# FLUICONNECTO SUPPLIER QUALITY ASSURANCE MANUAL





# SUPPLIER QUALITY ASSURANCE MANUAL



FIRST EDITION | 2020

This manual describes the expectations, requirements, formal quidelines and practices expected of you as our supplier



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## **USING THIS DOCUMENT**

1. Basic requirements

2. APQP

3. PPAP

4.Fluiconnecto group specific requirements

5. Production requirements

6. Performance measurements & corrective actions

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#### Organization

This document defines the expectations and working procedures intended to assist suppliers in achieving and maintaining a successful working business relationship with the Fluiconnecto Group. This document is organized in eight chapters explaining our main processes.



Supplier Quality Assurance Manual



# 1. BASIC REQUIREMENTS

Today, Quality, Service, Safety and Care for the Environment continue to be the core values of the FLUICONNECTO brand.

Responsibility

Identification

Production & Traceability requirements

Traceability requirements

Pass through Parts
Parts
requirements

requirements

requirements

Performance expectations

requirements



#### 11 Introduction

Suppliers are required to maintain the contact details for key individuals and business information for their organization. To ensure timely and accurate information.

#### 1.2 Responsibility

The production of fully conforming products to the Fluiconnecto Group companies is the supplier's responsibility and is part of the supplier's contractual commitment.

Suppliers are required to conduct a criticality analysis for features of the product design and production process that could result in a safety effect. For suppliers having design responsibility, special characteristics related to safety must be clearly identified within their design specifications, verification/validation plans, drawings and technical documentation.

FLUICONNECTO Group must be notified of any product features or functions where the potential failure mode is assigned

Suppliers are responsible to ensure that all sub-suppliers and contractors are aware of and comply with the requirements related to safety requirements. Tier I suppliers must have procedures and practices to ensure an adequate level of control and requirements are deployed at all suppliers or sub-suppliers whose product or processes could have an effect on safety related features.

FLUICONNECTO GROUP MUST BE NOTIFIED IMMEDIATELY IN THE EVENT A NON-CONFORMANCE OR POTENTIAL CUSTOMER RISK IS IDENTIFIED



#### 1.3 Identification of safety characteristics

A safety critical characteristic [CC] is identified when non-compliance with the requirement has the potential to lead to a Customer Safety effect.

The supplier is responsible of the methods used for marking lot/serial numbers on safety critical parts which must support identification, traceability and failure investigation through all phases of the product's life.

#### 1.4 Production and functional requirements

Safety critical characteristics must be clearly identified throughout the manufacturing process and in all associated documentation such as Process FMEA, control plans and work instructions.

FLUICONNECTO expects capability requirements for parts identified with [CC], characteristics are described below (ref. 4.1):

|                                                               | Critical Characteristics level [CC],[1]                                                                                                            |
|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                               | $C_{pk} \geq 1,67$                                                                                                                                 |
| Process under<br>statistical control,<br>normally distributed | <ul> <li>Process appropriate checking frequency</li> <li>On-going Statistical Process Control(SPC)</li> <li>Ppk analysis every 6 months</li> </ul> |

If the Cpk is not met, FLUICONNECTO expects a reinforced statistics process control in place.

Data records resulting from Statistical Process Control (SPC), automated checking, and inspection results must be available for download upon request by FLUICONNECTO.

NO DEVIATIONS ARE ALLOWED ON SAFETY CRITICAL FEATURES



#### 1.5 Lot traceability requirements

The basic requirements for lot traceability are covered under the section on Production Requirements. The following requirements apply to safety critical parts, components or assemblies and are in addition to the basic traceability requirements. Suppliers shall have an effective system of traceability that ensures delivered product can be traced from a finished product in the customer application back to specific lots, sub-components, parts, blanks and raw material.

In addition to component/materials traceability, the system must be capable of providing the production history of a lot or serial number. This history must include:

- Rework operations or activity
- Product and process special characteristics
- Test records
- Process parameters influencing conformance
- Machine settings influencing conformance
- Maintenance activity of machines, equipment, jigs, gauges and test equipment
- Personnel qualification records for operators performing the work

The minimum requirement for storage of information related to safety critical parts is ten years after product phase-out or end of production. Any additional applicable legal requirements related to storage must be maintained.

