推行內地
汽車行業
客戶特殊要求指南

主辦機構：

香港汽車零部件工業協會
Hong Kong Auto Parts Industry Association

鳴謝及支持機構

特別鳴謝

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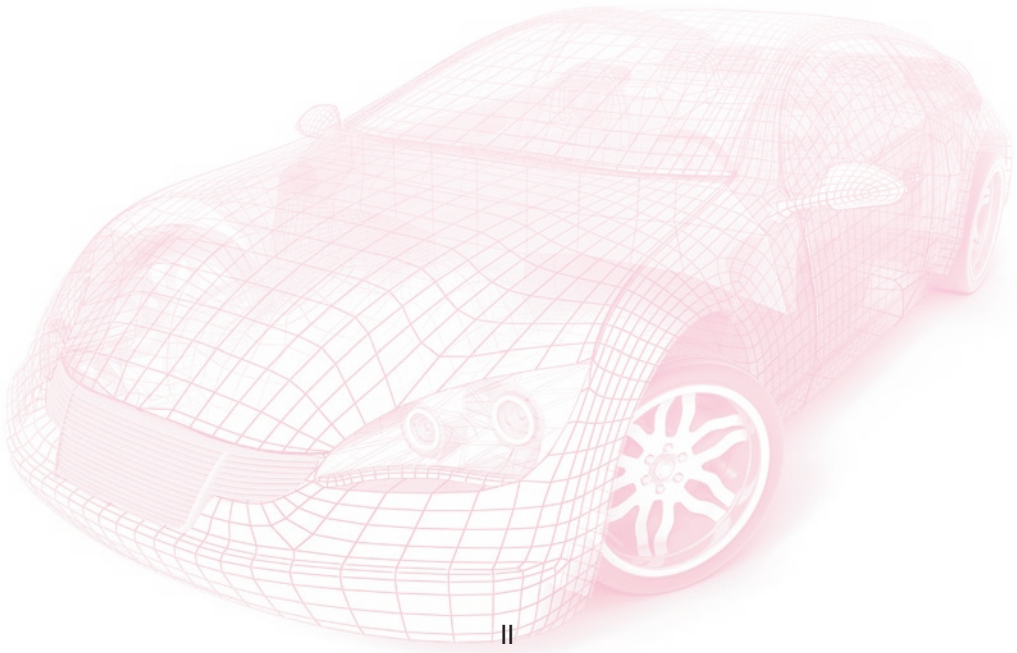
支持機構

香港金屬製造業協會
香港電子業商會
香港模具及產品科技協會
香港鑄造業總會
國際汽車及航空工程師學會 - 香港



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此項目由香港汽車零部件工業協會主辦，香港生產力促進局負責執行，並由香港特別行政區政府工業貿易署「發展品牌、升級轉型及拓展內銷市場的專項基金」(機構支持計劃) 撥款資助。

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2017 年 11 月初版
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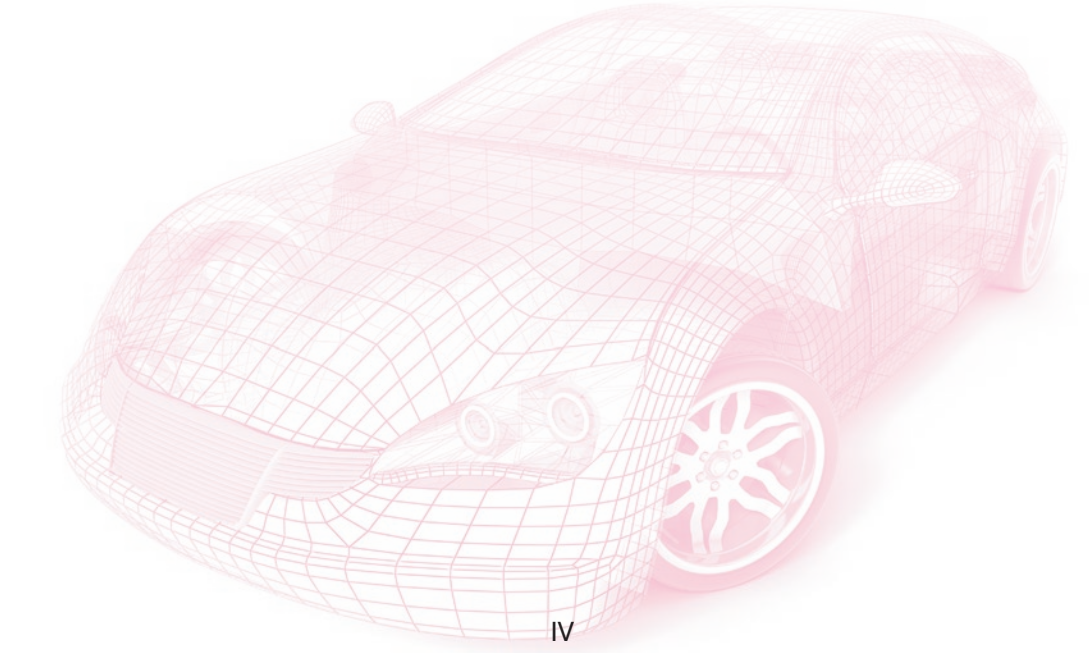
關於本指南

中國目前已經是世界上最大的汽車製造國，每年汽車產量大致相當於美國和日本之和。市場之龐大吸引了汽車零部件廠商爭相拓展內地汽車零部件市場以分一杯羹。

本港很多汽車零部件廠商已加強其品質保證及環境管理制度，並取得國際認可的品質管理系統標準 ISO 9000 認證及全球環境管理系統標準 ISO14000 認證。
為符合汽車業嚴謹的品質規定，以及履行社會責任，不少香港企業已獲取更多認證，例如 ISO/TS 16949、德國的 VDA 6.1 以及意大利的 AVSQ，這些都是國際認可的汽車業品質管理標準。

然而內地的汽車製造商除了要求供應商符合 ISO/TS 16949 的汽車業品質管理標準外，亦要滿足「客戶特殊要求」，才能成為其供應商。本指南蒐集了十二家內地汽車製造商（如：一汽大眾、上海通用、長城汽車等）之客戶特殊要求，供本港之汽車零部件廠商參閱，以協助打入內地汽車 OEM 市場。

「推行內地汽車行業客戶特殊要求指南」是「發展品牌、升級轉型及拓展內銷市場的專項基金」項目 － 「協助香港汽車零部件工業升級以符合內地汽車 OEM 製造商的客戶特殊要求」 的其中一個重要成果，而此指南的成功編制，以至整個項目得以成功地進行，有賴香港汽車零部件工業協會的支持，我們在此鳴謝積極參與此項目的企業。



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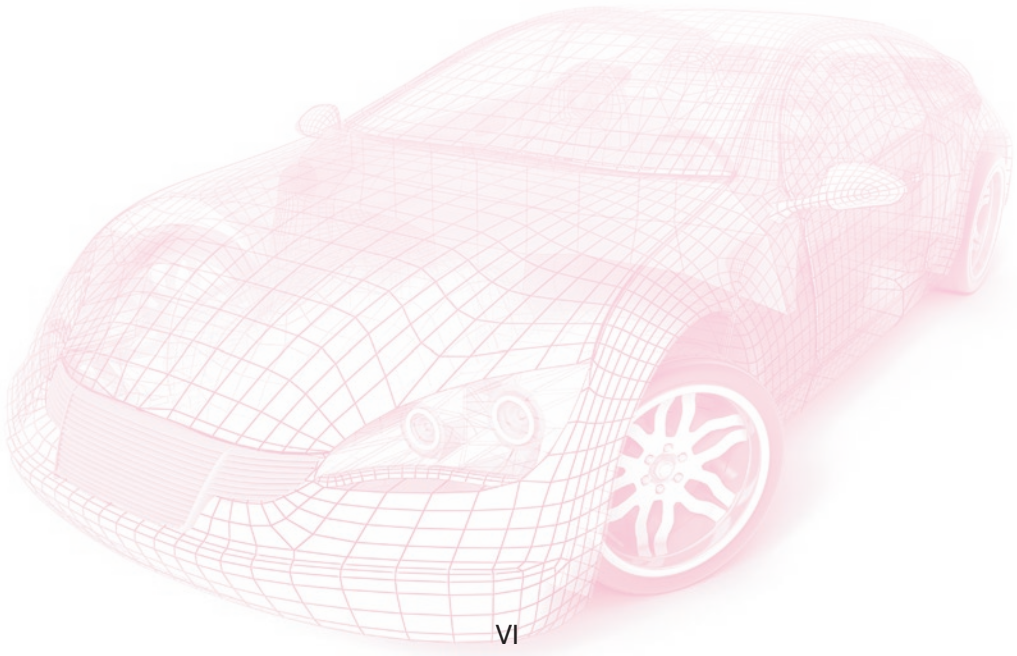

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12家內地整車廠之客戶特殊要求(CSR)與ISO/TS 16969:2009條文比對一覽表

