



SUPPLIER HANDBOOK

FORTACO

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FOREWORD

Fortaco is the leading strategic partner to the heavy off-highway equipment industries providing premium offerings, like assembly services, vehicle cabins, steel fabrications and technology & zero emission solutions.

Fortaco Group has operations in multiple European business sites and Technology Hubs supporting our global customers.

We benchmark ourselves to the automotive industry and its standards to secure maximized value add for our customers as a true Tier 0.5 partner. We have the right quality, the right delivery accuracy and the right price.

Our reputation is the foundation for our success and it stems from our values: Respect, Simplicity and Speed. Fortaco Values are the basis for our Code of Conduct. Our ambition is to be the most desired partner in our industry.

We strive for a safe, injury free work environment where everyone is committed to and active in driving risk reduction and zero accidents. Our goal is to exceed our customers' expectations for quality, deliver reliable and defect free products and continuous improvement. We aim to be in harmony with environment, always improving our resource efficiency and achieving full compliance with legal requirements and regulations.

We expect all our suppliers to live with our values and take responsibility for their contribution to achieve quality, health, safety and environmental ambitions.

INTRODUCTION

Fortaco Values

Fortaco Values guide our mindset and attitudes and provide a common framework for the behaviors we expect from all our people. This can only be achieved by mutual cooperation with our business partners, who follow the Fortaco core values:

RESPECT

Fair and equal play, trust, teamwork, transparency, diversity

SIMPLICITY

Straightforward, proactive, solution seeking, value adding, eliminating waste

SPEED

Customer mindset, fast & intelligent solutions, highest quality, learning mentality

Purpose of Supplier Handbook

This manual defines Fortaco's minimum requirements which apply to all Fortaco's direct material suppliers globally, including sub-tier special process suppliers and service providers.

In addition to the minimum requirements set to all suppliers, manual also lists industry-specific requirements for defense suppliers.

Requirements specified below extend from supplier evaluation through the new product implementation phase until serial production and services.

Supplier Responsibility

- Suppliers are responsible for meeting Fortaco Supplier Quality Manual, Code of Conduct and project specific requirements.
- Suppliers shall adopt the philosophy of Zero Defects Mindset and 100% On Time Delivery.
- Suppliers shall demonstrate their compliance to ISO 9001. This requirement also concerns their sub-suppliers and sub-contractors.
- Suppliers have full responsibility of their sub-supplier quality assurance.
- Suppliers are required to notify a Fortaco representative immediately when made aware of a potential safety issue or loss of information concerning products and services.

GENERAL REQUIREMENTS FOR SUPPLIERS

Business Vision and Strategy

Supplier shall have an understanding of the current status of their company and clear business vision of where they would like the company to be in the future. Management shall have an updated strategy and plan on how to achieve its targets.

Business Metrics and Controls

Supplier must have a set of Key Performance Indicators (KPI) giving management information on the status and progress of the key strategic targets of the company. Management shall use these indicators to monitor and review performance as well as initiate improvements.

Continuous Improvement

Supplier must have performance improvement programs based on strategy elements, Key Performance Indicators, quality and environmental objectives, customer satisfaction surveys etc.

At suitable intervals, management shall review the status of these programs and take necessary actions.

Ethical Values

Supplier shall have a documented policy or framework demonstrating commitment to the ethical business conduct. The policy must include commitment to ethical business behaviour and respect for human rights.

Management has to ensure that the policy is communicated, understood and implemented at all levels of the organization.

Human Resources

Supplier shall have documented Human Resource policies for ensuring that employees are treated with respect and dignity with compliance to local labour law and recognized international labour standards. Supplier shall not use any form of forced or compulsory labor and not be engaged in any practice inconsistent with the laws and regulations regarding child labor.

Supplier must ensure that the physical and mental working conditions allow employees to perform their tasks safely and efficiently.

Government Regulatory Compliance

Supplier has to recognize and comply with all applicable laws, governmental regulations and rules including those in the country of manufacture and the applicable European regulations. These regulations and laws relate to the health and safety of workers, environmental protection, usage of toxic and hazardous materials, free trade and export control.

Health & Safety

Suppliers shall minimize health, safety and environmental risks to prevent business interruption and damage to company reputation.

Certification to ISO 45001 or equivalent is strongly recommended.

Environment

Suppliers have to be actively engaged with environmental concerns and establish environmental management system according to ISO 14001 or other equivalent standard.

We encourage suppliers to actively seek possibilities decreasing environment footprint and carbon emissions.

