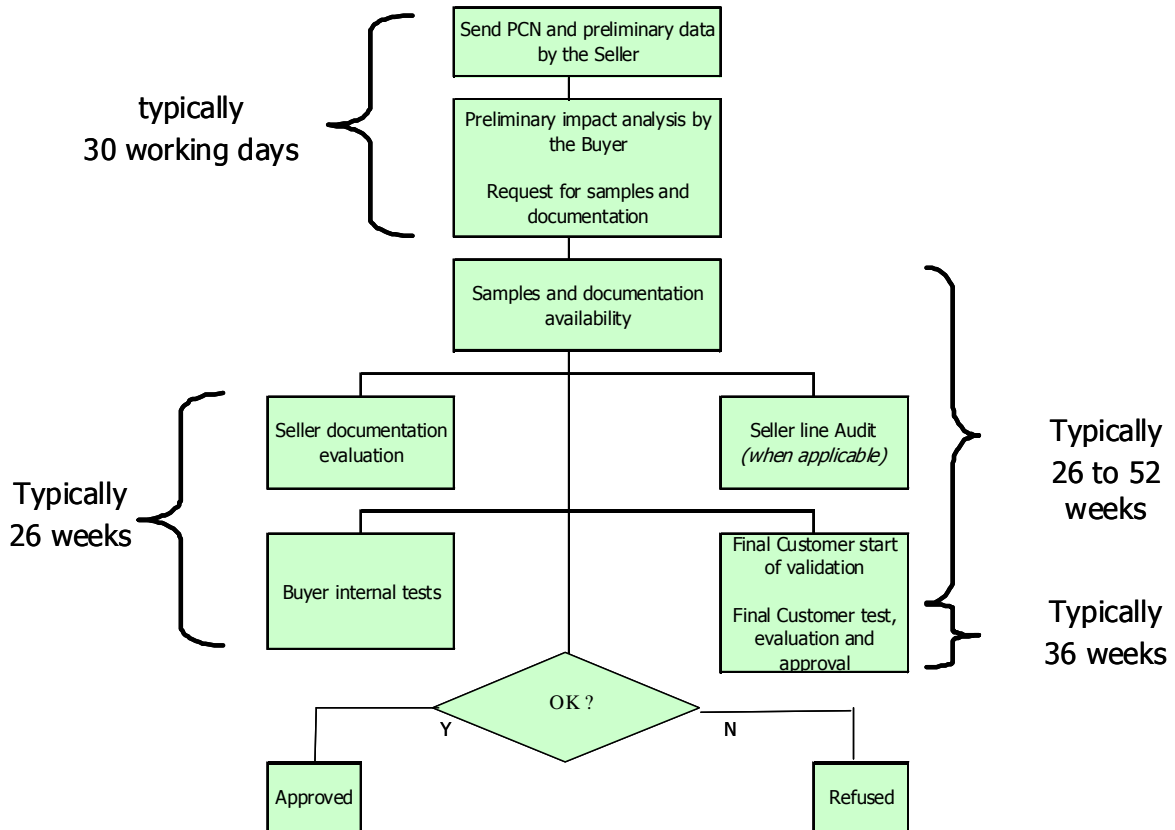
In order to validate corrective actions, Buyer has the right to request samples.

I.4 Lot refusal

In case of lot refusal, Seller is requested to apply sorting or lot replacement within 24 hours from Buyer Notification. In most critical cases, where there is the risk for production stop, Buyer may decide to immediately implement some sorting activities on Products, which related costs will be charged to Seller.