#### 1.6 Pass through parts requirements

"Pass through parts" are defined as parts that are shipped to FLUICONNECTO Group by a supplier who processes parts from their suppliers, without value added activity or modification. Tier I suppliers assume all responsibility for the quality of "pass through parts".

We believe that achieving this level of quality and reliability can only be achieved by robust processes and rigorous monitoring.

This requires a customer focus mindset, a continuing search for effective solutions, and opportunities for continuous improvement.



#### 1.7 Performance expectations

The table below defines the target performance levels for FLUICONNECTO Group suppliers. Our desire is for all our suppliers to meet and exceed these target values. All suppliers are expected to have a Zero Defect approach to quality and demonstrate a continuous improvement towards the Zero Defect goal.

For specific products, additional part specific targets may be defined in the Request for Quotation (RFQ).

#### **ZERO**defects approach expectations

| Measurement                                                                                                                            | Target                                             |
|----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| Field quality  • Warranty  • External campaign/ recall  • Quick Solving Process                                                        | Zero safety issues Zero field issues               |
| Zero km quality Internal reject campaigns Customer claims Line stop Product audit PPM                                                  | Zero production impact<br>Zero defects*            |
| <ul> <li>Problem solving</li> <li>Containment actions lead time</li> <li>Inspection Report lead time</li> <li>8D robustness</li> </ul> | Zero time lag versus expectations* Zero recurrence |
| Management system  ◆ Audit compliance                                                                                                  | Zero audit findings                                |

<sup>\*</sup> Actual targets for a supplier may be modified based on commodity, product technology, function or part criticality. Exceptions must be documented in a Long Term Agreement, or contract.

#### 1.8 Management systems requirements

| Area                  | Expected level                                     |
|-----------------------|----------------------------------------------------|
| Quality system        | ●ISO 9001 or IATF<br>16949                         |
| EHS system (optional) | •ISO 14001                                         |
| ,                     | <ul><li>ISO 45001</li><li>IMDS reporting</li></ul> |

| Area   | Expected level                     |
|--------|------------------------------------|
| Ethics | Corporate Social<br>Responsibility |

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## 2. ADVANCED PRODUCT QUALITY PLANNING



Staying competitive in the markets where Fluiconnecto Group operates requires regular improvements to existing product and continuous development of new products.

Supporting the introduction of new products requires a well-defined and organized process for project planning and launch.

Fluiconnecto Group organizes all new product introductions as projects. Suppliers are required to have an effective project planning process that is capable of supporting the Fluiconnecto Group process and timing for project management.

Suppliers are expected to develop a detailed Advanced Product Quality Plan for the development of processes used to produce Fluiconnecto Group products.



The following chapter describes the expectations related to APQP and requirements for synchronizing the plan with the FLUICONNECTO Group.

#### 2.1 Advanced Product Quality Planning

FLUICONNECTO Group expects suppliers to create product launch plans to support:

- •Launch of all new components intended for serial production
- Significant changes to existing products or processes
- $\bullet \mbox{Development of new manufacturing processes} \\$

Fluiconnecto Group requires suppliers to use Advanced Product Quality Planning (APQP) as a tool to support process development, integration and validation. The AIAG publication "Advanced Product Quality Planning (APQP) and Control Plan" should be used as a reference in developing these plans. Supplier's plans should include Fluiconnecto Group specific requirements.

The objective of the planning process is to deliver the project on time, at the right cost and at the highest level of quality.

SUPPLIERS ARE RESPONSIBILE TO DEVELOP AND DRIVE APQP FOR ALL COMPONENTS DELIVERED TO THE Fluiconnecto GROUP

#### 2.2 Responsibilities in APQP

Fluiconnecto Group has learned that successful projects require a high level of a close cooperation and teamwork with the suppliers. A detailed list of the shared roles and responsibilities must be shared and agreed with the supplier.



## 3. PRODUCTION PART APPROVAL PROCESS



The Production Part Approval Process (PPAP) demonstrates that the manufacturing process used to produce parts for the FLUICONNECTO Group is fully developed, thoroughly tested, and capable of serial production of parts conforming to the technical specifications.

For the PPAP (as for the APQP) FLUICONNECTO Group follows the AIAG requirements.