12家內地整車廠之客戶特殊要求 (CSR) 與ISO/TS 16969:2009條文比對一覽表

1. 12 家內地整車廠之客戶特殊特性 (CSR) 與 ISO/TS 16969:2009 條文比對一覽表

「*」為內地整車廠於 TS 16949：2009 條文的基礎上有額外的客戶特殊要求 (CSR)，具體要求的明細於單元二顯示。

內地整車廠 / TS 16949：2009 條文	一汽大眾	上汽通用五菱	上海大眾	上海通用	長安鈴木	長安福特	長城汽車	海馬汽車	偉世通	廣汽菲亞特	德爾福	Key Plastics
4.1.1 總要求—補充	*	*	*	*	*				*	*	*	
4.2.1 總則						*						
4.2.2 品質手冊											*	*
4.2.3 文件控制						*		*	*	*		*
4.2.4 記錄控制	*		*			*	*	*	*	*	*	*
5.1 管理承諾		*		*		*	*	*				
5.1.1 過程效率						*						
5.2 以顧客為中心	*		*	*		*	*	*	*			
5.3 質量方針												
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6.2.2 能力、培訓和意識		*		*		*	*	*	*			*
6.3 基礎設施						*						

內地整車廠 / TS 16949：2009 條文	一汽大眾	上汽通用五菱	上海大眾	上海通用	長安鈴木	長安福特	長城汽車	海馬汽車	偉世通	廣汽菲亞特	德爾福	Key Plastics
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6.4 工作環境		*		*			*	*	*			
7.1 產品實現的策劃	*	*	*	*	*	*	*	*	*	*	*	*
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7.2.1 與產品有關的要求的確定		*		*		*	*	*	*	*	*	*
7.2.2 與產品有關的要求的評審	*		*			*	*	*	*		*	*
7.2.3 顧客溝通	*	*	*	*	*	*	*	*	*		*	*
7.3 設計和開發	*	*	*	*	*	*	*	*	*	*	*	*
7.4.1 採購過程	*	*	*	*		*	*	*	*	*	*	*
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7.5.1 生產和服務提供的控制	*	*	*	*	*	*	*	*	*	*	*	*
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7.5.3 標識和可追溯性	*	*	*	*		*	*			*	*	*
7.5.4 顧客財產	*		*			*	*				*	*

12家內地整車廠之客戶特殊要求 (CSR)
與ISO/TS 16969:2009條文比對一覽表

內地整車廠 / TS 16949：2009 條文	一汽大眾	上汽通用五菱	上海大眾	上海通用	長安鈴木	長安福特	長城汽車	海馬汽車	偉世通	廣汽菲亞特	德爾福	Key Plastics
7.5.5 產品防護	*	*	*			*	*			*		
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8.2.3 過程的監視和測量	*	*	*	*		*		*				*
8.2.4 產品的監視和測量	*	*	*		*	*		*	*		*	*
8.3 不合格品控制	*	*	*	*	*	*		*	*	*	*	*
8.4 資料分析								*		*		
8.5.1 持續改進	*		*	*		*		*			*	
8.5.2 糾正措施	*	*	*	*	*	*	*	*	*		*	*
8.5.3 預防措施						*		*				*

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12家內地整車廠之客戶特殊特性(CSR)明細

12家內地整車廠之客戶特殊特性(CSR)明細

2.1 一汽 - 大眾汽車有限公司

一汽 - 大眾在 TS 16949 : 2009 條文的基礎上額外的客戶特殊要求 (CSR) 明細 (以下資料節錄自 Quality management agreement between the companies if the Volkswagen group and its suppliers) :

第一章　第二節

(對應 ISO/TS 16969:2009 條文 - 7.2.2)

1.2 Tender documents

The contractor must check all requirements of the tender documents for completeness, absence of contradictions, feasibility and technical state of the art (see also VW 99000, section 2.5) and must notify any discrepancies in writing (escalation).

If any amendments/additions are required, for example with regards to paint quality, residual dirt, safety equipment, airbags, etc., must be clarified with the respective technical departments before the tender is prepared (e.g. product and process requirements) and must be documented in writing.

For certain product groups, such as high-strength screws and cable sets, special Group requirements must be met. These are published on the "B2B" platform and are included with each enquiry.

第一章　第三節

(對應 ISO/TS 16969:2009 條文 - 7.2.2; 7.2.3)

1.3 Supplier concept creation

Three categories of development level are defined in the companies of the Volkswagen Group:

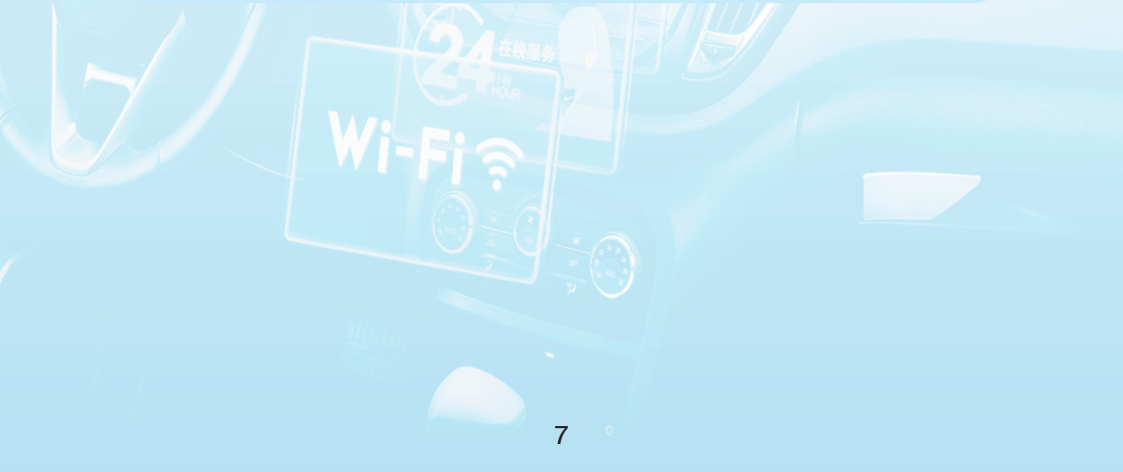
- Concept developer,
- SOP developer and
- Approved supplier

Depending on the development level applied, the supplier must prepare a tender in consultation with the buyer's respective technical department that contains the following minimum elements. This must be presented by the

supplier when requested by the respective quality officer (e.g. quality assurance purchased parts) before the tender process.

- Description of structural design (e.g. geometry, materials, functions, software)
- Planned project organisation with the relevant contacts for the development and production sites
- Explanation of planned production processes, factory layout and supply chains
- Explanation of project schedule for target forecasts for parts approval
- Detailed description of testing and approval planning (production chain including buyer)
- Explanation of subcontractor and change management
- Explanation of measures for achieving quality targets
- Plausibility and agreement of targets (0km and field)
- Approval of target costs, deadlines, unit quantities
- Risk assessment of deadlines, costs and quality
- Definition of cost unit for chargeable special measures
- Binding feasibility statement based on specifications (see VDA maturity level assurance for new parts, RF 2 and ISO/TS 16949 section 7.2.2.2)
- Logistics and packaging concept

Any further discrepancies with regard to the requirements must be notified to the quality assurance officer of the respective company of VOLKSWAGEN GROUP in writing and escalated if necessary (gap analysis).



12家內地整車廠之客戶特殊特性(CSR)明細

第一章　第四節

(對應 ISO/TS 16969:2009 條文 - 5.2; 8.5.1)

1.4 Quality framework agreement

The companies of the VOLKSWAGEN GROUP generally apply a zero error strategy. In addition to the supply contract regulations on defective and other liability claims, the supplier must agree a quality improvement programme with the respective quality assurance officer in writing if faults occur. If no written agreement exists, the supplier shall be required to halve any faults that occur every year.

The supplier is responsible to the companies of the VOLKSWAGEN GROUP for the supplied quality of components/modules/systems. The supplier shall manage and coordinate the subcontractors in the production and supply chain. The supplier shall apply appropriate contractual regulations to ensure that the documents applicable between the group companies and the supplier are also taken into consideration with regards to the subcontractors in the production and supply chain.

If one of the group companies specifies (sub) suppliers, so-called standard parts suppliers, within the production and supply chain for a component/module/system, these standard parts suppliers must conclude a quality framework agreement with their direct customers (i.e. the buying suppliers in the production chain). The 1st tier supplier still bears full responsibility for the quality supplied to the companies of the VOLKSWAGEN GROUP in this arrangement.

第二章　第一節

(對應 ISO/TS 16969:2009 條文 - 4.1.1, 5.4.1, 5.6)

2.1 Elements of the supplier assessment

- Evidence of a fully-functioning quality management system certified by an IATF-registered certifier in accordance with ISO/TS 16949 alternatively VDA 6.1. Without this certificate, a quality capability assessment cannot be carried out for stage A.

- Assessment of process suitability according to formula Q-capability and/or formula Q-capability software. Results are expressed based on the ratings A, B and C.
- Assessment of quality performance based on experience from previous projects and delivery and field quality. Escalation to the C rating is carried out in the "Critical approved supplier" programme.
- Product-specific and project-specific risk assessment involving experts, if required.

第二章　第二節

(對應 ISO/TS 16969:2009 條文 - 5.4.1)

2.2 Quality capability target agreement

In order to ensure the quality of the components/modules/systems the companies of the VOLKSWAGEN GROUP requires the supplier to product the components/modules/systems in an A-rated production site.