L. PROCESS CHANGE NOTIFICATIONS / PCN

L.1 Activity flow



L.2 PCN Notification form

PCN Notification form has been sent by email by Buyer and accepted by Seller



PCN notification form

L.3 List of major modification for each class

Active Components	<ul style="list-style-type: none"> - Changes listed in Annex A of Jedec Standard JESD46 - Test site transfer - Embedded firmware
Passive Components Electromechanical Passive Displays	<ul style="list-style-type: none"> - Assembly site - Materials - Process Flow - Drawing /Datasheet /Specifications change - Plating of external pins - Test flow - Appearance, colour - Marking - New process equipment - Packing / Shipping / Labeling /Storage Conditions - Carrier dimensions
Bulbs	<ul style="list-style-type: none"> - materials - tools / equipment - Assembly site - sub supplier - restart after inactive period - product changes (spec) - test specifications - new source of material - appearance (imprint)
Printed Circuit Boards	<ul style="list-style-type: none"> - Change of Plant - Change on Material (Base Material, Solder Resist, Undercoat/Overcoat, Copper, Finishing, Conductive Ink) - Change on Process (Equipment, Parameter, Method) - Change on Logistic Conditions - Use of Subcontractor
Plastic Mechanic Connectors	<ul style="list-style-type: none"> - Manufacturing site - Materials - Technology - Process Flow - Drawing /Datasheet /Specifications change - Finishing - Test flow - Appearance, colour - Retooling - Packing / Shipping / Labeling/ Storage Conditions - Subcontractor
Modules Sub Assemblies	<ul style="list-style-type: none"> - Changes listed in section "Active Components / Passive components / electromechanical components / passive display / printed circuit board / Plastic/ Mechanic/ Connectors" - SW change - changes to module / sub-assembly process in term of: <ul style="list-style-type: none"> * Assembly site * Materials * Process Flow * Drawing /Datasheet /Specifications change * Plating of external pins * Test flow * Appearance, colour * Marking * New process equipment * Packing / Shipping / Labeling /Storage Conditions * Carrier dimensions

L.4 Buyer interface for PCN notification and management (minor / major)

Electronic components (active and passive)	PCN Manager
Non-electronic components shipped to only one Marelli plant	Local Buyer + local R&D (specific people to be defined case by case according to supplied component and local organisation)
Non-electronic components shipped to 2 or more Marelli plants	PCN Manager
Only for Exhaust Systems: Metallic parts and components (Ex.: stamped parts, tubes bolts, bushing , machined parts, etc.)	Quality plant manager

M. ARCHIVING PERIOD FOR QUALITY RELEVANT DOCUMENTS AND RECORDS

M.1 Archiving period

Following table defines the archiving period per each type of document.

In case Seller delivers components with safety requirement, the Time Limit is 15 years, starting from the End of Life of Buyer production, for all documents.

Type of document	Time limit
MANAGEMENT	
Reports to Top Management	3 years
Management review reports	3 years
DESIGN & VALIDATION	
Component specifications and drawings	15 years from End of Life of Buyer production
Design Validation reports	15 years from End of Life of Buyer production
Cosmetic approval reports	5 years from End of Life of Buyer production
PPAP documents	3 years from End of Life of Buyer production
Buyer specifications	15 years from End of Life of Buyer production
Additional requirement specific for SW Product or components with SW embedded	
SW Development Plan	15 years from End of Life of Buyer production
SW requirements specifications	15 years from End of Life of Buyer production
SW Design specifications	15 years from End of Life of Buyer production
SW source code	15 years from End of Life of Buyer production
Configuration Management reports	15 years from End of Life of Buyer production
Test plan, cases, scripts, reports (for all applicable testing)	15 years from End of Life of Buyer production

Type of document	Time limit
Traceability matrix	15 years from End of Life of Buyer production
Complete tool chain (compiler, IDE, bug tracking system etc)	15 years from End of Life of Buyer production
PROCESS	
Testing specifications	15 years from End of Life of Buyer production
Tool inspection reports	3 years
Buyer approval to Start of production	3 years
Capability evaluation reports	3 years from End of Life of Buyer production
Special characteristics records	15 years from End of Life of Buyer production
Test and inspection records	15 years from End of Life of Buyer production
Rework records	3 years
Traceability of component, process and materials used (for calibrated tools) Measurement and Test Laboratory Certifications	3 years from End of Life of Buyer production
Tool calibration records	3 years
Tool calibration records	Document application plus 1 year from tool obsolescence
Maintenance records	3 years
COMPONENT	
Component & process modifications	15 years from End of Life of Buyer production
Component description and configuration	3 years from End of Life of Buyer production
QUALITY	
Quality targets	Document application
Quality and Conformity Certifications	3 years from End of Life of Buyer production
Internal quality audit reports and corrective action plans	3 years
Buyer audit reports and corrective action plans	3 years
Records on quality performances	3 years
8D reports	3 years
Risk analysis	3 years
Waiver application	3 years
Quality action plans	3 years
PURCHASING & SUPPLIER QUALITY (Tier-2 Suppliers)	
Purchasing contracts and attachments	All the period of business relationship between Seller and Tier-2 Supplier, including Warranty Period
Quality Contract and attachments	All the period of business relationship between Seller and Tier-2 Supplier, including Warranty Period
Quality target	Quality targets' term of validity
Audit plans	3 years
Audit reports and corrective action plans	3 years
Failure Analysis Request and related 8D reports / action plans	3 years