



ELECTRONIC AND ELECTROMAGNETIC SYTEMS
POWERTRAIN & DRIVETRAIN



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MESSAGE FROM THE MANAGEMENT

In order to meet the challenges of the international market EFI AUTOMOTIVE needs to work in close collaboration with dynamic and efficient suppliers. Suppliers convinced, like EFI AUTOMOTIVE, that the future belongs to customer oriented companies.

To be customer oriented means mastering quality, costs, delivery times, innovation and communication with the customer. In other words Total Quality.

This document has been written with the aim of explaining EFI AUTOMOTIVE's requirements as a customer and sharing our vision of total quality with our partners who are essential for our future success.

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1 SUPPLIER SELECTION

1.1 Preamble

EFI AUTOMOTIVE is defined as the EFI AUTOMOTIVE group's affiliated company(ies) with which the supplier is led to conclude a contract.

EFI AUTOMOTIVE wants to establish long-term relationships with suppliers who have already acquired experience in the AUTOMOTIVE industry and understand the game rules. Innovation, continuous improvement, respecting Quality objectives, costs and delivery lead-times must be top priorities in the supplier's quality policy. EFI AUTOMOTIVE has decided to retain only those suppliers who accept the rules defined in this Supplier Quality Assurance Manual and who are able to adopt the Product Quality Assurance approach. EFI AUTOMOTIVE's goal is for all supplies to be delivered in PQA.

Without any written agreement from the supplier one month after disclosing this manual, EFI AUTOMOTIVE group will consider that this document has been approved and accepted.

1.2 Normative references:

EFI AUTOMOTIVE requires that the supplier shall apply the following AUTOMOTIVE standards:

International standard

- ISO 9001

AUTOMOTIVE standards

- IATF 16949 / MAQMSR (Minimum AUTOMOTIVE Quality Management System
- Requirements for sub-Tier suppliers)
- ISO 26262

Applicable AIAG core tools & CQI at their latest revision :

- Advanced Product Quality Planning and Control Plan – APQP
- Production Part Approval Process – PPAP
- Potential Failure Mode and Effects Analysis – FMEA
- Measurements Systems Analysis – MSA
- Statistical Process Control – SPC
- All applicable Continuous Quality Improvement CQI

International standards for the phytosanitary rules

- Standard NIMP 15



1.3 **Assessment and selection of suppliers**

New suppliers to EFI AUTOMOTIVE could be pre-selected for homologation if their Quality Management System (QMS) is compliant to the following conditions:

* **Production Suppliers** (component supplied is part of EFI AUTOMOTIVE's finished product):

IATF 16949 certified.

ISO9001 certified with the ultimate objective of becoming IATF16949 certified for eligible suppliers within a reasonable period of time accepted by EFI AUTOMOTIVE. This commitment shall be formalized in a document signed by the supplier's top management.

ISO9001 suppliers, eligible IATF and not yet certified, will have to evaluate themselves according to the "Minimum AUTOMOTIVE Quality Management System Requirements for sub-Tier suppliers - MAQMSR" document and submit an action plan to EFI AUTOMOTIVE.

These requirements shall be cascaded by suppliers to their own suppliers.

* **Non-Production Suppliers:** we encourage ISO9001 certification

For electric and/or electronic components affecting the functional safety of road vehicles, it is required to comply with the standard ISO 26262. (except for off-the-shelf hardware parts).

The shortlisting of a supplier is made by the Purchasing and Quality Department through an approval audit; this is an evaluation of the technical and quality potential to supply products with zero defects.

The auditing team uses the "FORM - SUPPLIER APPROVAL QUESTIONNAIRE".

Score and conditions to be homologated are described in the front page of the questionnaire.

The homologation is valid only for the site audited and for the technology audited.

1.4 **Price**

The price offered by the supplier has to be competitive and in line with the market. The supplier must show a capacity to offer product or process improvements, which will influence the price. Cost transparency and commitment of the supplier on the cost objectives, are requirements.



1.5 Deadlines

The supplier must demonstrate its reactivity by effective logistics organization. EFI AUTOMOTIVE requires deliveries just in time by daily deliveries with a service rate objective of 100% from its suppliers.

1.6 Innovation and continuous improvement

The qualification level of the contacts proposed by the supplier as well as the manufacturing techniques used will be scored by EFI AUTOMOTIVE in the assessment of its ability to propose innovative solutions during the design phase and product improvements during the life of the product(s) supplied.

1.7 Communication

To facilitate integration in work meetings and the quest for improvements, the supplier must be proficient in French or English and possess a corporate culture compatible with the culture of the AUTOMOTIVE industry.

1.8 Respect of legal obligations

EFI AUTOMOTIVE is committed to complying with the laws and regulations applicable to its business and expect the same commitment from its suppliers adopting loyal, transparent, honest and sustainable business practices. Therefore, EFI AUTOMOTIVE formalized it in “FORM Suppliers’ Code of Conduct” and request its suppliers to adhere by applying and signing it.

From the perspective of safety and environment, product purchased by EFI AUTOMOTIVE must respect in any case the applicable legal requirements in the countries of manufacture and sale. These requirements will be stipulated in product specifications and/or on drawings.

It's the responsibility of the supplier to cascade legal requirements towards his own suppliers.