Certification to the environment management system ISO 14001 is strongly recommended.

REACH and RoHS

On the basis of European Directives for registration, evaluation, authorization and restriction of chemicals (REACH-EC 1907/2006 and restriction of hazardous substances directive (RoHS 2) 2011/65/EU:

- Suppliers shall comply with all applicable REACH & RoHS requirements that affect the products they supply to Fortaco.
- Supplier is required to provide evidence within one week upon request from Fortaco.

Conflict Minerals

Those Fortaco's customers having operations in the US are requested to report conflict minerals according to Dodd-Frank Act: Section 1502. Fortaco expects that Suppliers and manufacturing subcontractors have in place policies and measures, which will enable reasonable assurance that purchased materials do not include Conflict Minerals (tantalum, tin, tungsten, gold) from the military conflict area of the Democratic Republic of Congo (DRC). A declaration or other relevant information might be requested from suppliers.

Language

Fortaco's official language is English and all official communication shall be done in English. Documents may be submitted in other language(s), but must also include an English translation.

Documentation

A ten year retention period applies to following documentation related to the products delivered to Fortaco:

- approval documents (PPAP/ISIR/Derogation Permission)
- technical and material specifications
- drawings
- material certificates
- inspection and measuring
- lot traceability information, when specified
- country of origin certificates upon request
- certificate of conformity upon request.

The documentation shall be stored in a way that ensures no loss of data. Archived documents shall be available upon Fortaco's request.

Contingency Plan

Suppliers have to develop a contingency plan for potential hazards which may disrupt product flow to Fortaco, and advise a Fortaco representative immediately in the event of an actual production interruption.

Special requirements for defense supplier

Suppliers shall demonstrate their compliance to relevant AQAP standard and this requirement also concerns their sub-suppliers and sub-contractors. Supplier shall establish and implement a process for the avoidance and detection of Counterfeit Material. Supplier shall allow to Fortaco or Government Quality Assurance Representative (GQAR) to review and audit project related requirements and needed documentation shall be available to the GQAR during audit.

Security

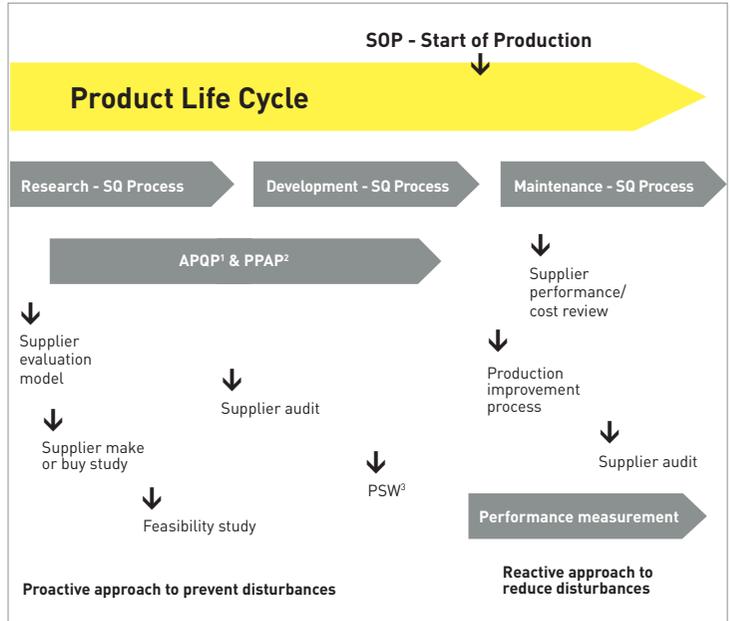
In defense, requirements for information and facility security are set based on the project by the customer and are contractually flown down to suppliers. A few examples of requirements that are set to all suppliers:

- guarding
- camera surveillance and alarms
- processes for access control
- policy for receiving visitors
- guidelines for remote work.

Fortaco reserves the right to make a security audit to assess compliance on security.

FORTACO QUALITY REQUIREMENTS

Supplier Quality Development Process



Pic.1. Supplier quality development process

¹APQP - Advanced Product Quality Planning, could also be referred to as PQAP - Part Quality Assured Plan

²PPAP - Production Part Approval Process

³PSW - Part Submission Warrant

Supplier Qualification and Approval

New potential supplier, who wishes to supply products to Fortaco has to:

- approve conditions included in Supplier Non-Disclosure Commitment ¹
- complete and submit Request For Information ¹
- complete Supplier Self-Assessment (SSA) and Supplier Financial Assessment (SFA) using Fortaco Supplier Portal
- demonstrate compliance to ISO 9001 and to relevant AQAP in defense
- meet all quality, commercial and financial requirements of the relevant Fortaco product line.