If the quality capability of the supplier's production site is rated "B" at the time of award, the supplier must qualify the production site in question so that it achieves an A rating. If this requirement is no met an escalation will be carried out. Details of this are set out in the nomination letter or in the quality capability target agreement.

第二章　第三節

(對應 ISO/TS 16969:2009 條文 - 7.3)

2.3 Design management framework agreement (KVV)

The design management framework agreement, in short KVV, defines the responsibilities in place for the development of components s between the contracting company of the VOLKSWAGEN GROUP and the supplier in advance. By defining the responsibilities for component design the suppliers are given greater control over the products developed together with the group companies.

The KVV consists of a design management framework agreement, which is concluded with the supplier for the sourcing of components/modules/systems and an appendix containing the design management quota agreement, in short KV-Quota, which is concluded for each component.

第三章　第一節

(對應 ISO/TS 16969:2009 條文 - 7.3)

3.1 New parts qualification programme (QPN-RG) / Maturity level assurance / Purchased part management

This qualification programme, which is based on the VDA maturity level (QPN-RG), must be applied consistently by the supplier throughout the entire supply chain to meet the requirements for a robust production process for new parts (see also formula Q-new parts).

This method allows users of the QPN maturity level at Volkswagen to identify scopes of delivery that are critical to maturity levels and to take any necessary measures promptly. As a result, the status in the production realisation process can be assessed across a number of disciplines based on standard maturity levels at defined project milestones. The companies of the VOLKSWAGEN GROUP reserve the right to review the current project statuses at any time with suppliers/subcontractors.

Fixed rules, including the introduction of so-called "Round tables", involves the suppliers (and subcontractors if any) of maturity-critical deliveries and the customer's international organisation in the product design process as early as possible (see also VDA maturity level new parts).

第四章　第一節

(對應 ISO/TS 16969:2009 條文 - 7.1; 7.5.1; 7.5.2; 7.5.3; 7.5.4; 7.5.5; 8.2.3)

4.1 Continuous guarantee of process capability

Process capability is a measure of the quality of a process based on the specification of the products created by the process.

On-going process capability is established and guaranteed (PFU) (see also ISO/TS 16949, sections 7.5.2 and 8.ff) in accordance with VW standards 10130, 10131 and 10119 (see also VDA 4.1).

The scope of the special characteristics that are measured to determine the Cp-, and Cpk values must be defined in the FMEA for the product and the process. These documents can be viewed at any time by the buyer.

The supplier must establish, document and, on request, notify the respective quality officer of any critical attributive characteristics (e.g. from process FMEA).

A draft protection agreement must be presented and agreed with the buyer for critical attributive characteristics (may result in A and B errors). This can be achieved, for example, using multi-level protection with Poka Yoke, occupational organisation measures, line measurements, audits, 100-percent testing, etc. for the acceptance criteria zero errors in accordance with ISO/TS 16949, section 7.1.2.

At least one method/ tool must be applied as described in VDA Books 4 and 14 for each identified process or product risk (e.g. by FMEA) in order to achieve the quality targets in accordance with the state of the art.

第四章　第二節

(對應 ISO/TS 16969:2009 條文 - 7.4.1; 7.5.1; 7.5.2; 7.5.3; 7.5.4; 7.5.5; 8.2.3; 8.2.4)

4.2 Product safety, product liability

The companies of the VOLKSWAGEN GROUP accept the final production liability if using purchased parts and general liability for the end product, the vehicle.

The primary production liability for the purchased parts used in the end product lies with the supplier or sub-contractor. The supplier must therefore take all organisational and technically feasible and reasonable measures to increase the

product safety of its parts and the parts of its subcontractors and to minimise the risks of product liability.

The supplier shall ensure and require its subcontractors to ensure that:

- A highly-developed appreciation of quality exists throughout the company,
- The require product safety is guaranteed when components are developed,
- Special consideration is given to product safety during the quality planning stage,
- The quality capability of the production processes is guaranteed and proven,
- Appropriate series quality assurance measures are taken to minimise the probability of defective products occurring,
- Defective products are identified early on in the production workflow using appropriate measures (to minimise costs/waste of added value),
- Quality data and the legally required compliance tests are documented in sufficient detail in order to prove that the products have been manufactured in accordance with all relevant laws and safety standards
- A material tracking system can be used to pinpoint the effects of any faults that occur if required,
- Detailed information and training for the relevant staff on "Product safety and product liability" and
- Similar systems with the buyer's requirements similar to formula Q-concrete, etc. are used by all subcontractors,
- A product safety officer (PSB) is appointed for each stage in the supply chain. The 1st tier PSB must be entered in the supplier database (LDB). This information must be kept up to date at all times.
- Components with a limited durability that meet special labelling requirements, particularly in accordance with the manual for original parts suppliers.

第四章　第三節

(對應 ISO/TS 16969:2009 條文 - 8.2.2)

4.3 Internal audits

To be able to assess and improve the quality capability of various divisions,

the supplier must carry out regular internal audits in accordance with the requirements of ISO/TS 16949 (section 8.2.2) and formula Q-capability/ formula Q-capability software.

In addition, the supplier must carry out a D/TLD self-audit at least once a year based on formula Q-capability for scopes of delivery marked as D parts.

The audit results of the D/TLD- audit must be archived for at least 15 years.

The companies of the VOLKSWAGEN GROUP reserve the right to carry out a process and product audit at any time.

第四章　第四節

(對應 ISO/TS 16969:2009 條文 - 8.3)

4.4 Control circuits

4.4.1 Complaints manager

The companies of the VOLKSWAGEN GROUP carry out comprehensive fault management. The supplier must automatically remedy any defects that occur as quickly as possible in accordance with current regulations and must notify the sustainability of the measures taken to the relevant quality officer.

The supplier must notify the respective quality officers, logistics centres and any other partners in the supply chain of any faults that occur.

A and B faults must be remedied by the supplier with immediate effect, in some cases on request (see also formula Q-capability, section 5.3) in other words at least:

- Immediate sorting/re-working of supplies at the buyer's site and
- Use of a 100% firewall to prevent further slips.

If this cannot be carried out by internal staff, the supplier must commission a third party to carry out the work.

If an A fault occurs the supplier must send a high-level representative to the relevant quality assurance department of the buying company of the VOLKSWAGEN GROUP within 24 hours, or if requested.

第四章　第四節

(對應 ISO/TS 16969:2009 條文 - 7.2.3; 8.3)

4.4.2 Early warning system

Complaints management allows the group company and its supplier to obtain important early warning information about new and unknown product problems.

Guidelines on handling problems at the supplier's factory:

If the significant discrepancies are noted with regard to the defect figures for the supplier's products (e.g. rejects and re-working) the supplier must immediately report to the relevant quality officer.

This also applies if defects are identified on similar products manufactured by competitors.

Guidelines on handling problems at the buying company of the VOLKSWAGEN GROUP (production hall failures):

The supplier must work through the information supplied by the buying company of the VOLKSWAGEN GROUP immediately to avoid faulty parts being sold to end customers. Consequently, the quality information on production hall failures and ppm must also be classified and evaluated regularly and promptly.

Guidelines on handling problems in the field:

The supplier must play an active role in early warning system (hotline, commercial task force, etc.), for example with resident experts on site, to assist with the early identification of field faults. The supplier is required to assist with the fault elimination process for start-ups and must report all defective parts noted by the observation group.

第四章　第四節

(對應 ISO/TS 16969:2009 條文 - 8.2.1)

4.4.3 Requirement for internal field testing with reporting obligations

As part of its product monitoring obligation the supplier must also carry out a market observation for the products it sells directly and to notify the buying company of the VOLKSWAGEN GROUP of any transferable knowledge obtained as a result.

第四章　第五節

(對應 ISO/TS 16969:2009 條文 - 8.5.1)

4.5 Continuous improvement process (KVP)

The supplier is required to provide evidence of a continuous improvement process in accordance with ISO/TS 16949 section 8.5. Through this process the suppliers aims to take suitable measures to reduce internal reject and re-working quotas. This information must be presented to the companies of the VOLKSWAGEN GROUP when requested.

第四章　第六節

(對應 ISO/TS 16969:2009 條文 - 7.1.4)

4.6 Change management

The supplier is required to notify the buying company of the VOLKSWAGEN GROUP of all changes to the process chain (site, product, process) prior to implementation and to obtain the approval of the relevant quality officer. If a new model is required, this must be agreed with the relevant quality officer from the buying company of the VOLKSWAGEN GROUP. Failure to observe these requirements will automatically result in a C rating (business on hold, see section 2). Any additional costs incurred for the new approval process shall be borne by the supplier.

12家內地整車廠之客戶特殊特性(CSR)明細

第四章　第七節

(對應 ISO/TS 16969:2009 條文 - 8.2.4)

4.7 Requalification

The supplier must guarantee quality by carrying out a regular requalification of its scope of supply in accordance with ISO/TS 16949 (section 8.2.4.1) and in accordance with VDA Robust Production Processes (section 5.3.4). Any differences to the requalification content must be agreed between the supplier and the buyer. The companies of the VOLKSWAGEN GROUP require a full requalification at least every five years. Any other requirements must be agreed in writing with the buying company of the VOLKSWAGEN GROUP.