Sample parts and the supporting documentation are submitted to show evidence that:

- •The design records and specifications have been properly understood and met
- •The manufacturing process has the capability to produce conforming parts in the actual production environment
- •The manufacturing process has the capacity to support production quantities at a consistent quality level

#### 3.1 Reference

Fluiconnecto Group requires its suppliers to follow the Customer Notification and Submission requirements as specified in the AIAG PPAP Manual that includes but is not limited to:

- Introduction of new components
- Changes to an existing part
- Drawing or specification changes
- Corrections to a prior discrepancy
- Supplier process change
- Material changes or substitutions
- Changes of sub-tier suppliers

THE SUPPLIER HAS TO APPLY FOR PPAP APPROVAL WHENEVER FLUICONNECTO GROUP REQUIRES TO



#### 3.2 Process

The preliminary target date for PPAP submission may be included as part of the RFQ information. Additional information concerning the target date for PPAP submission will be included in the Sample Order. PPAP submission dates must be planned as a milestone in the supplier's APQP plan. Any issues, delays or changes to the PPAP target date should be communicated to the Buyer and SQE.

The supplier is responsible for the PPAP preparation:

- Suppliers must notify the Buyer and SQE of the proposed shipment date
- •Suppliers (tier I) are responsible for the planning, approval, corrective action, follow-up and retention of PPAPs submitted by sub-suppliers and sub-contractors
- •Cpk studies on special characteristics, identified by [SC] or [CC], must be completed on a minimum of 30 pieces selected at random
- •100% dimensional evaluation is required on five parts selected from the Significant Production Run (SPR)

Upon satisfactory completion of all required measurements and tests, the supplier shall complete the required information on the Part Submission Warrant (PSW).

#### Completing the PSW:

•The PSW/SSW shall be signed by the authorized supplier representative before submission

The SQE will review all PPAP packages and assign one of the following:

- •Fully approved and in compliance with all specifications
- Conditional or interim approval
- Not approved

In the case where interim approval is given, it must be supported with an approved deviation. All deviation requests require review and approval by both the Fluiconnecto Group Design Engineer and the SQE. Full approval of the deviation also requires a plan from the supplier that addresses correction of all open issues .



#### 3.3 Significant Production Run

A Significant Production Run (SPR) is required for all new part introductions and is the basis for the PPAP. This sample run is to be conducted using production tooling/equipment, environment (including production operators), facility, and cycle time.

The SPR requires that an adequate quantity of parts be produced to allow:

- Overall process stabilization
- Accurate calculation of manufacturing cycle time
- Determine production through-put time
- Capacity assessments
- Completion of capability studies

The minimum quantity of parts to be produced during the SPR is agreed with the supplier. Samples used for the PPAP must be taken from the parts produced during the run.

THE PPAP (WHENEVER REQUIRED) MUST BE FULLY APPROVED OR HAVE INTERIM PPAP APPROVAL BEFORE STARTING SERIAL PRODUCTION

#### 3.4 Documentation requirements

Suppliers are required to submit a Level 4 PPAP package for all components unless other arrangements have been agreed with the supplier. The minimum requirements for a Level 4 PPAP include:

- Dimensional results
- Process Flow Diagram
- Control Plan
- Approved IMDS Report
- Part Submission Warrant (PSW)
- Material test results
- Performance test results (if applicable)
- •Appearance approval report (if applicable)

PPAPs can be approved based on supplier's drawings or Fluiconnecto drawings and must include reference "balloons" supporting dimensional checks.

The SQE may ask for the submission of additional information. Prior to submission, suppliers should contact the SQE to determine if additional documentation is required. Proprietary documents that cannot be submitted must be available for review.



Exception to default PPAP level 4: Upon may be required to submit a Level 3 PPAP package for Key Components.

#### Documentation requirements

| Requirements                                                     | Level 1 | Level 2 | Level 3 | Level 4 | Level 5 |
|------------------------------------------------------------------|---------|---------|---------|---------|---------|
|                                                                  |         |         |         |         |         |
| 1 Engineering change documents, if any                           | R       | S       | S       | *       | R       |
| 2 Design FMEA                                                    | R       | R       | S       | R       | R       |
| 3 Process flow diagrams                                          | R       | R       | S       | S       | R       |
| 4 Process FMEA                                                   | R       | R       | S       | *       | R       |
| 5 Control plan                                                   | R       | R       | S       | S       | R       |
| <ul><li>7 Measurement System Analysis studies</li></ul>          | R       | R       | S       | *       | R       |
| 8 Dimensional results                                            | R       | S       | S       | S       | R       |
| 9 Material and performance test results                          | R       | S       | S       | S       | R       |
| 10 Initial process studies (SPC) on the critical characteristics | R       | R       | S       | S       | R       |
| 11 Appearance Approval Report (AAR), if applicable               | S       | S       | S       | S       | R       |
| 12 Part Submission Warrant (PSW)                                 | S       | S       | S       | S       | R       |