EFI AUTOMOTIVE requests to its supplier to take out an insurance policy covering all risks related to the design, the production and the supply of products, and particularly a product liability insurance covering pure financial losses, dismounting/remounting costs, withdrawal expenses, as well as any costs linked to a recall engaged by EFI AUTOMOTIVE or by third parties.



1.9 Risk management

EFI AUTOMOTIVE is engaged in a risk management strategy by identifying and analyzing the risk exposure and resilience of its suppliers. This is based on financial, geopolitical, natural and / or accidental catastrophes, the risks of insurance protection. As a result, EFI AUTOMOTIVE has formalized a "FORM - Supplier's Risk Management Questionnaire" and asks its suppliers to fill it out.

EFI AUTOMOTIVE also asks its suppliers to implement the same risk management strategy and deploy it to its own "suppliers". EFI AUTOMOTIVE will request an improvement action plan according to the analysis performed.

1.10 Confidentiality

All documents, information, research, drawings, samples, of any kind (technical, business, industrial, etc.) and under whatever form (email, oral or written disclosure, etc.) made available to the supplier before or during the execution of the business relationship remain the EFI AUTOMOTIVE's property. They have to be kept strictly confidential and have not to be disclosed to any third party and/or be used by the supplier for its own needs without the prior written agreement of EFI AUTOMOTIVE. EFI AUTOMOTIVE reserves the right to require their restitution at any time.

The supplier shall not use confidential information to take any direct or indirect steps which could result in competition with or cause any damage to EFI AUTOMOTIVE.

Similarly, no publicity may be made in connection with this business relationship without EFI AUTOMOTIVE 's prior written permission.

Confidentiality obligations will remain valid during five (5) years after the termination of the business relationship.

The signature of a Non-Disclosure Agreement between EFI AUTOMOTIVE and the supplier shall cancel and replace the present provisions.



2 DEVELOPMENT OF NEW PARTS

2.1 Project Management

The supplier shall be able to make useful suggestions during the design phase by fulfilling thus its obligation of advice. The supplier is integrated into a new project as far upstream as possible to ensure the best adequacy between the definition of the product and the possibilities and capabilities of the processes.

The objective is to start mass production in the best conditions and to manufacture "right first time".

In the context of ISO 26262 (functional safety), a "FORM - Development Interface Agreement" will be established to define responsibilities of the 2 parties in the life cycle activities Safety and evidence or work-product that must be exchanged. During the development activities, the supplier shall report each anomaly in their area of responsibility or in that of their subcontractors.

2.2 Development monitoring

The supplier must ensure that the product development planning include all interested parties by using a project management system like APQP (according to AIAG APQP manual last revision or VDA last revision).

EFI AUTOMOTIVE's SQA teams are using an internal APQP document for following-up the development of new components. This document will be shared with suppliers et will be up dated at a frequency to be defined by EFI AUTOMOTIVE and the supplier.

The product development planning will be sent by the supplier with a price offer. The supplier planning shall include the important steps (delivery model, prototype, launch series tools and means of controls, the file Quality Assurance, internal audit, manufacturing process audit, full rate production day with EFI AUTOMOTIVE ...)

EFI AUTOMOTIVE asks the supplier to return the product development planning before any confirmation of purchase order.

2.3 Contract review

Before the issuance of any order, a contract shall be concluded between EFI AUTOMOTIVE and the supplier in a view to check that EFI AUTOMOTIVE's requirements have been accepted and approved and that the supplier is able to satisfy them.

If it is not the case, the supplier will request further information or negotiate the deviations with EFI AUTOMOTIVE's requirements.



To do that, the supplier will use the document “FORM - Team Feasibility Commitment” to be provided by EFI AUTOMOTIVE teams.

The contract is signed by both parties and shall refer to the latest version of EFI AUTOMOTIVE’s drawing and the “PRODUCT SPECIFICATION SHEET SPECIFIC REQUIREMENTS” approved and accepted by the supplier.

The purchase file is forwarded to the Supplier by EFI AUTOMOTIVE’s purchasing team and contains the following elements:

- Supplier ‘s audit results
- General purchasing requirements summary
- Supplier Quality Assurance Manuel
- Supplier product specification sheet – specific requirements
- Designation and part number of the purchased product
- Drawing of the purchased product
- Legal contracts (Nomination Letter for instance)
- Purchase order (when necessary)
- FORM - Suppliers’ capacity spreadsheet -> self-assessment of capacity must be done by the supplier using the document to be provided by EFI AUTOMOTIVE’ s purchasing teams.
- FORM - Development Interface Agreement (DIA) EFI-Supplier (for Safety component according to ISO26262)

Note: In the case of a component or a product electric or/and electronic with an impact on the functional safety of the vehicle, the Product Specification Sheet will include the Safety requirements:

- Formal request to comply with the ISO 26262
- Input data (Type, definition of the object or the functional specification of the element, safety target, functional safety requirements or technical safety requirements and ASIL level)
- Output data (evaluation, Safety assessment, calculations)

Supplier’s answers with objective evidences of the must be integrated into the DIA. EFI AUTOMOTIVE and the supplier shall agree on all responsibilities in the life cycle activities and work-product that are defined into the DIA.