第四章　第八節

(對應 ISO/TS 16969:2009 條文 - 8.5.1; 8.5.2)

4.8 Lessons Learned

Feedback on previous and ongoing projects, e.g. from field failures, production hall failures, project management, etc. must be used as "lessons learned" for new projects/developments and must demonstrate a measurable reduction based on previous indicators for start-ups.

第四章　第十節

(對應 ISO/TS 16969:2009 條文 - 8.2.3)

4.10 Technical review of suppliers (TRL)

In principle the companies of the VOLKSWAGEN GROUP pursue the following global aim together with TRL (see formula Q-capability):

- Guarantee of specified part and component requirements
- Review of series production on site and all other controlling activities
- Effectiveness check of corrective measures and verification of agreed quality management standards

The companies of the VOLKSWAGEN GROUP reserve the right to carry out a TRL

at any time. The TRL is notified on the working day prior to execution.

The TRL is assessed using a traffic light system. A red traffic light equates to a level 2 rating in the "Critical approved supplier" programme and will be followed up immediately with a quality meeting with the quality officer of the buying company of the VOLKSWAGEN GROUP responsible for TRL with the involvement of the supplier's top management; at this stage a decision will also be made regarding the supplier's C rating (business on hold; section 2).

第四章　第十一節

(對應 ISO/TS 16969:2009 條文 - 8.2.3)

4.11 "Critical approved supplier" programme “

If there are serious discrepancies in quality requirements, such as standard of delivery, prototyping and red TRL assessment, the quality officer at the buying company of the VOLKSWAGEN GROUP will escalate the supplier in the "Critical approved suppliers" programme. The programme consists of four defined levels:

Level 0: Supplier has problems

Level 1: Supplier is unsuccessful in solving the problems

Level 2: Supplier requires external help to guarantee supply availability, C warning

Level 3: Supplier does not meet group quality, C rating (business on hold; section 2)

As a rule, the ratings have a time limit. Suppliers who can provide evidence of the sustainability of the measures taken are deescalated.

The group quality officer reserves the right to enforce a direct level 3 rating in exceptional circumstances.

2.2 上汽通用五菱汽車股份有限公司

上海通用五菱在 TS 16949 : 2009 條文的基礎上額外的客戶特殊要求 (CSR) 明細 (以下資料節錄自供應商質量要求書 SOR)：

第二章　第一至四節

(對應 ISO/TS 16969:2009 條文 - 4.1.1)

2.1 供應商應遵守 SGMW 制定的供應商質量和開發程序並滿足 SGMW 列出的所有質量要求，以及 ISO/TS16949 質量體系提出的對供應商適用的要求。

2.2 SGMW SQE 或相關人員有權隨時進入供應商的工廠來檢查生產設施、產品、材料、過程和合同規定的 SGMW 所有物。

2.3 任何時間內，SGMW 對產品的檢查，不能夠免除供應商對在製品或成品檢查的責任。

2.4 所有的供應商應該向 SGMW 提供零缺陷的零件，零件應滿足所有工程規範和功能要求 , 以及 SGMW 的其它特殊要求及國家法規。

第二章　第五節

(對應 ISO/TS 16969:2009 條文 - 7.2.3)

2.5 在整個報價過程中，供應商需要說明為檢測缺陷 (防錯裝置等) 和防止缺陷流向顧客及每年度送第三方檢測所需要的費用。供應商以後追加的控製手段，費用由供應商承擔。

第三章　第三節

(對應 ISO/TS 16969:2009 條文 - 7.4.1)

3.3 供應商選擇的分供方必須通過 ISO/TS16949 或 ISO9000 體系認證，關鍵零部件分供方應通過 ISO/TS16949。

第四章　第一節

(對應 ISO/TS 16969:2009 條文 - 7.1)

4.1 APQP：供應商必須使用與 AIAG APQP 手冊相一致的產品質量先期策劃流程，以確保零件 100% 滿足產品規範，零件開發進程滿足 SGMW 項目進度要求。定點啟動會後 , 供應商必須向 SGMW 提供產品的 APQP 計劃，在項目進程中向 SGMW 的 SQE 匯報各階段狀態。

第四章　第二節

(對應 ISO/TS 16969:2009 條文 - 7.3)

4.2 PPAP：供應商提供給 SGMW 生產（含可售車或非可售車）使用的物料都必須通過生產件批准（PPAP），除非 SGMW SQE 有書面授權 , 並得到 SQ 總監批准。

第四章　第三節

(對應 ISO/TS 16969:2009 條文 - 6.2.2)

4.3 員工培訓：培訓計劃必須強調對新進員工和轉崗員工的培訓，培訓狀態應該在製造區域展示出來，明確各崗位的上崗要求以及上崗所需要的培訓時間。

第四章　第三節

(對應 ISO/TS 16969:2009 條文 - 7.3)

4.4 防錯：供應商應該執行防錯策略以確保所有提供給 SGMW 產品的材料，過程和標籤處於受控狀態。供應商應該運用防錯技術以確保產生缺陷之前及時發現缺陷並採取糾正措施（例如：採用“不可製造”的防錯技術）。供應商的防錯必須達到相關要求，以防止缺陷零件發送到 SGMW。

12家內地整車廠之客戶特殊特性(CSR)明細

第四章　第五節

(對應 ISO/TS 16969:2009 條文 - 7.5.3)

4.5 可追溯性：供應商應建立從原材料到成品各個環節的可追溯性計劃，包括製造日期編碼、批次控制、供應商識別信息，並保證在產品製造過程中控制物料先進先出，可追溯性項目應該在 APQP 過程中確定。

第四章　第六節

(對應 ISO/TS 16969:2009 條文 - 7.1)

4.6 顧客使用特性及 KPC 的驗證：顧客使用特性及 KPC (例如：配合，形狀，功能，匹配面等) 應該包括在 PFMEA，過程控制計劃，分層審核和防錯中，這些特性應該 100% 加以驗證。

第四章　第六節

(對應 ISO/TS 16969:2009 條文 - 7.3)

4.9 樣件管理要求

4.9.1 產品開發過程 SGMW 所提供的零件開發樣件及 OTS、PPAP 階段零件封樣件應妥善保存。

4.9.2 外觀封樣件、色板標準板、皮紋標準板應避光妥善保存，兩年更換一次。

第四章　第七節

(對應 ISO/TS 16969:2009 條文 - 7.6)

4.7 檢具要求

4.7.1 供應商須按照零件在汽車上的位置來進行檢具設計，除非 SQE 批准其它情形。

4.7.2 A 類檢具的設計和製造必須通過檢具認可小組的評審和批准，其它檢具應得到 SGMW SQE 的評審和批准。

4.7.3 供應商應該具備檢測整個總成的能力，並確保分供方具備檢測分總成及零件的能力，檢具應該能夠檢測與其相關零件和附件零件的匹配性。

4.7.4 供應商應該確保及時完成檢具來滿足主要的項目節點要求 (例如：OTS，FE,PPAP) 。供應商應該使用 CMM(三坐標測量機) 和零件專用測量樣架來檢測非正式工裝樣件和正式生產工裝製造的首件。

第四章　第八節

(對應 ISO/TS 16969:2009 條文 - 8.2.4)

4.8.2 在品批量供后，供商定期行型式，其中国家制目每年提交一次国家可有的室的告，其它目必提供国家或 SGMW 可的室的告。

第五章　第一節

(對應 ISO/TS 16969:2009 條文 - 7.5.1)

5.1 作業規範及分層審核 a) 供應商必須建立從原材料到成品交付各個環節的管理流程及作業規範，包括所有生產工位及檢驗、返工、生產切換、TPM、倉儲、搬運、發運等輔助工位。 b) 管理層必須對作業規範實施過程進行分層審核，必須建立分層審核制度，有文件化分層審核計劃，審核的頻次至少應該每班一次。 c) 應該記錄不符合項並且將糾正措施文件化。 d) 審核計劃應該覆蓋管理層的各個層次。 e) 領導層應該驗證計劃的完成情況。

12家內地整車廠之客戶特殊特性(CSR)明細

第五章　第二節

(對應 ISO/TS 16969:2009 條文 - 7.5.1)

5.2 生產質量：供應商應具備有效的防錯方法或質量檢測流程以防止缺陷產生、傳遞或接收，確保無缺陷的零件連續地運送到 SGMW 生產線上。

第五章　第三節

(對應 ISO/TS 16969:2009 條文 - 8.3)

5.3 遏制：所有不合格和可疑材料必須被控制，必須清楚地定義其方法，並應該執行目視管理，所有不合格材料必須被隔離和標識。在生產啟動階段（包括試生產和正式生產開始後初級階段）應執行 GP-12（早期生產次品遏制流程），按照 SGMW 的要求附加的遏制措施執行。如果問題發生，供應商應立即採取有效的遏制措施，並完全遵守 GP-5（問題通報與解決）以及可能導致的受控發運的要求，並將質量信息傳遞給 SGMW。

第五章　第四節

(對應 ISO/TS 16969:2009 條文 - 5.1)