- S The supplier shall submit a copy of the records or documentation and retain a copy at appropriate locations
- **R** The supplier shall retain at appropriate locations and make available to Fluiconnecto upon request
- \* The supplier shall retain at appropriate locations and submit to Fluiconnecto Group upon request

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## 4. FLUICONNECTO GROUP SPECIFIC REQUIREMENTS

Special characteristics

Cleanliness Requirements

In addition to the specific activities required by Advanced Product Quality Planning, Fluiconnecto Group has developed a group of activities that support the process of new part introduction in serial

#### 4.1 Special characteristics

For all features identified as a special characteristic, the following requirement applies:

| J 1                                                                             | '''                                                                                                                                           |                                                                                                                                                     |
|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                 | Critical Characteristics level [CC]<br>/ (I) or safety characteristics                                                                        | Significant Characteristics<br>level [SC] / (S)                                                                                                     |
| Process<br>under<br>statistical<br>control,<br>normally<br>distributed          | <ul> <li>Cpk ≥ 1,67</li> <li>Process appropriate checking frequency</li> <li>On-going SPC**</li> <li>Ppk analysis every six months</li> </ul> | <ul> <li>Cpk ≥ 1,33</li> <li>Process apropriate checking frequency</li> <li>On-going SPC**</li> <li>Compliance to capability requirement</li> </ul> |
| Process not<br>under<br>statistical<br>control or<br>capability<br>not achieved | <ul> <li>Electronic orautomated poka yoke</li> <li>Effectiveness verified once per<br/>shift</li> </ul>                                       | <ul> <li>100% inspection</li> <li>Action plan for achieving process control and capability</li> </ul>                                               |

<sup>\*\*\*</sup> Data records resulting from SPC, such as control charts or electronic data, must be stored and available upon request.

The requirements related to special characteristics are also applied to all parts classified as Safety Critical.

#### 4.2 Cleanliness requirements

Technology and performance enhancements to the hydraulic systems requires improved cleanliness of certain components. These components are required to meet a cleanliness requirement.

When required, cleanliness testing must be performed using the flushing method as defined in the ISO 18413 & ISO 16232. Suppliers are required to demonstrate adequate control of the cleaning process. If necessary FLUICONNECTO might ask to perform decontamination testing and cleanliness measurements at intervals

| Spec. Reference   | Cleanliness Requirements |
|-------------------|--------------------------|
| Max particle size | 500 μm                   |
|                   |                          |
| AS4059            | NAS 7                    |
|                   |                          |
| ISO 4406          | 17/15/12                 |

In addition, a Cleanliness Audit may be required by the SQE. The SQE will provide the appropriate information if a Cleanliness Audit is required.



# **5.PRODUCTION REQUIREMENTS**

Product or process change notification

Deviations to specification

FIFO inventory control

Sub-tier supplier requirement

Packaging

Warranty

#### **5.1**Product or Process Change Notification

In accordance with the IATF/ISO standards, (ref. PPAP guidelines), a supplier cannot implement a change to a product or production process after PPAP approval, without prior approval from the customer

All proposed changes to the product, production process, material or suppliers after PPAP must be submitted to Fluiconnecto Group for approval.

AFTER SUCCESSFUL PPAP NO CHANGE MAY BE MADE TO THE SUPPLIER'S PRODUCT OR PROCESS WITHOUT WRITTEN APPROVAL FROM FLUICONNECTO GROUP

The purpose of this requirement is to prevent quality and delivery issues resulting from unapproved, untested changes or modifications after PPAP approval. This applies, but is not limited to, the following cases:

- •Transferring of the production line: partly or totally; to a new or existing location, plant or building
- •New production layout or changes to production line
- •Change of a sub-tier supplier
- Packaging changes or repackaging operations

- •Change to the raw material
- •Outsourcing all or part of production to a sub-tier supplier
- Request for change to product design including dimensions, tolerance, function, appearance
- •Changes of a process at a contract supplier, (surface treatment, machining, etc.)