During the supplier selection and assessment phase, Fortaco may perform various audits to evaluate supplier capability. Suppliers that initially do not fulfill

¹ Appropriate form is delivered by Fortaco representative

requirements may be allowed to develop action plans to correct any deficiencies and then request a re-audit to verify implementation of these plans.

Fortaco or Fortaco nominated Third Party Organization, when necessary, reserves the right to audit the critical processes of sub-suppliers to verify that proper controls are in place throughout the entire supply chain.

Entering on the list of approved Fortaco suppliers is preceded by conferment of an individual supplier number.

Customer nominated suppliers shall also meet the criteria defined by this document.

Sample Submission and Approval

Pre-Production Phase

Prior to a quotation, supplier is obligated to verify the manufacturability of a quoted item on the basis of the necessary documentation and consideration of Zero Defect Mindset and 100% On-Time-Delivery.

This includes, but is not limited to the feasibility in terms of:

- quantity
- quality
- technology
- logistics
- Fortaco specific requirements.

Supplier must address each section of received Request For Quotation (RFQ) and include all requested supporting documents when responding.

If Supplier determines that it is not in a position to comply with the given requirement(s), Supplier is obligated to inform a Fortaco representative in written form about this, and if possible, submit appropriate suggestions to reach feasibility.

Supplier is encouraged to propose improvements towards simplifying manufacturability, improving quality and optimizing costs. These suggestions can be transferred and introduced into the product and process documentation after a mutual agreement.

By submitting an offer, Supplier explicitly confirms the feasibility of a quoted item.

Advanced Product Quality Planning (APQP)

An APQP process approach is recommended to all suppliers regardless of component type and priority.

Production Part Approval Process (PPAP)

Prior to start of serial production supplier has to perform a process and product release and confirm these by the required documentation.

Validation and approval of a product/service (PPAP) is required in the following cases:

- New Product Implementation (NPI)
- Changes performed to an existing product, including significant changes to product design, material, supply chain, manufacturing process or relocation of production equipment to a different location.
- Temporary non-conformances detected on a product in serial production.

Unless otherwise specified in RFQ, Supplier shall provide approval documentation, which consists of:

- Part Submission Warrant (PSW)
- Actual technical drawing
- Raw material certificate according to EN-10204 3.1
- Measurement report covering all relevant characteristics defined by the available technical specification
- Packaging instructions

In addition to approval documents listed above, sample(s) of a quoted product might be requested.

If the individual required elements are not known to Supplier, or if the requirements are unclear, Supplier is obligated to contact a Fortaco representative to have the unclear items clarified.

Product Implementation for Serial Production

Process and Product Requirements

This chapter includes the recommended quality tools which aid in successful implementation of new parts for serial manufacturing.

Lot Traceability

Suppliers must engage an effective traceability system for all produced materials. The data available on shipment documents shall be linked to the lot traceability system such a way that the delivered product can be traced back to the raw material.

In addition to materials traceability, the system must be capable of providing the production history, including:

- performed rework operations
- test records
- machine settings influencing product performance
- changes in supply chain.

Suppliers must ensure that their lot traceability system maintains its integrity throughout the entire supply chain.

FIFO

Whenever feasible, suppliers have to maintain FIFO (First-In-First-Out) inventory management practice to avoid the mix-up of batches and to be able to trace them back.

Material Certification

Suppliers have to maintain a copy of all procured raw material certifications which must be retrievable and include material specification, alloy or resin description and achieved test results. Such material certificate must be prepared according to EN 10204 3.1.

It is Supplier's responsibility to ensure ongoing adherence and control during production.

Special Characteristics

Special characteristics identified on Fortaco drawings, related to product safety, government regulations, product performance etc. require special control during Supplier's production process. Special characteristics needs to be addressed in control plans.

Process Flow Chart

Supplier should describe the correct flow of subsequent steps in the entire manufacturing process. It is recommended to prepare such a description in a graphical form, which promotes the understanding of the process, identifies problem areas and improvement opportunities as well as easily depicts customer-supplier relationships.

FMEA

Whenever possible, Supplier is suggested to develop and implement Product and/or Process FMEA as the most effective tool to identify supplier related risks. The usage of a latest AIAG Potential Failure Mode & Effects Analysis (PFMEA) manual as the reference document is advised.