5.4 質量表現：供應商的高級管理層應該承諾保持質量的持續改進。監控產品的 PPM, PR/Rs，一級和二級受控發運，主機廠停線記錄等質量表現。

第五章　第五節

(對應 ISO/TS 16969:2009 條文 - 7.5.5)

5.5 標識、包裝、存儲、運輸、交付：供應商應有適當的包裝、存儲、運輸、交付控制，確保零件標識清晰，在周轉過程中不損壞，並按批次交付。

第六章

(對應 ISO/TS 16969:2009 條文 - 8.5.2)

- 供應商應使用 3X5 個為什麼來解決問題 a) 預防：為什麼製造系統未能預防缺陷的產生 b) 檢測：為什麼質量系統未能檢測到缺陷，導致缺陷傳遞 c) 策劃：質量策劃過程中為什麼沒有預測到此缺陷
- 使用橫向展開表，回顧所有提供給 SGMW 類似產品或過程是否存在類似問題，改進措施是否已運用。
- 供應商應具備運用適當的問題解決技術（例如 GM“Red X”系統）來解決複雜問題的能力。

第七章　第二節

(對應 ISO/TS 16969:2009 條文 - 5.5.2.1)

7.2 供應商與 SGMW 生產各班保持聯繫：供應商應該指派明確的代表來支持 SGMW 工廠的每一班生產。供應商指派的代表應至少負責以下方面：

7.2.1 對缺陷零件立即採取措施以確保缺陷零件不會發送到 SGMW 工廠。

7.2.2 按照 SGMW 工廠 /SQE 的要求返工和篩選，並按要求做好標識，並通報返工區域。

7.2.3 協調提供返工和篩選零件所需的必要資源。

7.2.4 提供分總成 / 零件相關質量問題所要求的返修。

7.2.5 提供正在運往 SGMW 工廠途中，有關缺陷零件的明確信息 (如何識別缺陷，處置方針)。

7.2.6 協調合格零件的特殊運輸。

12家內地整車廠之客戶特殊特性(CSR)明細

第八章

(對應 ISO/TS 16969:2009 條文 - 7.4.1)

- 供應商應對所供總成零件中所有零部件的產品質量負責，並且供應商必須對其分供方的管理
- 供應商應使用類似 SGMW 對其管理方法管理分供方，包括：a) 用以進行供應商選 • 擇與評價的程序和作業指導 b) 用以評價與顧客要求和標準的符合性的程序 c) 對於關鍵供應商的考核和確認系統

第九章 第一節

(對應 ISO/TS 16969:2009 條文 - 7.2.1)

9.1 在价程中，供商集成零件的配量，双方按照 SGMW 确和制定相供准。

第九章 第五節

(對應 ISO/TS 16969:2009 條文 - 7.2.3)

9.5 于 SGMW 提供的零件或集成供商自行拉的零件出量，集成供商以量信息卡等面形式反 SGMW SQE，SGMW SQE 的解决，集成供商跟踪措施有效性并反 SGMW SQE。

第十章　第一節

(對應 ISO/TS 16969:2009 條文 - 8.2.3)

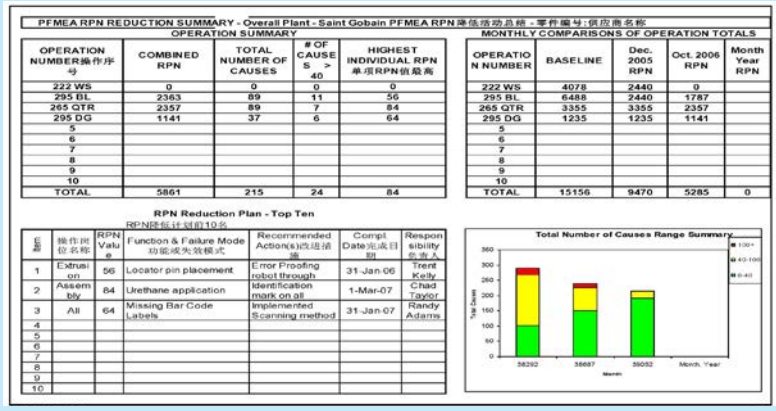
10.1　能力要求

特性	PPAP	正常生產
KPC 關鍵特性 / 特別關注	Cp & Pp ≥ 2.0 Cpk & Ppk ≥ 1.5	Cp & Pp ≥ 2.0 Cpk & Ppk ≥ 1.5 並要求持續改進
PQC 關鍵特性 / 特別關注	Cp & Pp ≥ 2.0 Cpk & Ppk ≥ 1.5	Cp & Pp ≥ 2.0 Cpk & Ppk ≥ 1.5
標準產品特性	檢查單個零件	Pp ≥1.33 Ppk≥1.33 在控制計劃和操作指導書中規定對特性的日常監控)

如果在產品 / 過程開發中，達到上述要求的能力有困難，供應商必須立即通知 SQE 並且制定計劃來確保達到要求，否則應得到正式書面的能力偏差許可批准 .

第十章　第二節

(對應 ISO/TS 16969:2009 條文 - 7.3)



PFMEA RPN REDUCTION SUMMARY - Overall Plant - Saint Gobain PFMEA RPN 降低活动总结 - 零件编号:供应商名称

OPERATION SUMMARY

OPERATION NUMBER 操作序号	COMBINED RPN	TOTAL NUMBER OF CAUSES	# OF CAUSES S > 40	HIGHEST INDIVIDUAL RPN 单项RPN值最高
222 WS	0	0	0	0
295 BL	2363	89	11	56
265 QTR	2357	89	7	84
295 DG	1141	37	6	64
5				
6				
7				
8				
9				
10				
TOTAL	5861	215	24	84

MONTHLY COMPARISONS OF OPERATION TOTALS

OPERATION NUMBER	BASELINE	Dec. 2005 RPN	Oct. 2006 RPN	Month Year RPN
222 WS	4078	2440	0	
295 BL	6488	2440	1787	
265 QTR	3355	3355	2357	
295 DG	1235	1235	1141	
5				
6				
7				
8				
9				
10				
TOTAL	15156	9470	5285	0

RPN Reduction Plan - Top Ten

RPN降低计划前10名

Item	操作序位名称	RPN Value	Function & Failure Mode 功能或失效模式	Recommended Action(s) 改进措施	Compl. Date 完成日期	Responsibility 负责人
1	Extrusion	56	Locator pin placement	Error Proofing robot through	31-Jan-06	Trent Kelly
2	Assembly	84	Urethane application	Identification mark on all	1-Mar-07	Chad Tayler
3	All	64	Missing Bar Code Labels	Implemented Scanning method	31-Jan-07	Randy Adams
4						
5						
6						
7						
8						
9						
10						

Total Number of Causes Range Summary

2.3 上汽大眾汽車有限公司

上汽大眾在 TS 16949 : 2009 條文的基礎上額外的客戶特殊要求 (CSR) 明細 (以下資料節錄自 Quality management agreement between the companies if the Volkswagen group and its suppliers) :

第一章　第二節

(對應 ISO/TS 16969:2009 條文 - 7.2.2)

1.2 Tender documents

The contractor must check all requirements of the tender documents for completeness, absence of contradictions, feasibility and technical state of the art (see also VW 99000, section 2.5) and must notify any discrepancies in writing (escalation).

If any amendments/additions are required, for example with regards to paint quality, residual dirt, safety equipment, airbags, etc., must be clarified with the respective technical departments before the tender is prepared (e.g. product and process requirements) and must be documented in writing.

For certain product groups, such as high-strength screws and cable sets, special Group requirements must be met. These are published on the "B2B" platform and are included with each enquiry.

第一章　第三節

(對應 ISO/TS 16969:2009 條文 - 7.2.2; 7.2.3)

1.3 Supplier concept creation

Three categories of development level are defined in the companies of the Volkswagen Group:

- Concept developer,
- SOP developer and
- Approved supplier

Depending on the development level applied, the supplier must prepare a tender in consultation with the buyer's respective technical department that contains the following minimum elements. This must be presented by the

supplier when requested by the respective quality officer (e.g. quality assurance purchased parts) before the tender process.

- Description of structural design (e.g. geometry, materials, functions, software)
- Planned project organisation with the relevant contacts for the development and production sites
- Explanation of planned production processes, factory layout and supply chains
- Explanation of project schedule for target forecasts for parts approval
- Detailed description of testing and approval planning (production chain including buyer)
- Explanation of subcontractor and change management
- Explanation of measures for achieving quality targets
- Plausibility and agreement of targets (0km and field)
- Approval of target costs, deadlines, unit quantities
- Risk assessment of deadlines, costs and quality
- Definition of cost unit for chargeable special measures
- Binding feasibility statement based on specifications (see VDA maturity level assurance for new parts, RF 2 and ISO/TS 16949 section 7.2.2.2)
- Logistics and packaging concept

Any further discrepancies with regard to the requirements must be notified to the quality assurance officer of the respective company of VOLKSWAGEN GROUP in writing and escalated if necessary (gap analysis).