REQUESTS FOR CHANGE MUST BE SUBMITTED FROM A MINIMUM OF 4 MONTHS PRIOR TO THE PROPOSED CHANGE

#### 5.2 Requesting deviations to specifications

In the case where the supplier wishes to request a deviation to supply parts that do not fully comply with Fluiconnecto Group requirements, the supplier must inform Fluiconnecto Group and request approval. The request must be approved prior to shipment.

If the deviation is approved, the supplier will be e-mailed a copy of the notice of approval.

All shipments made under a deviation shall be identified on the exterior of the shipping container. Specific labelling type shall be agreed.

Suppliers requesting a deviation must complete an 8D response identifying the cause, corrective action, and measures taken to prevent recurrence.

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#### 5.3 Lot traceability

Lot control and traceability might be asked to limit the size and impact in the event of the need for product recalls or campaigns. The control system must be capable of linking production quantities to production processes to support root cause analysis activity.

The traceability is mandatory for hoses and fittings.

#### 5.4 First In First Out inventory control

Suppliers are responsible to have inventory control systems that positively identify and control obsolete material to prevent inadvertent shipment. Where feasible, suppliers shall maintain First In First Out (FIFO) inventory management practice.

#### 5.5 Sub-tier supplier requirements

Fluiconnecto Group strongly encourages our suppliers to support at least ISO9001 certification of their sub-tier suppliers. Suppliers have full responsibility for the quality assurance and corrective action of products delivered from sub-tier suppliers for use in Fluiconnecto Group products.

Fluiconnecto Group reserves the right to have access to sub-tier suppliers and processes that could have significant impact on final product quality.

THE PRODUCTION PART APPROVAL PROCESS,
DOCUMENTED BY A PART SUBMISSION WARRANT IS
REOUIRED FOR PRODUCTS FROM SUB-TIER SUPPLIERS

#### 5.6 Packaging

Suppliers are expected to package components according to packaging instructions that are agreed to and approved between Fluiconnecto Group and the supplier before shipment.

#### 5.7 Warranty

Responding to field warranty claims remains a top priority at Fluiconnecto Group. When Field Failures are determined to be the result of a supplier's product, suppliers will be notified through receipt of a warranty claim. It is expected that suppliers will fully participate in the investigation, root cause analysis and corrective action when field failures are identified.

Fluiconnecto Group has developed a dedicated **quality database** to manage customer field returns. Each single supplier is required to ask for access permission to **info@fluiconnecto.com** 



### 6. PERFORMANCE MEASUREMENTS AND CORRECTIVE ACTIONS



Fluiconnecto Group has developed a system for the measurement and evaluation of supplier performance. The indicators resulting from this process are compiled every quarter and are reviewed and evaluated at all levels of the Fluiconnecto Group organization.



Fluiconnecto Group invites suppliers to work as partners in the problem solving process.

#### **6.1 Non-conforming material**

It is in the interest of both Fluiconnecto Group and the supplier, to identify and address non-conforming parts as quickly as possible. Suppliers shall take all necessary actions to respond to non-conforming product

In the event non-conforming parts or material have been identified at a Fluiconnecto Group facility, suppliers will be notified using a web based portal along with an email to the supplier's quality contact.

All costs (sorting, handling, shipping, rework and inspection report costs) associated with addressing a non-conformance will be the supplier's responsibility. These costs may include any secondary costs resulting from a non-conformance, such as the costs associated with tear down, reassembly, re-testing, and logistics support.

Depending on the type of non-conformance and material status, supplier parts may be sorted, reworked or adjusted. Suppliers should be prepared to take any or all of the following actions after non-conforming material are identified at a Fluiconnecto Group facility:

- Expedited replacement of non-conforming material
- Provide resources to perform required sorting or rework
- Provide third party sorting resources
- Authorize Fluiconnecto Group to begin third party activities on the supplier's behalf
- Provide instructions and acceptance criteria required to support inspection, sorting, or rework
- Provide product specific gauging

If not used under deviation, after rework or after repair, nonconforming parts or material will be "returned to supplier" or "scrapped" based on supplier's direction.



#### 6.2 Corrective action response

Fluiconnecto Group uses the 8 Disciplines (8D) process as common problem solving process for quality issues. Each time a non-conformance or a defect has been documented, the causes for the problem must be investigated and reported in the 8D. Suppliers should submit their corrective action response in the system as soon as possible, and no later than the due time.