Control Plan

A Control Plan, including the product and process characteristics, measurement methods and necessary reaction plans for deviations, is expected from Supplier for volume production. The Control Plan must appropriately reflect the same steps and flow established by the Process Flow diagram and PFMEA.

Preventive Maintenance

To follow an 'on-time-delivery' mindset, Supplier must develop and implement a preventive maintenance system covering the plant, equipment, production machines and tools. A maintenance plan, available in written form, must include a scope of maintenance, time intervals between and records from already conducted repairs. Supplier should also ensure availability of spare parts related to the key processes.

Packaging and Labelling

Materials and components delivered to Fortaco have to be protected adequately to minimize the possibility of damage during transportation and handling. Supplied goods should be labelled to allow easy identification. The methods used for marking the lot numbers must support identification and failure investigations through all phases of the product life cycle.

The packaging details must be included in the PPAP approval documentation.

Customer Satisfaction

Supplier must establish a method to evaluate feedback from Fortaco in the following areas:

- parts quality
- warranty and field returns
- delivery schedule performance
- issued claims
- major disruptions.

Supplier must monitor the performance of their manufacturing processes to demonstrate compliance with the Fortaco requirements for product quality and efficiency of the process.

Serial Production Processes

Change Management

After the final product approval, Supplier is not allowed to make any changes without a prior written notification and agreement received from a Fortaco representative.

The list of changes in process or product requiring mandatory notification and approval:

- other construction or material than was used in the previously approved product
- new source of raw material
- production from new or modified tools, which due to their unique form or functions influence on the integrity of a final product (this is not applicable to standard tools)
- production from tooling and equipment transferred to a different plant location or from an additional plant location
- change of subcontractor for parts or services, e.g. heat-treatment, plating, coating or welding, which affect on fit, form, function, durability or performance
- test method or inspection method changes used for special characteristics.

To achieve necessary approval, Supplier must submit a written request to Fortaco via e-mail, addressed to a responsible Sourcing Manager. The written request is including detailed description together with all supporting validation data [e.g. dimensional reports, capability studies, performance testing, before/after process parameters, control plan] and detailed timeline behind the implementation.

Suppliers must assure that they receive a written acknowledgement of the request.

The application will be checked by Fortaco and its final decision to be communicated to Supplier. Fortaco reserves the right to conduct an audit or initiate a PPAP process for this reason.

Fortaco reserves the right to invoice any internal and external cost associated with non-communicated or unauthorized changes at Supplier's manufacturing facility or any subsupplier facility.

Supplier Audit

Supplier audit is carried out to assess supplier quality in order to minimize the risk of new supplier selection and verify supplier compliance level with imposed requirements.

Supplier facility access

By prior notice, Supplier must allow Fortaco and Fortaco customers' access to their facilities at any time for the purpose of evaluating parts, processes, documents, methodologies and systems used in the manufacturing of Fortaco products.

The same applies to sub-suppliers, authorized and obligated to confidentiality.

Audit application

Supplier audit is carried out to assess supplier quality potential in order to minimize the risk of new supplier selection and verifying of a supplier compliance level with imposed requirements.

Fortaco Supplier Audit can be conducted because of, but not limited to the following reasons:

- new supplier
- new technology
- new location (transfer of production)
- product launch and process approval
- customer complaints/rejects
- escalation stages
- periodic monitoring (part of current audit program).

Audit Classification and Action Plan

Adding an assessments for each question contained in the Supplier Audit Form ³ results in an overall classification: A, B or C (see Tab.1).

A Corrective Action Plan is developed by Supplier based on Supplier Audit findings. The audited organization is responsible for implementing actions, and a person responsible for the process has to monitor implementation.

General audit classification	
A	Quality Capable – Overall result \geq 90% – No questions assessed as "Not achieved"
B	Conditionally Quality Capable - Overall result between 50–90%
C	Quality not capable – Overall result < 50%

Tab.1. General Supplier Audit Classification

³ Supplier Audit Form Template is available on Fortaco web: www.fortacogroup.com

The confirmation of the effectiveness of taken actions must be documented by a note in an action plan, with a date, by a person responsible for the process. The responsible person must inform the auditor about the result of effectiveness check.

Potential follow-up actions

If the effectiveness of the actions is not confirmed, possible follow-up actions are:

- escalation
- problem analysis
- re-audit

Claim Management

General requirements

To ensure efficient and transparent processing of supplier claims, all claim-related activities must be conducted through the designated Fortaco Supplier Portal.