2.4 Prototypes

The wording for prototypes may be different from one customer to another, but generally speaking the definition is defined as below :



Type	Raw material	Process	EFI AUTOMOTIVE use
Mock-up	Different than serial parts	Different than serial parts / not the same technology <i>e.g. 3D printing</i>	Concept evaluation
Proto A	Could be different than serial parts	Could be different than serial parts / could be not the same technology <i>e.g. : laser cutting i.o. stamping</i>	Concept evaluation / Prototypes for customers
Proto B	Shall be the same than serial parts	Could be different than serial but same technology. <i>e.g. : mold or die 1 cav i.o. several cav. / CNC machine i.o. multi-spindle machine</i>	Design Validation
Proto C / Off Serial Tools	Shall be the same than serial parts	Shall be the same than serial parts	Manufacturing Process Validation

In case of different requirements, specifications will be provided by EFI AUTOMOTIVE

The delivery of prototypes is conditioned by an order from EFI AUTOMOTIVE 's Purchasing teams. The realization of prototypes must enable the supplier to discover the difficulties likely to be encountered during the initial samples phase and the mass production.

All documents requested by EFI AUTOMOTIVE in the "FORM - Product specification sheet – specific requirement" must be provided with the shipment of prototypes.

If the Product specification sheet is not available at that time, documents usually expected are: metrology report, certificate of analysis. Other documents could be requested by EFI AUTOMOTIVE's SQA teams: capability studies, control plan...

At the end of the "prototyping" phase, the supplier will be able to propose improvement approaches to EFI AUTOMOTIVE's engineering departments (modifications of dimensions, tolerances, process etc...).

Tracking evolution sheet for prototypes A, B, C is strongly recommended (processes and Bill Of Material) identifying also potential quality impact in mass production.

Tracking evolution sheet is **mandatory for safety products** (ISO26262 requirements or CCS characteristic in the drawing).



2.5 Management of purchased components by the supplier

The supplier shall provide to EFI AUTOMOTIVE the list of its sources of supply of raw materials and will not change without notifying EFI AUTOMOTIVE (refer to chapter 4 "Management of engineering change request").

Development of new purchased components shall be done in compliance with ISO9001 & IATF16949 requirements using relevant AIAG core tools and CQI including CQI-19 (sub-tier supplier management process guideline).

2.6 Conformity with regulation

The supplier must comply with the regulation regarding the materials and substances banned or restricted following EU directives 2000/53/CE, 2003/11/CE, 67/548/CEE and 76/769/CEE and/or local regulations. The product or material purchased must also comply with regulations in the country of manufacture and marketing in conformity with "PRODUCT SPECIFICATION - SPECIFIC REQUIREMENTS" (for example, regulatory constraints related to the environment, electricity, electromagnetic compatibility, safety)

The supplier must declare the products delivered to EFI AUTOMOTIVE with the IMDS system.

When the components are assembled into a sensor produces by EFI AUTOMOTIVE and shipped to a Chinese customer, the supplier must declare its product into the CAMDS database. The request will be sent by EFI AUTOMOTIVE (purchasing & SQA teams).

It's the responsibility of the supplier to check that his own suppliers are compliant with regulation's disposals described above.

2.7 Preparation of initial samples

Initial samples are ordered from the supplier by the Purchasing team in accordance with EFI AUTOMOTIVE's "FORM - PRODUCT SPECIFICATION SHEET SPECIFIC REQUIREMENTS".

FORM "PPAP requirements and synthesis" must be sent to the supplier by EFI AUTOMOTIVE with the purchase order of the Initial Samples.

PPAP package is defined hereunder in case PPAP requirements are not transmitted on time:

- PSW
- IMDS / CAMDS
- Drawing ballooned
- Dimensional results and metrology protocol
- Functional test according to the drawing or the Product specification Sheet



- Initial Process Studies (capabilities)
- Measuring System Analysis (MSA)
- Raw material Certificate of Analysis
- Process FMEA -> at minimum, the pareto of RPN and action plan associated
- Process Flow Diagram
- Control plan
- Appearance Approval Report / Appearance boundary catalog
- Packaging: working instruction / copy of the label to identify the packaging units (barre code: Product P / Quantity Q / Label number S / deadline for product with expiry date)
- Sample Production Part / Master Sample

➔ PPAP content will depends on the type of submission

Note 1: Special Characteristics identified in EFI AUTOMOTIVE printing shall be reported on FMEA, Control Plan and relevant working instructions.

Note 2: It's the responsibility of EFI AUTOMOTIVE's suppliers to cascade Special Characteristics towards his own suppliers and to check that such Special Characteristics are also reported in FMEA, Control Plan and relevant working instructions of his own suppliers.

2.8 Audit of the manufacturing process

EFI AUTOMOTIVE' s SQA teams are responsible for conducting audits of manufacturing processes at the Suppliers' facilities during the production of initial samples (PPAP audit) and at least every 3 years (renewal audit).

Before being audited by EFI AUTOMOTIVE (PPAP audit), the supplier shall conduct internal audit and alert EFI AUTOMOTIVE in case of big issues.

Frequency of audit may be less than 3 years in case of EFI AUTOMOTIVE' s customer's specific requirements and/or in case of issue in mass production (e.g.: recurrent claim, quality crisis...).

EFI AUTOMOTIVE reserves the right to attend to sub-suppliers' manufacturing and/or PPAP audit carried-out by our supplier (in conjunction with them).

