



ELECTRONIC AND ELECTROMAGNETIC SYSTEMS
POWERTRAIN & DRIVE



Qualité Quality
Qualität
Kalite 质量



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.

The undertaking of the supplier to conform to the present Supplier Quality Assurance Manual will be formalised by the signature of the recorded delivery.

In the record delivery isn't returned by the end of one month following dispatch 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

- Quality System Requirements – QS 9000
- IATF 16949 / [MAQMSR \(Minimum Automotive Quality Management System Requirements for sub-Tier suppliers\)](#)
- ISO 26262

Standards AIAG (manuals related to QS 9000)

- 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

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 Electricfil finished product) :

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. For certain supplied products which necessitate co-design with the supplier, the supplier's aptitude to participate in co-design with EFI AUTOMOTIVE's project team will be taken into account for the evaluation.

1.4 Price

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

1.5 Deadlines

The supplier has to 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 has to 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

From the perspective of safety and environment, product purchased by EFI AUTOMOTIVE has to 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.

1.9 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 "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

Each product development must have a realisation planning, type "Status report" in conformity with the APQP method (manual attached to QS9000, AIAG), compatible with the project planning of EFI AUTOMOTIVE. The updating frequency is determined jointly between the supplier and EFI AUTOMOTIVE (except specific requirements of our customers).

This planning will be delivered 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 the return of acknowledgment signed and development planning before any order confirmation.

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 in question will request further information or negotiate the differences with EFI AUTOMOTIVE 's requirements.

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.



2.4 Prototypes

As far as possible, prototypes are made in the same conditions as production batches and must always comply with the « PROTOTYPE SUBMISSION CERTIFICATE » (or equivalent site) or a file containing the information requested by EFI AUTOMOTIVE. The delivery of prototypes is conditioned by an order from EFI AUTOMOTIVE 's Purchasing teams. The realisation of prototypes has to enable the supplier to discover the difficulties likely to be encountered during the initial samples phase.

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...).

Specific cases of suppliers of bulk materials: the form "REQUIREMENTS FOR BULK MATERIALS" (or equivalent) will be completed by the supplier and transmitted to EFI AUTOMOTIVE.

2.5 Approval of components

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.

The supplier shall implement a procedure for acceptance of components it buys and its sub-contractors including: signing of a specification, acceptance of initial samples, validation of the Quality Assurance file, manufacturing process audit...

An annual metrological check on predetermined functional ratings is required by EFI AUTOMOTIVE and must be included into the monitoring plan.

2.6 Conformity with regulation

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

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 "PRODUCT SPECIFICATION SHEET SPECIFIC REQUIREMENTS".

The initial samples file includes: *(The points identified by an asterisk (*) are obligatory.)*

- * the numbered drawing used to manufacture the initial samples,
- * the flow chart,
- * the FMEA process,
- * the control plan,
- * a metrological report or test report vs. the plan and/or the specifications,
- the result of the capability studies as stipulated in the product specification sheet, for the critical ratings and those defined in the requirement file,
- * the result of the R&R in accordance with the current version of the MSA or AIAG,
- the result of the raw material analysis and material certificate according to the requirement file,
- a test report as stipulated in the product specifications,
- the « PARTS SUBMISSION CERTIFICATE » or equivalent according to the concerned plant,
- proof of conformity with safety and environment laws (if necessary),
- recommendations for assembly and product use (if necessary),
- *synthesis of deviations with the requirements of EFI AUTOMOTIVE with associated action plan,
- products must be delivered in the package series defined in EFI AUTOMOTIVE 's "PRODUCT SPECIFICATION SHEET SPECIFIC REQUIREMENTS",
- the packaging must have a label with the DATA type GALIA : Product / Quantity / S (single number),
- any other additional element that may be requested.

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

The audit process is carried out by the Supplier Quality Assurance manager (SQA) possibly accompanied by the project manager and/or purchaser at the supplier's premises as defined in "THE AUDIT PROCESS QUESTIONNAIRE". For the supply to be approved, the audit score must be greater than or equal to the values 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 first page of the audit questionnaire, systematically signed by the supplier, will be attached to the necessary 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 delivery (unless an exception is granted by the AQF responsible). The action plan follow-up will be carried out by the Supplier Quality Assurance manager (SQA) and should make it possible to improve the initial audit score. A follow-up audit could be carried out by the Supplier Quality Assurance manager (SQA), to check the effectiveness of the action plans.

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 or by the supplier (with the group document "Audit questionnaire for supplier") 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 Quality file and in conformity with the submission certificate (only parts 100% in conformity or derogate by EFI AUTOMOTIVE will be called initial samples).

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

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.



In the case of non-compliance with certain requirements regarding the submission, an acceptance with a waiver may be granted by the Supplier Quality Assurance manager (SQA) about the submission certificate. For any acceptance with a waiver, EFI AUTOMOTIVE will require a corrective action plan.

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

In case of refusal of initial samples, the supplier shall correct them by all necessary means and re-present a folder.