Suppliers are required to reply on claims via the portal. The portal provides a standardized format for claim documentation (8D methodology), communication, and tracking.

Access & Support

Access to portal or in case of experiencing technical issues, please contact the SQD team for assistance. Training materials and user guides for the portal will be provided by the responsible SQD engineer and are available upon request. This process is designed to improve response times and maintain clear records of all claims.

D1. Team

Team

ID	Type of position	Name	Position held	Email	Phone
1	Leader				

D2. Problem description

WHAT is the problem?

What is the production date(s) of affected?

What is the batch number(s) of affected?

D3. Containment Action(s)

ID	Containment action	Responsible person	Date implemented	% Effective

Results

ID	Location	# NOK parts	# of checked parts
		0	0

D4. Root Cause(s) Analysis

Root cause(s)

Root cause(s) attachment

Attachment

Evidence required?

D5-D6. Permanent Corrective Action(s)

ID	Implemented actions	Responsible person	Date implemented	% Effective	Attachment

ID	Validation	Result

D7. Prev. Action(s) and Systemic Recommendation(s)

ID	Systemic prevent(s)	Responsible person	Date implemented	% Effective

Pic.2. 8D report

A problem solving process must be reported by Supplier to Fortaco via Supplier A
 A problem solving process must be reported by Supplier to Fortaco via Supplier Portal by using 8D methodology. The 8D form is available in Fortaco Supplier Portal.

Reporting rules

The first written notification of a claim sent to Supplier should contain:

The screenshot shows a web form titled "Claim details". It has the following fields and options:

- Reject q-ty at FORTACO ** (text input)
- Part # ** (text input)
- PO number ** (text input)
- Drawing # (text input)
- Part description (text input)
- Error code ** (dropdown menu, currently showing "Bending")
- Error description * (text input)
- Attachment section with a plus icon and a refresh icon.
- PPAP parts (checkbox)
- Recurrent issue? (checkbox)
- Safety issue? (checkbox)
- Fortaco customer claim (checkbox)
- Type of claim (dropdown menu, currently showing "Quality")

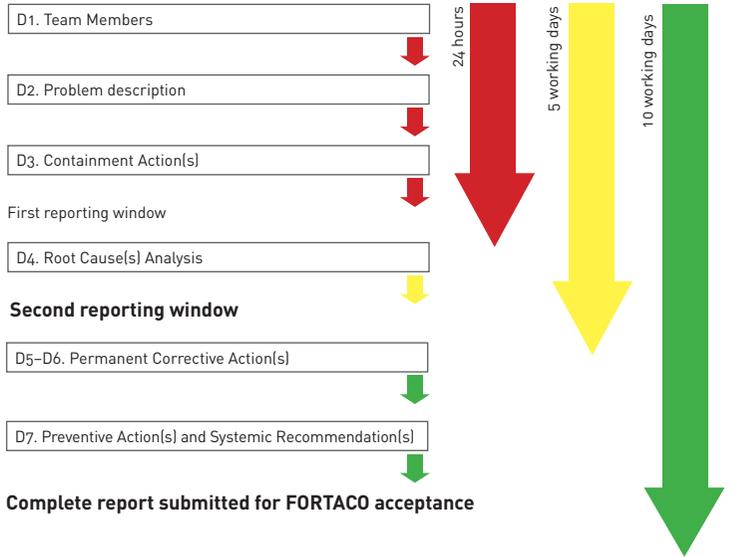
Pic. 3. Claim details

Although all necessary information is received via Fortaco supplier portal, Supplier is allowed to investigate claimed items for reviewing and for further evaluation (if possible).

Fortaco expects the following deadlines for a problem solving process (Pic.3) and reporting (Supplier's responsibility):

- acceptance or rejection of a claim must be made within 24 hours
- containment actions must be implemented and reported within 24 hours after the first problem submission (sections D1–D3 on Fortaco Corrective Action(s) Report)
- root cause analysis should be reported within 5 working days (section D4)
- complete claim report should be handled and closed within 10 working days, unless otherwise specified (sections D5–D7).

Claim Submission to Supplier



Pic.4. Claim reporting schedule

In case of a prolonged investigation process or prolonged implementation of defined individual actions, Supplier must inform Fortaco by using an interim Corrective Action(s) Report containing the current status of results achieved and further activities.