Questionnaire template to use is FORM – *SUPPLIER AUDIT QUESTIONNAIRE*.

In the case of self-assessment, supplier's questionnaire could be used if it's approved by EFI AUTOMOTIVE's SQA.

Other questionnaires may be used in the following cases:

- Specific customer requirement (e.g.: VDA6 latest revision)
- Supplier's questionnaire if approved by EFI AUTOMOTIVE' s SQA (in the case of the audit is delegated to the supplier)

For capacity, EFI AUTOMOTIVE could also check on site self-assessment to be provided by the supplier (refer to chapter 2.3).



For approving the process, the audit score must be greater or equal to the scores indicated in the cover page of the audit questionnaire, with no major non-conformity.

For electric and/or electronic components affecting the functional safety of road vehicles, the audit questionnaire for suppliers ISO26262 shall be used.

The cover sheet of the audit questionnaire, systematically signed by the supplier, will be attached to an improvement action plan.

This action plan will be provided within two weeks of receipt of the report and will be fenced within 3 months after its submission (unless an exception is granted by the SQA). The action plan follow-up will be carried out by SQA and should make it possible to improve the initial audit score. A follow-up audit could be carried out by the SQA to check the effectiveness of the action.

Due to our Customer Specific Requirements (CSR), IATF16949 requirements and our willingness to be sure that processes of our suppliers are under control, we request adherence to the relevant, valid version of the AIAG CQI (Continuous Quality Improvement) guidelines and their implementation by our suppliers and sub-suppliers. We request that both suppliers and sub-suppliers carry out a self-assessment on an annual basis in accordance with CQI standards if one of the following processes is used:

- CQI-9: heat treatment assessment
- CQI-11: plating system assessment
- CQI-12: coating system assessment
- CQI-15: welding system assessment
- CQI-17: soldering system assessment
- CQI-23: molding system assessment
- CQI-27: casting system assessment

It is the supplier's responsibility to select the more appropriated process table amongst all proposed in every standard. In case the process table does not match completely with the process, the supplier shall select applicable requirements.

Suppliers shall:

- Implement the CQI-xx self-assessment, including introduction of measures in the event of discrepancies, archive the results at his premises and ensure that evidences will be made available at EFI AUTOMOTIVE's request.
- Integrate the applicable CQI-xx audits/assessments in his annual audit plan.
- Forward all requirements above to his sub-suppliers and monitor of their implementation.

Suppliers could be requested by EFI AUTOMOTIVE to provide evidence of CQI-xx assessments.

In addition, EFI AUTOMOTIVE reserves the right to verify the assessments at your location, in consultation with you, and at your sub-suppliers' location in conjunction with you.

For detailed information, documents (assessment questionnaire) or training, please contact the AIAG at <http://aiag.org>.



2.9 Preparation of initial samples

The initial samples will be collected at run-at-rate production during manufacturing process audit conducted by EFI AUTOMOTIVE teams (with the group document "Audit questionnaire for supplier") or by the supplier (with the document "FORM - Audit questionnaire for supplier" or with supplier's standard if it is accepted by EFI AUTOMOTIVE) in case of delegation granted by EFI AUTOMOTIVE.

The definition of the initial samples (quantity, condition, etc...) shall be defined between EFI AUTOMOTIVE and the supplier.

2.10 Presentation of initial samples

The supplier delivers initial samples, with the complete PPAP package and in conformity with the submission:

Initial samples will be identified inside and outside the container with a colored label "INITIAL SAMPLES".

2.11 Acceptance of initial samples

The supplier will be informed of acceptance of the initial samples by the return of the submission certificate concerned, signed and approved by the Supplier Quality Assurance manager (SQA) of the concerned plant.

Acceptance status are: interim, full approved.

In case of interim, a deadline will be defined by EFI AUTOMOTIVE. The supplier shall submit relevant action plan to allow a full approval before the expiration of the interim.

In case of status "refused", the supplier is not allowed to ship any product to EFI AUTOMOTIVE. An action plan shall be submitted as quick as possible to allow an interim or full approval status.

It is the supplier's responsibility to check that the initial samples have been accepted by EFI AUTOMOTIVE before starting mass production for delivering goods.



3 PRODUCTION DELIVERIES

3.1 Control of the manufacturing process

In the event of non-conforming product detected by the supplier without any other solution than shipping the product to EFI AUTOMOTIVE, the supplier must inform immediately EFI AUTOMOTIVE and submit before shipping a deviation request and an action plan to avoid any repetition. The delivery will be possible only after a written acceptance of the deviation by EFI AUTOMOTIVE.

A deviation request shall be also submitted to EFI AUTOMOTIVE for any temporary situation that was not PPAPed and approved by EFI AUTOMOTIVE: rework, repair, use of another manufacturing equipment, another measuring equipment (non-exhaustive list).

Feel free to get in touch with EFI AUTOMOTIVE's teams in case of doubt.

The supplier will keep available for EFI AUTOMOTIVE any documents (e.g. SPC charts, raw material certificate of analysis....) used to manufacture the product. If processes capabilities (Pp, Ppk – long term) are less than 1.33 or other value defined into the Product Specification Sheet the supplier will have to implement a 100% sorting and implement an improvement action plan until meeting requirements-

In the aim of ensuring risk management and eradication of defects, an up-to-date chronological list of all problems encountered and actions implemented will be made available to EFI AUTOMOTIVE by the supplier.