3 PRODUCTION DELIVERIES

3.1 Control of the manufacturing process

The processes used to manufacture parts have to be the same as those used to make the initial samples and comply with the flow chart and the test and inspection schedule. In the event of a non conformed product or process, the supplier has to immediately inform us and submitted before any delivery a request for a waiver accompanied by an action plan. The delivery will be possible only after acceptance of the waiver by EFI AUTOMOTIVE. The supplier will keep available for EFI AUTOMOTIVE the control charts and material analysis certificates used to manufacture the product. If the process capabilities (Cpk) are less than 1.33 the supplier has to start an action plan and sort 100% of the parts concerned.

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.

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 has to inform us. All raw material changes incoming in the composition of the product/raw material that the supplier has to provide to us have also to be subject to a prior agreement (to the buyer responsible).

3.3 Deliveries

The deliveries of parts have to 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 type GALIA, 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.



Any delays or risks have to 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 an 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.

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 control over in-coming products. The PQA procedure depends on validation of the process, on validation of initial samples at supplier's premises and on the reception of a number of deliveries without non-conformity defined by the AQF responsible. Products complying with these rules are then declared to be PQA.

3.5 Monitoring performance

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



3.6 Product quality / handling of disputes / penalties

The goal is zero defects. Specific targets for certain technologies or products may be mentioned in the Quality part / Reliability of the "SPECIFICATIONS PRODUCT - SPECIFIC REQUIREMENTS".

The supplier has to submit an action plan to EFI AUTOMOTIVE to achieve defined target.

The supplier is contacted as soon as a quality issue appears. A "supplier non conformity sheet" is established and a mail may be sent to it if needed. The consideration of the non-conformity should be immediate. Precautionary measures (isolation of batches, sorting 100%, re-delivery schedule) should be in place within 24 hours.

Responses should be provided within 15 days and formulated into the document "REPORT OF PROBLEM SOLVING" (8D REPORT) or other according to EFI AUTOMOTIVE's specific requests. The supplier shall identify the root causes of the problem.

EFI AUTOMOTIVE requires its suppliers to use the problem solving tools as 5 Why, Ishikawa...

3.6.1 Non-conformity detected at EFI AUTOMOTIVE's

Any non-compliant product, detected in control reception or in use in production will lead to the rejection of the entire batch. The sorting to be made is borne by the supplier.

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.

3.6.2 Non-conformity detected at supplier's

In case of non-compliant product or process, or if non-compliant parts have been delivered to EFI AUTOMOTIVE, the supplier shall notify us immediately in order to decide what action to take.



3.6.3 Non-compliant products

Non-compliant batches are identified and returned to the supplier (at supplier's expenses). A delivery slip shall accompany the defective batch and a credit note for the costs incurred by EFI AUTOMOTIVE will be issued. The supplier has to 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.

3.6.4 Liability for non-compliant products

In the event of non-conformity of the product, the PQA may be withdrawn and EFI AUTOMOTIVE may start to test all incoming products again (controlled shipping). EFI AUTOMOTIVE reserves the right to impose additional control measurements to the supplier in the event of recurrent uncontrolled quality issues presenting a serious risk for end customers.

There are two levels of controlled shipping: CS1 and CS2.

The supplier will be held financially liable for all the consequences due to the non-compliance with the specified requirements, including returns under warranty, after assessment on a case by case basis.

The costs will be notified according to the document "Supplier costs follow up" or equivalent site.

3.7 Supply conformity indicator

To evaluate supplier delivery performance, EFI AUTOMOTIVE asks the supplier to provide within the time required by the SQA team, the exact number of parts found defective after sorting in the event of return of parts to the supplier. In the absence of feedback, the number of defective parts will be estimated in proportion to what was found in EFI.

The supply conformity indicator for a given reference is calculated as follows:

$$\frac{\text{Number of actually non-conformed parts}}{\text{Number of parts delivered to EFI AUTOMOTIVE}} \times 106 = \text{ppm of defective parts}$$

This indicator will be one of those used in the Continuous Improvement process (Chapter 5).



3.8 Traceability

The supplier will use a traceability system permitting the identification of the date and manufacture location, the batch of material used and the quantity manufactured from bar coded labels (for example).

From the delivery note number, the supplier has to be able to communicate batch numbers and the traceability attached to these batch numbers (batch quantity, batch destination ...). Specific requirements may be stipulated in the "SPECIFICATIONS PRODUCT - SPECIFIC REQUIREMENTS".

3.9 Shelf-life of documents

The initial sample folders (PPAP), 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 have to be retained for 12 years (these rules apply to any supplier or subcontractor or manufacture of EFI AUTOMOTIVE's toolings).



4 THE MANAGEMENT OF MODIFICATIONS

4.1 Product modification request / Manufacturing process

For any changes of manufacturing process or product, an application has to be first given to EFI AUTOMOTIVE by using "REQUEST FOR MODIFICATION TO BE SENT TO EFI AUTOMOTIVE" form (or equivalent).