Evaluation of Reject Rate

Reject rate includes the following:

- quantity of verified non-conform items at work in process and transport
- quantity of reworked items
- quantity of suspected items returned to Supplier – this quantity shall be adjusted by issuer after receiving appropriate information regarding real defectiveness from Supplier.

Items with the valid approval of the deviation are not considered to be reject rated.

The reject rate of bulk material (raw materials, consumables, labelling and contamination) covers all affected parts/exchange units (pcs, kg, m, litres, etc.)

Containment action(s)

Supplier must start immediately an extensive evaluation and implementation of urgent activities in all required areas (customer, transit, supplier and sub-supplier), just after the claim submission so that it can be ensured that more defective parts cannot get into a shipment and to Fortaco.

Supplier must immediately notify all impacted Fortaco locations upon discovery, that it may have shipped non-conforming suspected products. The notification must be sent to quality and logistic representatives.

All Fortaco locations receiving the same product must be notified.

Root Cause Analysis

Supplier has to conduct a detailed root cause analysis before introducing corrective actions. Fortaco recommends the 5W methodology or Ishikawa diagram to identify all (including potential) influencing factors.

Proper measures for each individually identified cause must be introduced.

Corrective action(s)

Corrective actions proposed by Supplier must include:

- the best solution which eliminates the root cause
- the best solution which warns about the first symptoms of the problem
- evidence that the proposed solution will be effective after implementation
- evidence that the chosen solution will not cause any side-effects (additional problems).

Costs

Cost recovery activities will be initiated by Fortaco when it is determined that the affected Supplier is responsible for shortcomings in quality or delivery.

Potential costs incurred may include, but are not limited to scrapped defective parts (components, semi-finished products and ready goods), warranty returns, assembly line downtimes, inspection costs, external and internal analysis costs, transit costs, rework, accounting services, claim handling cost as well as all justified costs presented to Fortaco by its customers.

Exact information about the total costs will be provided to Supplier via Fortaco Supplier Portal.

The level of cost recovery against concerns will be a significant factor in Fortaco sourcing decisions.

Auditing

Fortaco is entitled to investigate Supplier's activities connected to the open issues on-site at any time. The same applies to third parties authorized and obligated to confidentiality by Fortaco or its customers.

Warranty

The top priority for Fortaco is to deliver high quality products with minimum risk to customers. Therefore, avoiding failures and non-conformities is essential.

When a field failure is determined being a result of Supplier's or Sub-supplier's product, an affected side is notified by receiving a warranty claim. Supplier is expected to participate in the problem solving process based on the 8D methodology.

It is expected that all Fortaco Suppliers have a process established to handle, analyze, investigate and report about corrective actions and their implementation.

Supplier Performance Rating (SPR)

Fortaco conducts a regular monthly evaluation of direct material Supplier’s performance, which is based on the criteria and rules specified below. Target is to promote Zero Defects and 100% On-time Delivery.

The SPR calculation considers three different parameters: PPM, Delivery Precision (DPR) and Claim rate (CLR) with different weighting (Tab.2). This approach has been chosen because SPR is a better indicator and provides a more realistic picture of an evaluated supplier than PPM or delivery precision measured separately.

$$CLR=(\text{Number of claims}/\text{Number of delivered items})*5000.$$

PPM level (PPM)			Points	Delivery precision (DPR)			Points	Claim rate (CLR)			Points
0			0	100%			0	0			0
1	1000		5	95%	99%		5	0	0,5		10
1000	10000		10	85%	94%		10	0,5	1,5		20
10000	50000		15	50%	84%		15	1,5	3		30
> 50000			25	< 50%			25	3	5		40
								>5			50

Tab.2. Measurement criteria

Supplier’s performance is calculated for each calendar month separately, and the SPR results are available in supplier portal during the first half of the following month.

All Fortaco KPIs, such as Supplier Performance Results, number of claims, PPM, number of defected parts, are presented to Supplier by using Fortaco Supplier Portal (Pic. 4 and Pic. 5).

Suppliers are encouraged to proactively submit an improvement plan, if their monthly SPR goes below the threshold of 50%.