For components ISO26262 related, the supplier shall implement a management of configuration that will allow to track and record any modifications of the components and the processes.

3.2 Conformity with regulation

Any delivery of hazardous must be subject to prior agreement and be accompanied by a safety data sheet (in French), the conditioning unit and cartons must be identified accordingly.

For each modification of safety data sheet, the supplier must inform us. All raw material changes incoming in the composition of the product/raw material that the supplier must provide to us have also to be subject to a prior agreement (to the buyer responsible).

3.3 Deliveries

The deliveries of parts must be carried out in compliance with "PRODUCT SPECIFICATION SHEET - SPECIFIC REQUIREMENTS"; packaging will be identified in accordance with specified requirements.

The supplier will deliver exactly the quantity stipulated, at the stipulated date, in the stipulated packaging, identified with a bar code label and with the correct



documentation. If not, the delivery concerned may be refused and be involved in litigation.

An item subject to an expiration date must be identified at the delivery in accordance with the "specification product - specific requirements". In the case of an evolution of the expiration date EFI must be informed before setting up.

Refer to EFI AUTOMOTIVE's specifications:

- FORM - PRODUCT SPECIFICATION SHEET - SPECIFIC REQUIREMENTS
- INS - General logistic requirements

Any delays or risks must be immediately reported to EFI AUTOMOTIVE. In the event of a delay, EFI AUTOMOTIVE reserves the right:

- to demand an express delivery at the expense of the supplier,
- to terminate without compensation, all or part of the order not executed,
- to purchase the products from another supplier, in which event any extra costs involved shall be paid by the supplier,
- to apply late delivery penalties of an amount corresponding to one percent (1%) of the total amount of the concerned order, per day of delay, in the limit of ten percent (10 %). These penalties can be deducted from any amounts still due to the supplier.

Notwithstanding the payment of late delivery penalties, the supplier will compensate EFI AUTOMOTIVE for all costs relating to customer claims and/or line stoppage caused by this delay in delivery.

Notwithstanding the foregoing, it is agreed that if the supplier, or EFI AUTOMOTIVE, was unable to execute totally or partially its obligations due to an event of Force Majeure, it shall not be held liable for any damages resulting from it until the end of the event of Force Majeure, provided however that such a event be notified to the other party within forty-eight (48) hours following the occurrence of said event.

Should the event of Force Majeure last more than one (1) month, the other party reserves the right to terminate the business relationship without notice or compensation.

The Force Majeure (Exemption) clause of the International Chamber of Commerce (Publication No. 421) is an integral part of the business relationship.

Documents to be provided to EFI AUTOMOTIVE :

A/ Projects activities - New components

EFI AUTOMOTIVE' s team will write into the Product Specification Sheet which kind of documents shall be provided:

- With each shipment during a period to be defined by EFI AUTOMOTIVE
Ex: dimensional results, functional results, SPC chart, results of firewall.....
- At least once a year
Ex: dimensional results, functional results, SPC chart, CQI-xx assessment....



B/Mass production activities: non-conformity / Engineering change request

EFI AUTOMOTIVE reserves the right to request the supplier to provide with each shipment some documents for proving that activities following a non-conformity, or a change have been well done (ex: dimensional results, functional results, SPC chart, results of firewall.....)

The period will be defined by EFI AUTOMOTIVE.

3.4 Product Quality Assurance (P.Q.A)

The objective is to use the products delivered by supplier directly in production at EFI AUTOMOTIVE's without any receiving inspection processes.

During a probationary period to be defined by the SQA according to internal rules (general case: 20 deliveries or 4 months), EFI AUTOMOTIVE's facilities have the choice:

- To check the conformity by measuring, inspecting, checking the product.
- To check data to be provided by suppliers (e.g.: certificate of analysis, SPC chart, measuring report....).
- Refer to chapter 3.3. (Documents to be provided to EFI AUTOMOTIVE)

The probationary period will start at the SOP (Start Of Production, PPAP has been approved) or after a non-conformity has been issued.

In case of non-conforming product for which the supplier's responsibility has been demonstrated and that require EFI AUTOMOTIVE to engage resources for inspecting the product, related costs will be charged back to the supplier.

This will be applicable:

- If the probationary period must be extended.
- In case of any quality issue that require to remove the PQA status and go back to receiving inspection.

3.5 Monitoring of performance

Quality, Cost & On-time deliveries performance of strategic suppliers is measured regularly by EFI AUTOMOTIVE teams and give rise to evaluations. The suppliers must implement improvement action plan according to the modalities defined in the letter sent with the evaluations.