#### AN 8D RESPONSE IS REQUIRED FOR ALL NON-CONFORMANCES

It is of vital importance that the supplier starts the problem solving process upon notification. It is critical that appropriate actions occur immediately to contain the problem and avoid any further disturbances to production or potential quality hazard. When notified of a non-conformance suppliers are requested to react in accordance with the following timeline:

- •24 Hours (for safety issues and extended related issues): Begin containment activities to include sorting internally, intransit and at Fluiconnecto Group facilities.
- •48 Hours: Containment completed and short term corrective action fully implemented.
- •25 working days: Cause analysis complete for both occurrence and non- detection, permanent corrective action defined and implemented.

Problem identified

Timing

Activity

PROBLEM IDENTIFIEDAND
CONTAINMENT INITIATED

48 Hours

CONTAINMENT COMPLETED

25 working days

ROOT CAUSE ANALYTICS AND
ACTIONS COMPLETED/VERIFIED

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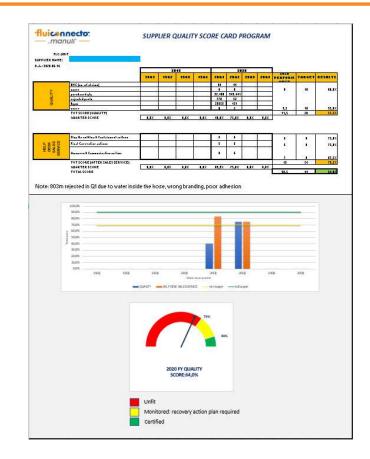
#### 6.3 PPM and Quality Performance Measurement

Fluiconnecto Group maintains a scorecard of the quality performance. The measurements on this scorecard are regularly reviewed and shared with suppliers.

It is recommended that suppliers review this information on a regular basis.

The scorecard is a tool for monitoring supplier performance.

The total QUALITY PERFORMANCE SCORE is the weighted average of the the Quality service (70% weight) and the Helpdesk service (30% weight)





The supplier's performance is calculated for a calendar quarter and the scorecard is updated during the first half of the following month. The scorecard shows information for the prior quarters, with the ratings calculation covering two main areas: QUALITY & HELP DESK SERVICE

#### **Quality evaluation**

#### **ZERO Km claims**

| ZERO KIII CIAIIIIS                     |       |  |                                                    |       |
|----------------------------------------|-------|--|----------------------------------------------------|-------|
| NON CONFORMITY REPORTS                 |       |  |                                                    |       |
| # NC                                   | Score |  | # ppm                                              | Score |
| Number of justified claims to supplier |       |  | Rjected parts / parts delivered from supplier *1KK |       |
| from 0 to 15                           | 10    |  | 0                                                  | 10    |
| from 16 to 100                         | 8     |  | from 1 to 100                                      | 8     |
| from 101 to 200                        | 7     |  | from 101 to 200                                    | 7     |
| from 201 to 350                        | 5     |  | from 201 to 2000                                   | 6     |
| from 351 to 1000                       | 2     |  | from 2001 to 4000                                  | 4     |
| > 1000                                 | 0     |  | >4000                                              | 0     |

#### Helpdesk service evaluation

| SERVICE CATEGORY                | EVALUATION CRITERIA                                                                                                                                                                                                                      | SCORE |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
|                                 | Reaction (confirmation and agreement) from supplier about containment actions within 48 hrs. (mostly for major claims involving safety issues, fire hazard, near misses, line stopper claims and potential extended liabilities claims). | 8     |
| Stop the outflow & Containment  | Reaction (Confirmation and agreement) from supplier about containment actions within the range of 2 $\div$ 5 calendar days                                                                                                               | 7     |
| actions                         | Reaction from supplier over 5 days. Reaction (Confirmation and agreement) from supplier about containment actions within the range of 5 ÷ 10 calendar days.                                                                              | 6     |
|                                 | No reactivity from supplier, always have to remind it or call it to act. Reaction (Confirmation and agreement) from supplier about containment actions > 10 calendar days.                                                               | 3     |
|                                 |                                                                                                                                                                                                                                          |       |
| Final Corrective actions        | at lest 90% claims decrease vs previous quarter (No occurrences after the implementation of the actions)                                                                                                                                 | 8     |
| Final Corrective actions        | at lest 40% claims decrease vs previous quarter                                                                                                                                                                                          | 6     |
|                                 | < 10% claims decrease vs previous quarter                                                                                                                                                                                                | 3     |
|                                 |                                                                                                                                                                                                                                          |       |
|                                 | Technical report released within 35 calendar days from FLC sub claim date                                                                                                                                                                | 8     |
| Awswers & Communication on time | Technical report released in the range of 36 ÷ 40 calendar days                                                                                                                                                                          | 6     |
| ите                             | Technical report released in the range of 41 ÷ 50 calendar days                                                                                                                                                                          | 5     |
|                                 | Technical report released over 50 calendar days                                                                                                                                                                                          | 3     |