Factory filtering									
CLAIMS	SPR	ROLLING SPR	SPR HISTORY	AUDITS	PROCESS AUDITS	SUPPLIER SELF-ASSESSMENT	SUPPLIER FINANCIAL-ASSESSMENT		
SPR									
Year	Month	# OT Delivered	# Delivered	Delivery precision [%]	Claims	Reject q - ty at FORTACO	PPM	SPR	
2024	Jan	50000	50250	100%	2	6	119	80	
2023	Dec	9000	9100	99%	1	5	549	70	
2023	Nov	1234	1234	100%	1	2	1621	50	
2023	Oct	2365	2364	100%	2	4	1692	50	
2023	Sep	59000	60000	98%	2	63	1050	75	
2023	Aug	9990	10000	100%	2	3	300	70	
2023	Jul	9990	10000	100%	1	4	400	70	

Pic.5. Supplier KPI

FORTACO		Supplier name: GPO						
		Supplier no: 20211105						
Targets for current year								
Year	SPR	Claims	PPM	Delivery Accuracy				
2024	65	15	2000	99				
SPR								
Year	Month	# OT Delivered	# Delivered	Delivery precision [%]	Claims	Reject q - ty at FORTACO	PPM	SPR
2024	Jan	50000	50250	100%	2	6	119	80
2023	Dec	9000	9100	99%	1	5	549	70
2023	Nov	1234	1234	100%	1	2	1621	50
2023	Oct	2365	2364	100%	2	4	1692	50
2023	Sep	59000	60000	98%	2	63	1050	75
2023	Aug	9990	10000	100%	2	3	300	70
2023	Jul	9990	10000	100%	1	4	400	70
2023	Jun	19980	20000	100%	0			95
2023	May	24990	30000	83%	5	18	600	60
2023	Apr	9990	10000	100%	2	7	700	70
2023	Mar	9990	10000	100%	1	3	300	70
2023	Feb	9990	10000	100%	0			95
ROLLING SPR								
Time	# OT Delivered	# Delivered	Delivery precision [%]	Claims	Reject q - ty at FORTACO	PPM	SPR	
3M	50000	50250	100%	2	6	119	80	
6M	50000	50250	100%	2	6	119	80	
Year to date	50000	50250	100%	2	6	119	80	
SPR HISTORY								
Year	# OT Delivered	Delivered items in total	Delivery precision [%]	Claims	Reject q - ty at FORTACO	PPM	SPR	
2024	50000	50250	100%	2	6	119	80	
2023	181604	184798	98%	24	147	795	70	
2022	153000	154740	99%	2	35	226	80	

Pic. 6. Supplier scorecard

Supplier Classification and Fortaco Reaction Plan

The performance thresholds have been set as shown in Tab.3.

Supplier class	SPR (%) Achievement	Reaction plan
A – Quality Capable	≥ 90%	Potential communication with the Supplier
B – Conditionally Quality Capable	≥ 50% < 90%	<ul style="list-style-type: none"> • Discussion of the results with Supplier • Supplier self-assessment or Fortaco Supplier Audit • Preparation and implementation of Supplier corrective action plan
B – Conditionally Quality Capable	≥ 50% < 90%	<ul style="list-style-type: none"> • Obligatory on-site discussion of the results with Supplier • Fortaco Supplier Audit • Supplier nomination on Quality Improvement Plan

Tab.3. Supplier classification and Fortaco reaction plan

Calculation Method

Monthly score:

$$SPR = PPM + DPR + CLR$$

$$SPR[\%] = [1 - (SPR/100)] \times 100\%$$

Annual score:

$$SPR[\%] = [1 - (SPR_{JAN} + SPR_{FEB} + \dots + SPR_{NOV} + SPR_{DEC}) / 1200] \times 100\%$$

Example: Supplier X has delivered to Fortaco 10 000 (ten thousand) parts in total within preceding month achieving DPR=90%. 1 (one) affected component was rejected by production line operator, the rest of them were checked but not more defective pieces was found. Because of raised quality issue Fortaco SQA submitted 1 quality claim towards Supplier X. In such case we have:

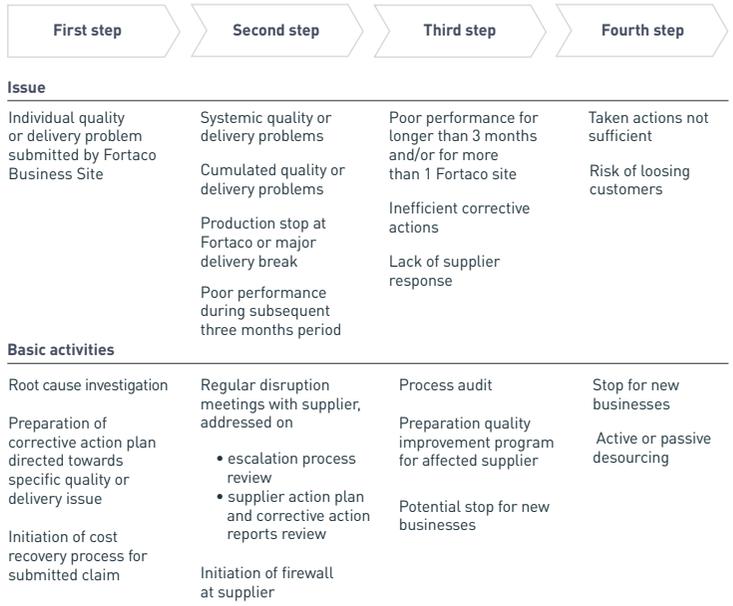
$$SPR = 5(PPM) + 10(DPR) + 20(CLR) = 35$$