12家內地整車廠之客戶特殊特性(CSR)明細

第一章　第四節

(對應 ISO/TS 16969:2009 條文 - 5.2; 8.5.1)

1.4 Quality framework agreement

The companies of the VOLKSWAGEN GROUP generally apply a zero error strategy. In addition to the supply contract regulations on defective and other liability claims, the supplier must agree a quality improvement programme with the respective quality assurance officer in writing if faults occur. If no written agreement exists, the supplier shall be required to halve any faults that occur every year.

The supplier is responsible to the companies of the VOLKSWAGEN GROUP for the supplied quality of components/modules/systems. The supplier shall manage and coordinate the subcontractors in the production and supply chain. The supplier shall apply appropriate contractual regulations to ensure that the documents applicable between the group companies and the supplier are also taken into consideration with regards to the subcontractors in the production and supply chain.

If one of the group companies specifies (sub) suppliers, so-called standard parts suppliers, within the production and supply chain for a component/module/system, these standard parts suppliers must conclude a quality framework agreement with their direct customers (i.e. the buying suppliers in the production chain). The 1st tier supplier still bears full responsibility for the quality supplied to the companies of the VOLKSWAGEN GROUP in this arrangement.

第二章　第一節

(對應 ISO/TS 16969:2009 條文 - 4.1.1, 5.4.1, 5.6)

2.1 Elements of the supplier assessment

- Evidence of a fully-functioning quality management system certified by an IATF-registered certifier in accordance with ISO/TS 16949 alternatively VDA 6.1. Without this certificate, a quality capability assessment cannot be carried out for stage A.

- Assessment of process suitability according to formula Q-capability and/or formula Q-capability software. Results are expressed based on the ratings A, B and C.
- Assessment of quality performance based on experience from previous projects and delivery and field quality. Escalation to the C rating is carried out in the "Critical approved supplier" programme.
- Product-specific and project-specific risk assessment involving experts, if required.

第二章　第二節

(對應 ISO/TS 16969:2009 條文 - 5.4.1)

2.2 Quality capability target agreement

In order to ensure the quality of the components/modules/systems the companies of the VOLKSWAGEN GROUP requires the supplier to product the components/modules/systems in an A-rated production site.

If the quality capability of the supplier's production site is rated "B" at the time of award, the supplier must qualify the production site in question so that it achieves an A rating. If this requirement is no met an escalation will be carried out. Details of this are set out in the nomination letter or in the quality capability target agreement.

第二章　第三節

(對應 ISO/TS 16969:2009 條文 - 7.3)

2.3 Design management framework agreement (KVV)

The design management framework agreement, in short KVV, defines the responsibilities in place for the development of components s between the contracting company of the VOLKSWAGEN GROUP and the supplier in advance. By defining the responsibilities for component design the suppliers are given greater control over the products developed together with the group companies.

The KVV consists of a design management framework agreement, which is concluded with the supplier for the sourcing of components/modules/systems and an appendix containing the design management quota agreement, in short KV-Quota, which is concluded for each component.

第三章　第一節

(對應 ISO/TS 16969:2009 條文 - 7.3)

3.1 New parts qualification programme (QPN-RG) / Maturity level assurance / Purchased part management

This qualification programme, which is based on the VDA maturity level (QPN-RG), must be applied consistently by the supplier throughout the entire supply chain to meet the requirements for a robust production process for new parts (see also formula Q-new parts).

This method allows users of the QPN maturity level at Volkswagen to identify scopes of delivery that are critical to maturity levels and to take any necessary measures promptly. As a result, the status in the production realisation process can be assessed across a number of disciplines based on standard maturity levels at defined project milestones. The companies of the VOLKSWAGEN GROUP reserve the right to review the current project statuses at any time with suppliers/subcontractors.

Fixed rules, including the introduction of so-called "Round tables", involves the suppliers (and subcontractors if any) of maturity-critical deliveries and the customer's international organisation in the product design process as early as possible (see also VDA maturity level new parts).

第四章　第一節

(對應 ISO/TS 16969:2009 條文 - 7.1; 7.5.1; 7.5.2; 7.5.3; 7.5.4; 7.5.5; 8.2.3)

4.1 Continuous guarantee of process capability

Process capability is a measure of the quality of a process based on the specification of the products created by the process.

On-going process capability is established and guaranteed (PFU) (see also ISO/TS 16949, sections 7.5.2 and 8.ff) in accordance with VW standards 10130, 10131 and 10119 (see also VDA 4.1).

The scope of the special characteristics that are measured to determine the Cp-, and Cpk values must be defined in the FMEA for the product and the process. These documents can be viewed at any time by the buyer.

The supplier must establish, document and, on request, notify the respective quality officer of any critical attributive characteristics (e.g. from process FMEA).

A draft protection agreement must be presented and agreed with the buyer for critical attributive characteristics (may result in A and B errors). This can be achieved, for example, using multi-level protection with Poka Yoke, occupational organisation measures, line measurements, audits, 100-percent testing, etc. for the acceptance criteria zero errors in accordance with ISO/TS 16949, section 7.1.2.

At least one method/ tool must be applied as described in VDA Books 4 and 14 for each identified process or product risk (e.g. by FMEA) in order to achieve the quality targets in accordance with the state of the art.

第四章　第二節

(對應 ISO/TS 16969:2009 條文 - 7.4.1; 7.5.1; 7.5.2; 7.5.3; 7.5.4; 7.5.5; 8.2.3; 8.2.4)

4.2 Product safety, product liability

The companies of the VOLKSWAGEN GROUP accept the final production liability if using purchased parts and general liability for the end product, the vehicle.

The primary production liability for the purchased parts used in the end product lies with the supplier or sub-contractor. The supplier must therefore take all organisational and technically feasible and reasonable measures to increase the

product safety of its parts and the parts of its subcontractors and to minimise the risks of product liability.

The supplier shall ensure and require its subcontractors to ensure that:

- A highly-developed appreciation of quality exists throughout the company,
- The require product safety is guaranteed when components are developed,
- Special consideration is given to product safety during the quality planning stage,
- The quality capability of the production processes is guaranteed and proven,
- Appropriate series quality assurance measures are taken to minimise the probability of defective products occurring,
- Defective products are identified early on in the production workflow using appropriate measures (to minimise costs/waste of added value),
- Quality data and the legally required compliance tests are documented in sufficient detail in order to prove that the products have been manufactured in accordance with all relevant laws and safety standards
- A material tracking system can be used to pinpoint the effects of any faults that occur if required,
- Detailed information and training for the relevant staff on "Product safety and product liability" and
- Similar systems with the buyer's requirements similar to formula Q-concrete, etc. are used by all subcontractors,
- A product safety officer (PSB) is appointed for each stage in the supply chain. The 1st tier PSB must be entered in the supplier database (LDB). This information must be kept up to date at all times.
- Components with a limited durability that meet special labelling requirements, particularly in accordance with the manual for original parts suppliers.

第四章　第三節

(對應 ISO/TS 16969:2009 條文 - 8.2.2)

4.3 Internal audits

To be able to assess and improve the quality capability of various divisions,

the supplier must carry out regular internal audits in accordance with the requirements of ISO/TS 16949 (section 8.2.2) and formula Q-capability/ formula Q-capability software.

In addition, the supplier must carry out a D/TLD self-audit at least once a year based on formula Q-capability for scopes of delivery marked as D parts.

The audit results of the D/TLD- audit must be archived for at least 15 years.

The companies of the VOLKSWAGEN GROUP reserve the right to carry out a process and product audit at any time.

第四章　第四節

(對應 ISO/TS 16969:2009 條文 - 8.3)

4.4 Control circuits

4.4.1 Complaints manager

The companies of the VOLKSWAGEN GROUP carry out comprehensive fault management. The supplier must automatically remedy any defects that occur as quickly as possible in accordance with current regulations and must notify the sustainability of the measures taken to the relevant quality officer.

The supplier must notify the respective quality officers, logistics centres and any other partners in the supply chain of any faults that occur.

A and B faults must be remedied by the supplier with immediate effect, in some cases on request (see also formula Q-capability, section 5.3) in other words at least:

- Immediate sorting/re-working of supplies at the buyer's site and
- Use of a 100% firewall to prevent further slips.

If this cannot be carried out by internal staff, the supplier must commission a third party to carry out the work.

If an A fault occurs the supplier must send a high-level representative to the relevant quality assurance department of the buying company of the VOLKSWAGEN GROUP within 24 hours, or if requested.

第四章　第四節

(對應 ISO/TS 16969:2009 條文 - 7.2.3; 8.3)

4.4.2 Early warning system

Complaints management allows the group company and its supplier to obtain important early warning information about new and unknown product problems.

Guidelines on handling problems at the supplier's factory:

If the significant discrepancies are noted with regard to the defect figures for the supplier's products (e.g. rejects and re-working) the supplier must immediately report to the relevant quality officer.

This also applies if defects are identified on similar products manufactured by competitors.

Guidelines on handling problems at the buying company of the VOLKSWAGEN GROUP (production hall failures):

The supplier must work through the information supplied by the buying company of the VOLKSWAGEN GROUP immediately to avoid faulty parts being sold to end customers. Consequently, the quality information on production hall failures and ppm must also be classified and evaluated regularly and promptly.

Guidelines on handling problems in the field:

The supplier must play an active role in early warning system (hotline, commercial task force, etc.), for example with resident experts on site, to assist with the early identification of field faults. The supplier is required to assist with the fault elimination process for start-ups and must report all defective parts noted by the observation group.