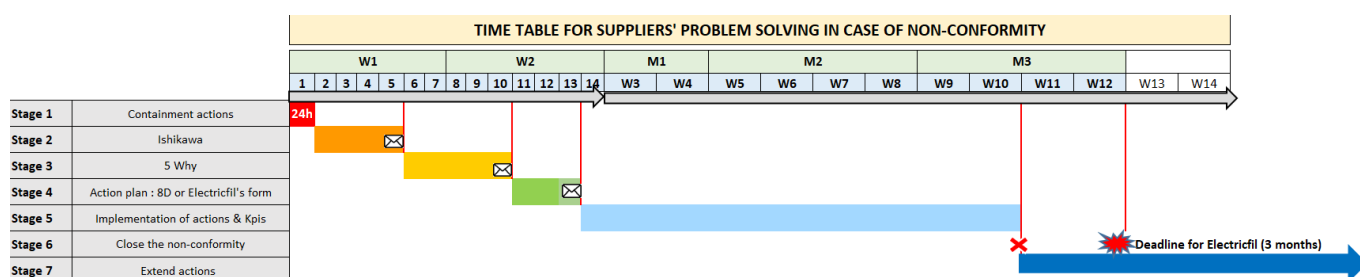
3.6 Non conformities detected by EFI AUTOMOTIVE or his customers

The goal is zero defects.”

In case of a non-conforming product, the supplier is informed by EFI AUTOMOTIVE : Call / non-conformity sheet sent by email.

The timing to be respected is described hereunder:

3.6.1 - Timing



The supplier shall commit to:

- **Stage 1: Within 24 hours max** - Organize and implement containment actions in order to ship only parts that have been secured with relevant methods .
- **Stage 2: Within 5 calendar days max** - Provide an Ishikawa and results of assumptions ' check. Try to reproduce the defect.
- **Stage 3: Within 10 calendar days max** - Provide 5 Why for occurrence / non-detection / system
- **Stage 4: Within 13 calendar days max** - Provide an action plan . Implement KPIs to track the efficiency of actions
- **Stage 5: Within 8 weeks max** - Implement action and check that they are efficient
- **Stage 6: End of CW10 max** - Deadline to close the issue. All documents & evidences shall be submitted to EFI AUTOMOTIVE and statement from the supplier that issue has been closed. EFI AUTOMOTIVE's SQA must close the non-conformity within 3 months max.
- **Stage 7: As soon as the issue has been closed** - start actions for extensions to other products / processes linked to parts shipped to EFI AUTOMOTIVE (in priority)

For all the stages above, send to EFI AUTOMOTIVE's SQA your own 8D form or EFI AUTOMOTIVE's form, with all appropriated chapters well fulfilled.

Purposes:

- * Have a constructive discussion about the state of progress with the supplier, stage by stage
- * Improve the dynamique of problem solving and exchange faster about potential problems
- * Respect the deadline of 15 days max for approving 8D by EFI AUTOMOTIVE's SQA and close the non-conformity within 3 months max

3.6.2 - Sorting

Any non-compliant product detected in control reception or in use in production will lead to the rejection of the entire batch.

In case of non-quality with impact on the product flow, two scenarios are possible:



- Possible sorting at EFI: the supplier will engage within the period requested by EFI (at the choice):
 - a / its own staff (preferred option depending on location and the time limit)
 - b / a company specialized in the sorting who assure training, management, coaching staff and the balance sheet sorting at a frequency to be agreed with EFI.In no case, it's could be temporary staff whose management would ensure EFI.
The sorting instruction sheet will be defined by the supplier
- No possibility of sorting (means or technical): the supplier shall implement all necessary means to avoid the disturbance of the manufacturing flow.
Non-compliant batches are identified and returned to the supplier (at supplier's expenses). A delivery note shall be joined to the non-conforming batch and a credit note for the costs incurred by EFI AUTOMOTIVE will be issued. The supplier must replace the concerned batches as soon as possible. Once notified about the availability of non-compliant goods, the supplier undertakes to take them back as quickly as possible. Upon agreed deadline, the concerned plant of EFI AUTOMOTIVE will proceed to the re-shipment with the carrier of its choice according to an "ex-works" delivery contract.

3.6.3 - Penalties

In case of non-conforming product detected by EFI AUTOMOTIVE and/or his customers and after having demonstrate supplier's responsibility, all the costs supported by EFI AUTOMOTIVE will be charged back to the supplier. All relevant information (hours, costs, labor cost....) will be notified into a document called "FORM - Suppliers cost follow-up" and will be sent to the supplier after being signed by authorized people.

If the non-conformity does not lead to open the document "FORM - Suppliers cost follow-up", administrative costs could be charged back depending where the non-conformity has been detected and taken into consideration a recurrent claim. Costs are defined hereunder:

- Claim detected at EFI AUTOMOTIVE' s incoming inspection: 300€ (or equivalent in the local currency)
- Claim detected at EFI AUTOMOTIVE' s production line: 500€ (or equivalent in the local currency)
- Claim detected at EFI AUTOMOTIVE' s customer: 750€ (or equivalent in the local currency)
- In case of recurrent claim: adding 300€ (or equivalent in the local currency) to the amount defined above.

3.6.4 – Recurrence of non-conforming product

After a Non-Conformity (NC) has been fixed by the supplier and closed by EFI AUTOMOTIVE's SQA, a new one occurred again. We are talking about recurrence if we are facing the same effect whatever the root cause.



SQA is looking back 2 years maximum -> if NC#1 occurred more than 2 years before NC#2 we do not consider that NC#2 is recurrent.

CS1: Control Shipping level 1:

In case of NC recurrent as defined above. The supplier must implement a fire wall -> 100% inspection on the characteristic(s) out of specification.

Management of CS1 may be led by the supplier (or third part up to supplier's decision)

CS2: Control Shipping level 2.