$$SPR[\%] = [1 - (35/100)] \times 100\% = 65\%$$

Escalation Process

Fortaco escalation process involves four steps. It starts with one of the Fortaco facilities submitting a complaint against the affected supplier for a quality or delivery issue and ends eventually on the termination of the partnership, if all the taken actions have failed.

When an exit criteria, defined for each single step is met, Supplier will be moved back to the no-action-required status.



Pic.7. Escalation Process (mistake in rev. here is correct.)

DEFINITIONS

8D – Problem solving method used to identify, correct and eliminate problems that follow the logic of the PDCA cycle.

Advance Product Quality Planning (APQP) – A structure activity which plans, tracks and reports the development of a process to manufacture a component/material/assembly to meet customer requirements.

AQAP: Allied Quality Assurance Publication, the set of NATO quality assurance requirements.

Control Plan (CP) – Reflect a strategy for controlling Processes and Products to ensure that all outputs remain in a state of control. Well-designed control plan is able to react to changing process conditions via written descriptions of the actions that are required at each phase of the process from receiving through shipping.

COC - Certificate of Conformity, an official document that proves a product meets all required regulatory, technical, and safety standards.

Corrective Action(s) Report – A formal written submission to Fortaco describing action(s) taken to eliminate the cause(s) of an existing nonconformity or other undesirable situation in order to prevent recurrence.

Delivery precision (DPR) – A ratio of the quantities delivered within a predetermined time window (2 days early and 1 day late arrival against confirmed delivery date) in relation to the quantity received in total. Received quantities are considered for metric units: kg, meter, liter and square meter.

Failure Mode and Effects Analysis (FMEA) – A team process that identifies and controls potential failures before the product goes into production.

GQAR - Government Quality Assurance Representative

ISO 9001 – Quality management systems standards designed to help organizations ensure that they meet the needs of customers and other stakeholders while meeting statutory and regulatory requirements related to a product or program.

Non-Conformity Report (NCR) – A claim submitted toward affected supplier.

Part Submission Warrant (PSW) – Form that summarizes the whole PPAP process. It is formal supplier's confirmation that there are no deviations and serial production can be started or that PPAP cannot be submitted. A submission approval by Fortaco authorizes supplier to start production.

PPM (Parts per Million) – An indicator calculated by following formula:
$$\text{PPM} = (\text{No. of Defective Parts} \div \text{Total number of parts received}) \times 1000000.$$

Process Flow Chart (PFC) – A chart indicating all production steps and their sequence in the fabrication process, including incoming components.

Production Part Approval Process (PPAP) – Process that is designed to demonstrate that the component supplier has developed their design and production process to meet the customer’s requirements and to minimize the risk of failure.

Production Part Approval Check Sheet (PPAP Checklist) – A document intended to clearly identify requirements and eliminate ambiguity between Fortaco and the supplier, prior to production of new or changed parts.

Request for Quotation (RFQ) – A process which purpose is to invite suppliers into a bidding process for a specific products or services.

Special Characteristic – Figure describing product characteristic and/or process parameter which has a significant influence on the product performance.

Start of Production (SOP) - The date when serial production starts.

Fortaco is the leading full-solution provider for OEMs in the off-highway equipment industries. Pioneering the design and production of assemblies, cabins, steel fabrications, and zero emission solutions, we offer cutting-edge technology for enhanced productivity. We empower off-highway machines to use fossil-free steel and our customers to optimize their operations and move towards a greener future.

Collaborating with industry-leading OEMs, we specialize in full lifecycle solutions from research and technology to the design and production of their components and machines. Our innovative technologies extend to lightweight design, ensuring efficiency without compromising on durability and functionality.

We have operations in multiple business sites which enable flexible and reliable support for our customers.