第四章　第四節

(對應 ISO/TS 16969:2009 條文 - 8.2.1)

4.4.3 Requirement for internal field testing with reporting obligations

As part of its product monitoring obligation the supplier must also carry out a market observation for the products it sells directly and to notify the buying company of the VOLKSWAGEN GROUP of any transferable knowledge obtained as a result.

第四章　第五節

(對應 ISO/TS 16969:2009 條文 - 8.5.1)

4.5 Continuous improvement process (KVP)

The supplier is required to provide evidence of a continuous improvement process in accordance with ISO/TS 16949 section 8.5. Through this process the suppliers aims to take suitable measures to reduce internal reject and re-working quotas. This information must be presented to the companies of the VOLKSWAGEN GROUP when requested.

第四章　第六節

(對應 ISO/TS 16969:2009 條文 - 7.1.4)

4.6 Change management

The supplier is required to notify the buying company of the VOLKSWAGEN GROUP of all changes to the process chain (site, product, process) prior to implementation and to obtain the approval of the relevant quality officer. If a new model is required, this must be agreed with the relevant quality officer from the buying company of the VOLKSWAGEN GROUP. Failure to observe these requirements will automatically result in a C rating (business on hold, see section 2). Any additional costs incurred for the new approval process shall be borne by the supplier.

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第四章　第七節

(對應 ISO/TS 16969:2009 條文 - 8.2.4)

4.7 Requalification

The supplier must guarantee quality by carrying out a regular requalification of its scope of supply in accordance with ISO/TS 16949 (section 8.2.4.1) and in accordance with VDA Robust Production Processes (section 5.3.4). Any differences to the requalification content must be agreed between the supplier and the buyer. The companies of the VOLKSWAGEN GROUP require a full requalification at least every five years. Any other requirements must be agreed in writing with the buying company of the VOLKSWAGEN GROUP.

第四章　第八節

(對應 ISO/TS 16969:2009 條文 - 8.5.1; 8.5.2)

4.8 Lessons Learned

Feedback on previous and ongoing projects, e.g. from field failures, production hall failures, project management, etc. must be used as "lessons learned" for new projects/developments and must demonstrate a measurable reduction based on previous indicators for start-ups.

第四章　第十節

(對應 ISO/TS 16969:2009 條文 - 8.2.3)

4.10 Technical review of suppliers (TRL)

In principle the companies of the VOLKSWAGEN GROUP pursue the following global aim together with TRL (see formula Q-capability):

- Guarantee of specified part and component requirements
- Review of series production on site and all other controlling activities
- Effectiveness check of corrective measures and verification of agreed quality management standards

The companies of the VOLKSWAGEN GROUP reserve the right to carry out a TRL

at any time. The TRL is notified on the working day prior to execution.

The TRL is assessed using a traffic light system. A red traffic light equates to a level 2 rating in the "Critical approved supplier" programme and will be followed up immediately with a quality meeting with the quality officer of the buying company of the VOLKSWAGEN GROUP responsible for TRL with the involvement of the supplier's top management; at this stage a decision will also be made regarding the supplier's C rating (business on hold; section 2).

第四章　第十一節

(對應 ISO/TS 16969:2009 條文 - 8.2.3)

4.11 "Critical approved supplier" programme "

If there are serious discrepancies in quality requirements, such as standard of delivery, prototyping and red TRL assessment, the quality officer at the buying company of the VOLKSWAGEN GROUP will escalate the supplier in the "Critical approved suppliers" programme. The programme consists of four defined levels:

Level 0: Supplier has problems

Level 1: Supplier is unsuccessful in solving the problems

Level 2: Supplier requires external help to guarantee supply availability, C warning

Level 3: Supplier does not meet group quality, C rating (business on hold; section 2)

As a rule, the ratings have a time limit. Suppliers who can provide evidence of the sustainability of the measures taken are deescalated.

The group quality officer reserves the right to enforce a direct level 3 rating in exceptional circumstances.

2.4 上海通用汽車有限公司

上海通用在 TS 16949 : 2009 條文的基礎上額外的客戶特殊要求 (CSR) 明細 (以下資料節錄自上海通用汽車對供應商質量要求的規定)：

第一章 第二節

(對應 ISO/TS 16969:2009 條文 - 4.1.1)

1.2 System Compliance, Specific Production Process Requirements:
體係法規符合性、特定生產過程要求：

1.2.1 All providers of a) production materials, b) production or after sale parts, or c) heat treating, plating, painting or other finishing services directly to Shanghai General Motors must be certified to ISO/TS16949, ISO14001 and OHSAS18001 by a Certification Body (CB) recognized by the International Automotive Task Force (IATF) and have a current certificate available demonstrating compliance to GM supplements.
所有向上海通用汽車直接提供 a) 生產材料，b) 生產或售後服務件，或 c) 熱處理、塗鍍、油漆或其他加工服務的供應商必須通過 IATF 認可的 ISO/TS16949、ISO14001、OHSAS18001 標準的認證， 並且取得相應證書。

1.2.2 Effectiveness of the heat treating, the plating and the coating processes shall be demonstrated to meet the requirement of CQI-9 Heat Treat System Assessment, CQI-11 Plating System Assessment and CQI-12 Coating System Assessment published by AIAG respectively and SGM special requirement.
熱處理、電鍍、油漆過程必須分別滿足 AIAG 發布的 CQI-9、CQI-11、CQI-12 要求及 SGM 的特殊要求。

1.2.3 Welding and soldering process shall be compliant with CQI-15 Welding System Assessment and CQI-17 Soldering System Assessment published by AIAG respectively.
焊接和釬焊加工必須分別滿足 AIAG 發布的 CQI-15 和 CQI-17 要求。

1.2.4 If the suppliers do not certified to ISO/TS 16949 or ISO14001 and OHSAS18001, or they need construct new plants and new product

lines to manufacture the parts being quoted, their quotation must include a defined certification attainment plan for further consideration. New supplier shall pass PSA, or the third party appointed by SGM will implement the special audits and the suppliers will take charge of the related cost.

供應商如果沒有通過 ISO/TS16949 或 ISO14001 或 OHSAS18001 認證，或者這些供應商需新建工廠和生產線來製造報價的零件，供應商在報價時必須包括通過相關認證的詳細計劃。新供應商必須通過 PSA 後方可向 SGM 批量供貨，否則將由 SGM 指定第三方進行特殊審核，相關費用由供應商支付。

第一章　第三節

(對應 ISO/TS 16969:2009 條文 - 4.1.1)

1.3 China Compulsory Certification (CCC) Supplier Requirements:

中國強制性產品認證供應商要求：

It is the supplier's responsibility to contact China Quality Certificate Centre (CQC) for CCC activities and ensure all CCC related parts meet the China Compulsory Certification requirements (reference CNCA-02-063:2005). All saleable parts shall have a CCC marking after proper authorization. The SGM/GM math data or parts specific drawing general notes will have "Part Must Be China Compulsory Certification Compliant". Supplier shall update and maintain their specific duns' code to the CCC China Compulsory Certification requirements in EP&GQTS (Global Quality Tracking System) - Supplier Certification. A copy of the certificate for the part should be sent to SGM/GM Engineering before PPAP or when saleable status is attained also email to SQ_Cert@gm.com (must include the duns' code). Web-site: http://www.cqc.com.cn/english/index.htm

供應商必須聯繫 CQC 進行 CCC 認證工作並確保所有相關零件滿足 CCC 要求（參考 CNCA-02-063:2005）。所有相關可銷售零件必須帶有經授權的 CCC 標誌。在 SGM/GM 的數模或零件圖紙上將包含"零件必須滿足 CCC"的要求。供應商必須在 EP/GQTS 更新和維護其 duns 號的 CCC 認證信息。零件的 CCC 證書在 PPAP 之前必鬚髮送給 SGM/GM 的工程，或在達到 saleable 狀態時也發給相應的 SQE（必須包含 duns 信息）。（參考網址 http://www.cqc.com.cn/english/index.htm）

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第一章　第四節

(對應 ISO/TS 16969:2009 條文 - 8.5.2)

1.4 Responsibilities for Repair, Replacement and Return of Household Automotive Products:

汽車執行“包修、包退、包換”政策要求：

1.4.1 Fast Response Requirement to 3R Products related suppliers

涉及“三包”的零件供應商必須確保的快速響應

Within 24 hours (Local Supplier) / 48 hours (Import Supplier) of receipt of SGM Quality Alert Notification (telephone or in writing):

收到 SGM 通知（電話或書面）的國產供應商在 24 小時 / 進口供應商在 48 小時內：

1) Establish the emergency conference call with SGM SQE;

配合 SGM SQE 建立緊急電話會議機制；

2) Investigate the potential cause and implement the short-term containment in-house;

在廠內排查潛在原因及採取短期遏制措施；

3) The defective parts will be sent by SGM within 24 hours upon receipt.

SGM 會在收到失效件 24 小時內寄出。

1.4.2 Supplier must confirm the validity of the short-term containment within 24 hours upon receipt of defective part.

供應商收到失效件 24 小時內必須確認短期遏制措施有效性。

1.4.3 Supplier must finish analyzing and provide feedback on root cause and long-term countermeasure within 5 working days if it is the Tire 1 supplier’s problem.