In case of non-conforming parts which have slipped out the CS1 (for the characteristic checked at CS1) and have been detected by EFI AUTOMOTIVE and/or his customer(s) a CS2 must be notified to the supplier.

An additional 100% inspection must be implemented.

Management of CS2 cannot be led by the supplier. It must be led by a third part.

Location of CS2 may be:

- at supplier
- at third part
- at EFI AUTOMOTIVE (but to be managed by a third part)

All costs shall be supported by the supplier.

Third part may be chosen by the supplier or recommended by EFI AUTOMOTIVE.

The CSx must be notified by the SQA by sending the FORM - CONTROL SHIPPING – NOTIFICATION LETTER.

The document must be signed by the supplier (usually quality manager or customer quality responsible) and sent back to the SQA.

The supplier must implement immediately the CSx for a period defined in the previously cited document.

3.7 Traceability

The supplier shall use a traceability system for allowing the recovering of all relevant product and processes' information (records of measuring, records of processes' parameters, raw material batch number....). All data shall be found thanks to the delivery note and/or information available on label (packing / handling units). Refer to EFI AUTOMOTIVE's specifications:

- FORM - PRODUCT SPECIFICATION SHEET - SPECIFIC REQUIREMENTS
- INS - General logistic requirements

3.8 Shelf-life of documents

The PPAP package, contracts, amendments, purchase orders, documents related to tooling shall be retained throughout the entire lifetime of the product that EFI AUTOMOTIVE delivers to the customer beyond one year.



The metrology results, workstation record sheets, control policies, R&R studies, certificates of material analysis must be retained for 15 years (these rules apply to any supplier or subcontractor or manufacture of EFI AUTOMOTIVE's toolings. Other requirements could be defined into the FORM - Product Specification Sheet – Specific requirements.



4 MANAGEMENT OF ENGINEERING CHANGE REQUEST (ECR)

4.1 ECR for product and processes

For any changes of manufacturing processes or product, a request must be sent to EFI AUTOMOTIVE and agreement must be obtained before launching any change activities.

The change must be described into the document "FORM - REQUEST FOR MODIFICATION TO BE SENT TO EFI AUTOMOTIVE" form.

The change request must necessarily contain:

- Reason(s) of the change
- A detailed description of the situation before / after modification
- A risk analysis with relevant action to handle the risk. - Impact analysis according to WP9 document for safety product ISO26262
- A product Validation Plan
- A processes Validation Plan

Examples of product changes (non-exhaustive list):

Any differences to what have been PPAPed and approved by EFI AUTOMOTIVE:

- Raw material: new supplier, new material.
- Dimensions: any modification of shape, dimensions, tolerance, norm.
-

Examples of manufacturing process changes (non-exhaustive list):

Any differences to what have been PPAPed and approved by EFI AUTOMOTIVE:

- Machine: new or modified machine, main repair or refurbishment that may have an impact on the product (quality, cycle time....).
- Tool, die: new cavity, new tool or die, main repair or refurbishment that may have an impact on the product (quality, cycle time....).
- Any transfer of machine, die, tool to another workshop, another plant, another supplier.
- Process Flow Diagram: add, remove, interchange an operation
- Packaging: new, modified (even if there is no risk for the product, it might have an impact on EFI AUTOMOTIVE's storage and/or processes).

If the change is approved, a PPAP package will be requested by EFI AUTOMOTIVE. The first delivery after the change shall be identified in a proper manner.

4.2 Quality system modification

In the event of major modifications of supplier's quality system (e.g.: loss or renewal of ISO 9001/IATF 16949 certification, or in the event of a merger or buyout) the supplier shall immediately inform the Supplier Quality Assurance and Purchasing representatives.



5 CONTINUOUS IMPROVEMENT

EFI AUTOMOTIVE encourages its suppliers to implement a continuous improvement approach by using all relevant tools and methods such as: T.P.M., team work, SMED, Kanban, employees' suggestion system, visual management, 5S method, problem solving (non-exhaustive list).

All relevant KPIs shall be implemented for measuring the performance in terms of Quality – Cost – On time deliveries.

As for Statistical Process Control, continuous improvement approach must lead to maintain capabilities index (P_p & P_{pk} in mass production) greater than 1,33 (or other value defined into the Product Specification Sheet – Specific requirements).



6 SPECIFIC REQUIREMENTS

- The products shall comply with EFI AUTOMOTIVE's provisions mentioned within its "open" and/or "firm" orders and its delivery schedules -
- The tools belonging to EFI AUTOMOTIVE must be marked in a permanent manner (for example in the mass). The supplier shall notify EFI AUTOMOTIVE about the state of wear of each tool at least once a year.
- The supplier must nominate a Product Safety Manager :
 - ✓ In charge of the relationship with EFI AUTOMOTIVE in case of significant quality problem (recall procedure, ...).
 - ✓ Responsible of functional safety management. He must implement the necessary means to reach the specified level of Safety (product ISO26262 related)
 - ✓ Responsible of the creation, implementation (planning and coordination) and monitoring of the Safety activities during the development and/or the production (Safety Plan)
 - ✓ Responsible of the respect of the methodology and the validation of the productThis person shall be identified in an organization chart.
- Special Characteristics:
 - ✓ Special Characteristics concerning safety, and Pass-Through (respectively CCS, PTC) are identified on EFI AUTOMOTIVE 's drawings . These characteristics require special attention. For CCS and PTC, the objective is 0 defect. Supplier must implement relevant system to achieve this requirement. Poka-Yoke for not producing non-conforming parts are preferred solutions. Poka-Yoke for detection remain an acceptable solution.
 - ✓ Other Special Characteristics, Significant and according to regulation (respectively SC, CCR) also require special attention generally using SPC or any other method that ensures the stability of the process to achieve quality requirements defined into the Product Specification Sheet – specific requirements.
 - ✓ Special Characteristics shall be cascaded by the supplier to his sub-suppliers.