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#### 6.4The Fluiconnecto Group process audit

Fluiconnecto Group might conduct process audits as a prevention activity as well as to support corrective actions. Process audits may be performed under any of the following circumstances:

- During APQP
- During production ramp up
- New supplier evaluation
- •Introduction of a new process
- Move production to a new location
- Poor quality performance
- •After a major incident

Periodically Fluiconnecto Group Supplier Quality might conduct an in depth audit of the process steps that have a direct impact on the quality of delivered products. Suppliers are required to develop a robust improvement plan to close the gaps identified during the process audit.

A self-assessment audit check list will be sent in advance to the supplier.

#### 6.5 Continuous improvements

In addition to responding to identified non-conformances, suppliers should use statistical data to continually evaluate and refine their processes. This evaluation should include analysis of high PPM, scrap, downtime, and warranty failures. The clear objective of this analysis must be reduction of variation with the finished product.

#### 6.6 Field quality issues

It is in Fluiconnecto Group's and our supplier's best interest to solve customer quality issues as quickly as possible. Therefore, when a customer quality issue is identified as potentially related to supplier delivered parts, the supplier will receive a claim notification through the Fluiconnecto quality web portal.

- •The solving process will be led by the supplier
- •An 8D report is required
- •Expected solving lead time is the same as for Inspection Reports (ref. 6.2)



# 7. Sourcing

#### **7.1 Our Ethics guidance**

We will maintain a cooperative, trusting relationship with our suppliers and treat all suppliers fairly.

In deciding among competing suppliers, we will impartially weigh all factors and avoid favoritism.

We will communicate clearly and concisely so our suppliers understand the terms of our enquiry, purchase orders, including price, quantity, performance criteria and schedules, as necessary.

#### 7.2 Supplier Audit

An audit by Supplier Quality and Development (resulting in a favorable audit report) is required prior to purchasing from a supplier.

This audit will evaluate capacity, capability, quality and serviceability.



#### 7.3 New Supplier Identification and Approval

New supply sources will be sought when:

Current sources are not capable of meeting quality, reliability, cost or volume requirements,

New or unique products are required to support a new program, and the current supply base does not have the technical or manufacturing capability/capacity to provide the new part(s),

A new source can offer significant improvements in product function, quality, reliability, technology and/or cost.

#### 7.4 Supply Agreements

- A Supply Agreement establishes the terms on which a vendor will supply product, to multiple locations
- The terms will generally include set forecast quantity supplier guaranteed pricing; lead-time requirements; inventory requirements, payment terms.
- No binding commitment is made until or unless purchase orders are issued.



#### Glossary

- 8D eight Disciplines, a problem solving method
- **AIAG** Automotive Industry Action Group
- APQP Advanced Product Quality Planning
- CC Critical Characteristic
- **Cpk** Capability Analysis Index
- **FIFO** First In First Out
- **FMEA** Failure Modes Effects Analysis
- IATF International Automotive Task Force
- IMDS International Material Data System
- Poka Yoke A Japanese term for error proofing system
- **PPAP** Production Part Approval Process
- **Ppk** Performance Analysis Index
- PPM Part Per million
- **PSW** Part Submission Warrant
- **RFQ** Request for Quote
- **SC** Significant Characteristic
- SPC Statistical Process Control
- **SPR** Significant production run
- SQE Supplier quality engineer



#### Revision record

| Edition   | Revisions description |
|-----------|-----------------------|
| Oct. 2020 | Rel 01                |
|           | Key changes:          |
|           |                       |
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#### Supplier feedback

We welcome and encourage feedback concerning this document. Any suggestions or improvements to this document, should be e-mailed to **info@fluiconnecto.com** 



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