The change request must necessarily contain:

- A detailed description of the situation before / after modification
- An analysis of risk changes and action plan for eliminate the risks
- Product Validation Plan
- Process Validation Plan

Any change has to be approved by EFI AUTOMOTIVE before deliveries.

This applies to both changes requested by EFI AUTOMOTIVE and changes suggested by suppliers.

Examples of product changes: new materials, dimensional changes, or any product characteristic which are not specified on drawings or in the "SPECIFICATIONS PRODUCT - SPECIFIC REQUIREMENTS".

Examples of manufacturing process changes: new machine, modified machine, new manufacturing plant, change of subcontractor or supplier, control plan change or flow chart, number of parts per container, delivery terms, labelling, packaging or other.

For each change, the supplier has to first submit a PPAP (Production Part Approval Process) of which the level shall be defined by the AQF.

The supplier has to identify the first shipments of parts after modification.

4.2 Quality system modification

In the event of major modifications of supplier's quality system (e.g.: loss or renewal of ISO 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

Continuous improvement is the result of a management philosophy and EFI AUTOMOTIVE is at the disposal of its suppliers to share its experiences in this field of said continuous improvement. This philosophy (detailed in ISO/TS 16949 standard) is based upon some basic tools like T.P.M., work group, Kanban, suggestion system, visual management and 5S method.

In order to achieve the set and measured objectives on criteria Quality - Cost - Deadline, the supplier has to submit an annual progress plan to be executed after validation by EFI AUTOMOTIVE.

5.1 Quality, Cost, Deadline

EFI AUTOMOTIVE encourages each supplier to propose improvements in terms of Quality, Cost and Deadline. To prepare its improvement plan, the supplier shall take into account the evolution of the following key indicators:

- Productivity and cost reduction,
- Number of non-conformities,
- Recurrence rate of non-conformities,
- PPM rate,
- PQA product rate,
- Delivery rate.

The supplier has to respect the following in-house indicators regarding its entire activity and to communicate the results at the request of EFI AUTOMOTIVE:

- reject and re-working costs,
- TPM (Total Productive Maintenance),
- Line-flow time,
- SMED (time taken to change products on the production line),
- Stock rotation rate,
- Turnover per employee,
- Number of suggestions for improvement per year and per person,
- Exceptional transport costs.

5.2 Reliability of the manufacturing process

The characteristics of EFI AUTOMOTIVE products require reliable manufacturing process. The best means, but not the only one, to reduce process variability is SPC (Statistical Process Control). This must lead to continuous improvement of capabilities (Cpk). A stable value of 1.33, for example, is acceptable but not enough. To ensure process reliability, the supplier shall aim for a capability $> 1,67$. Continuous improvement leads to permanent process capability improvement.

Tooling maintenance shall be borne by the supplier who shall thus ensure the required quality level.



6 **SPECIFIC REQUIREMENTS**

The products shall be warranted according to the general terms of purchase of EFI AUTOMOTIVE.

The tools belonging to EFI AUTOMOTIVE have to 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.

Supplier designated within his organization a "Product Safety Manager" in charge of the relationship with EFI Automotive in case of significant quality problem (recall procedure, ...). This person will be identified in an organizational chart.

Characteristics concerning safety and legal obligations are identified on EFI AUTOMOTIVE 's drawings by the symbol of an inverted triangle. These characteristics require special attention and are normally controlled by SPC. The inverted triangle has to be also used to identify the work stations affecting the characteristics concerned and has to appear on all relevant documents such as test and inspection schedules.

Other symbols such as an asterisk (*) or the Rep. X written on defined drawings are frequently used to identify specific characteristics of product and/or process. These characteristics also require special attention generally through the use of SPC or any other method that ensures the stability of the process.



7 DOCUMENTS TO BE USED

The last versions of these documents are to withdraw from the AQF site with whom you interact.

- INS ASSESSMENT AND FOLLOW UP SUPPLIERS PERFORMANCE. *(Group)*
- FORM Supplier approval questionnaire. *(Group)*
- FORM Audit questionnaire for suppliers *(Group)*
- FORM Audit questionnaire for suppliers ISO26262 *(Group)*
- FORM Control plan *(or equivalent site)*
- FORM Capability of measurement systems *(or equivalent site)*
- FORM Part submission warrant *(or equivalent site)*
- FORM Advanced Quality Planning (APQP) *(or equivalent site)*
- FORM Request for modification to be sent to efi *(or equivalent site)*
- FORM Check-list des exigences pour les matières en vrac *(or equivalent site)*
- FORM Controlled shipping notification letter *(or equivalent site)*
- FORM Controlled shipping confirmation reply *(or equivalent site)*
- FORM Notification of special status for defaulting suppliers *(or equivalent site)*
- FORM Supplier costs follow up *(or equivalent site)*
- FORM Problem-solving report (8d report) *(or equivalent site)*



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*

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.*

AMDEC: *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*

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.*

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.*

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*

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.*

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.*



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

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.

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..

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

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.

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



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