7 DOCUMENTS TO BE USED

The last versions of these documents are to be obtained from the Key commodity Leader / Buyer and / or SQA site with whom you interact.

FORM Non-Disclosure Agreement
FORM Nomination Letter
SPEC Suppliers' code of conduct
FORM Supplier Risk Management Questionnaire
INS ASSESSMENT AND FOLLOW UP SUPPLIERS PERFORMANCE.
INS General logistic requirements
FORM Supplier approval questionnaire
FORM Audit questionnaire for suppliers
FORM Audit questionnaire for supplier ISO26262
FORM APQP - Advanced Product Quality Planning
FORM Request for modification to be sent to EFI AUTOMOTIVE
FORM Check-list of requirement for bulk material
FORM Controlled shipping notification letter
FORM Controlled shipping confirmation reply
FORM Supplier costs follow up
FORM DIA - Development Interface Agreement
FORM Product Specification Sheet – Specific requirements
FORM PPAP requirements & synthesis
FORM TFC - Team Feasibility Commitment
FORM Suppliers' capacity spreadsheet



8 QUALITY GLOSSARY

5 WHY: *Root cause identification method.*

5S: *Seiri (Elimination), Seiton (Neatness), Seiso (Cleaning), Seiketsu (Standardisation), Shitsuke (Discipline).). Recognized method contributing to the effectiveness of a quality approach. Quality dictionary, 2003, AFNOR*

APQP: *Advanced Product Quality Planning. Structured process making it possible to define the methods used during the production of a specific product, or family of products.*

CAMDS: *China AUTOMOTIVE Material Data System compliance*

CPK: *Process capability: "CP is a coefficient which makes it possible to evaluate the aptitude of a process to produce parts in the definite tolerances.*

CQI: *Continuous Quality Improvement*

CS1: *Controlled Shipping level 1. In the event of recurrence of a non-conformity, 100% control on the defective characteristics, implemented at the supplier's premises, off-line.*

CS2: *Controlled Shipping level 2. Additional control compared to the CS1 set up at the premises of the supplier's customer, under the responsibility of a third party and paid for by the supplier.*

Diagram of ISHIKAWA : *Schematized process-flow diagram which highlights actions to be taken to mitigate unacceptable risks. Quality dictionary, 2003, AFNOR*

FMEA: *Failure Mode & Effect Analysis. Analysis of failure modes, their effects and their criticality. Quantitative method of prevention through analysis of the reliability of a system by the determination, in terms of seriousness and occurrence, of the effects of each failure mode and their criticality on other elements and/or functions of the system. FMEA is an analytical method relating to failure risk probability during the design phase. Quality dictionary, 2003, AFNOR*

IMDS: *International Materials Data System*

Initial samples: *Initial samples are a quantity of parts manufactured at the production plant using mass production resources. Parts are sampled from a statistically significant production run, representing the production of 1 to 8 hours with a minimum of 300 parts whenever possible.*

Non-conformity : *failure to satisfy a requirement. The definition applies to the variation or the absence, vs. the requirements specified, of one or more quality*



characteristics or one or more elements of the quality system. Quality dictionary, 2003, AFNOR

P.Q.A: *Product Quality Assurance. Product quality assurance is designed to ensure the continuation of product quality over time. The approach implies the identification and the installation at the supplier's premises of the technical and human resources needed to ensure the quality of the products.*

REACH: *Registration Evaluation Authorisation and Restriction of Chemicals*

R&R Studies : *Repeatability And Reproducibility Studies. Studies carried out on the measurement, control or test resources to determine their aptitude for the measurement of what needs to be measured.*

PPAP : *Production Part Approval Process*

All the documents relating to a part (PSW, metrology report, capability studies ...) and which lead to an acceptance status of the part by the signature of the PSW.

PPM : *: the number of defective parts multiplied by a million and divided by the number of parts delivered..*

PSW: *Part Submission Warrant*

SPC: *Statistical process control. Quality method used to check that the manufacturing processes can produce to the product specifications and meet the pre-defined tolerances. Quality dictionary, 2003, AFNOR*

Special Feature: *requirements which the failure affects the safety functions, product regulation, or the quality of the product.*

Test and Control Plan : *document listing all the tests and inspections carried out during the manufacture of a product, from the reception of raw materials to the tests carried out throughout the life of the batch as shown in the quality tracking plan. The test and control plan includes the quality tracking plan and end product audits.*

TPM : *Total Productive Maintenance : All actions which aim to achieve zero line stoppages, zero wastage, zero accidents and which contribute to the quality of the products or devices manufactured, and their reliability. Quality dictionary, 2003, AFNOR.*



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