若為一級供應商本身原因，則 5 個工作日內必須完成根本原因及長期措施的分析和反饋。

1.4.4 Supplier must provide analysis plan (including the part transport breakpoint) within 24 hours and finish analyzing and feedback the root cause and long-term measure within 10 working days if it is the tier 2 or tier 3 suppliers’ problem.

若為二、三級供應商問題，則供應商必須 24 小時內反饋分析計劃（含郵寄節點），10 個工作日內完成根本原因

及長期措施的分析和反饋。

1.4.5 Supplier must support SGM with emergency air transport and on-site analysis if necessary.
若有必要，供應商須支持 SGM 實施緊急空運並到失效現場進行問題分析。

1.4.6 SGM reserves the right to adjust the established response requirement and notify the supplier the response requirement. The supplier should execute the adjusted requirement strictly to ensure the parts fast response.
SGM 有權對上述響應要求進行調整併通知供應商，供應商應當嚴格執行調整後的響應要求以保證零件的快速響應。

第一章　第五節

(對應 ISO/TS 16969:2009 條文 - 5.2)

1.5 Shanghai General Motors Procedures and Reference Documents:
上海通用汽車的程序和參考文件：
Suppliers are to adhere to the requirements contained in the following documents:

PROCEDURE 程序	DOCUMENT 文件
Advanced Product Quality Planning & Control Plan Reference Manual 產品質量先期策劃和控制計劃參考手冊	AIAG Manual
Fundamental Statistical Process Control (SPC) Reference Manual 統計過程控制參考手冊 (SPC)	AIAG Manual
Measurement Systems Analysis (MSA) Reference Manual 測量系統分析 (MSA) 參考手冊	AIAG Manual
Failure Mode and Effects Analysis (FMEA) Reference Manual 失效模式和影響分析 (FMEA) 參考手冊	AIAG Manual
Production Part Approval Process (PPAP) Manual 生產件批准手冊	AIAG Manual

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Purchased Parts General Products Traceability Assurance Procedure 外購件一般產品可追溯性保證程序	
Product Traceability Procedure(Bar code precise traceability) 產品可追溯性程序 (條形碼精確追溯)	TS-070-020 TS-070-021
GP-5 Supplier Quality Processes and Measurements Procedure 供應商質量監控流程	GM1746
GP-8 Continuous Improvement Procedure 持續改進程序	GM1747
GM1747	
GP-10 Evaluation and Accreditation of Supplier Test Facilities 供應商檢測設備的評價和鑑定	GM1796
GP-12 Early Production Containment 早期生產遏制	GM1920
Fixture Standards 檢具要求標準	GM1925
GM Global Supplier Quality Manual 通用全球供應商質量手冊	GM1927
GP-9 Run @ Rate 按節拍生產	GM1960
Key Characteristics Designation System (KCDS) 關鍵特性指示系統 (KCDS)	GMW15049
Supplier Quality Weld Support Manual 供應商焊接質量支持手冊	
Customer Care & Aftersales Specific:	
Shipping and Delivery Performance Requirements - Ship Direct 發運和運輸要求 - 直接發運	
Packaging and Labeling Requirements - AC Delco and Accessories 包裝和標籤要求 -AC Delco 和附件	
Supplier Injection Mold Technical Specification 供應商注塑模具技術要求	
Supplier Press Tool Technical Specification 供應商沖壓模具技術要求	
Supplier Die-casting Diie Technical Specification 供應商壓鑄模具技術要求	

Note: in case of conflict between SGM requirement and GM requirement, SGM requirement will prevail.

注:SGM要求和GM要求出現不一致的情況下,必須首先滿足SGM要求。

第一章　第六節

(對應 ISO/TS 16969:2009 條文 - 7.6)

1.6.6 Inspection Fixtures and Gages Requirements:

檢具要求：

1.6.6.1 Supplier to assume the gage construction orientates the part in vehicle position unless Supplier Quality Engineer approves a deviation.

除非 SQE 批准此項偏差，供應商應根據零件的裝車位置來製造檢具。

1.6.6.2 Gage designs shall be approved by the Supplier Quality Engineer or the appropriate customer gage approval group prior to the start of fixture construction (for your regional requirements, contact your supplier quality engineer). Gage designs shall incorporate approved GD&T datum schemes and gages/fixtures must be capable to dimensionally evaluate parts.

SQE 或合適的顧客檢具認可小組應在檢具製造開始之前 (與 SQE 聯繫所在地區要求) 對所有檢具設計進行認可。檢具設計應該包括認可的 GD&T 基準方案以及檢具必須具備評價零件尺寸的能力。

1.6.6.3 Supplier shall have hand apply fixtures for openings where assembly plant or sequencer/subassembler will install something that impacts a final vehicle specification (e.g. trim plates, extension panel, grilles, glove box door, etc.).

針對主機廠或排序供應商 / 分總成供應商需要安裝一些對最終整車匹配規範有影響的分總成 (例如：內飾板，延伸板， 格柵，手套箱門等) 的開口配合處，供應商應設計制造掌上型檢具。

1.6.6.4 Supplier shall have the ability to check a completed assembly. Sub-contractors shall also have the ability to check component parts. Any cubing or build fixture shall have the ability to demonstrate fit to adjoining parts and attachments.

供應商應該具備檢測整個總成的能力。分供方也應該具備檢測分零件的能力。任何檢具應該能夠檢測與其他零件相匹配的尺寸。

1.6.6.5 Appropriate functional testing and final inspection to ensure product performs as designed under actual vehicle conditions.
使用適當的功能檢測和最終檢測以確保產品在實際的車輛狀態下符合設計要求。

1.6.6.6 Supplier shall ensure that fixtures are procured in a timely manner to meet major program benchmarks (i.e. first shots, GP-11, PPQP (Preproduction Part Quality Process)/PPO (Pre-Production Operations) Build Shop events, Functional evaluations, and PPAP.) Supplier shall, at a minimum, have a CMM (coordinate measurement machine) holding fixture available for the inspection of first parts off prototype and production tooling.
供應商應該確保及時完成檢具來滿足專案的主節點要求（例如：首模零件、GP-11、PPQP/PPO 造車、功能評估，和 PPAP）。供應商應該至少使用 CMM(三座標測量機)測量支架，檢測樣件工裝和生產工裝製造的首件。

第一章　第七節

(對應 ISO/TS 16969:2009 條文 - 5.1)

1.7.2 Quality Performance Metrics: Each Supplier's Senior Management shall commit to maintain and continuously improve quality. EP and GQTS (Global Quality Tracking System) monitors performance data for PPM, PR&Rs, Controlled Shipping Level I / II, Major Assembly Plant Disruptions, ISO/TS16949 / ISO14001 / OHSAS18001 Certifications. Suppliers shall monitor their quality performance on line through EP and GQTS.
品質表現：每一家供應商的高級管理層應該承諾保持品質的持續改進。EP（電子採購系統）和 GQTS（全球品質跟蹤系統）監控供應商的 PPM、PR&Rs、一級 / 二級受控發運、主機廠停線 記錄、ISO/TS16949 / ISO14001 / OHSAS18001 的認證等資料或資訊。供應商應通過 EP 和 GQTS 線上監控其品質表現。

第一章　第八節

(對應 ISO/TS 16969:2009 條文 - 7.5.1)

1.8 Capacity Planning and Manufacturing System Requirements:

產能計畫和製造系統要求：

1.8.1 Supplier shall have the ability to design and install adequate capacity to meet the daily contract requirements in one production day while operating under normal operating conditions and under total customer load.

正常生產和顧客滿負荷條件下，供應商的設計和安裝產能需滿足每生產日合同產能。

1.8.2 Supplier must comply with all requirements of GP9 Run at Rate process including completion of the GM1960 run at rate workbook.

供應商須符合 GP9 流程的所有要求，完成 GM1960.

1.8.3 Suppliers are required to demonstrate their ability to meet SGM contractual requirements through both system capacity analysis and actual R@R production to verify accuracy of the analysis.

要求供應商按節拍生產，驗證系統產能分析的正確性，說明其滿足 SGM 合同要求的能力。

第一章　第九節

(對應 ISO/TS 16969:2009 條文 - 8.5.1)

1.9.1 GP-8:

持續改進：

Supplier shall follow SGM GP-8 and effectively execute continuous improvement activities to carry out PDCA and focus on operability. Supplier shall effectively solve the problems, to overcome the internal weakness and to establish the scientific methods and effective self-motivating continuous improvement mechanism.

供應商應按照 SGM GP-8 有效執行相關持續改進任務，貫徹 PDCA，關注可操作性、可執行 力；應有效解決問題，攻克薄弱環節，建立科學方法及健全有效的自主持續改進機制。

12家內地整車廠之客戶特殊特性(CSR)明細

第一章　第九節

(對應 ISO/TS 16969:2009 條文 - 6.2.2)

1.9.4 Quality Culture to the Team:

品質文化落地班組：

Supplier should enhance the team building and management and ensure the all-around and practical company quality culture. Supplier should make GP-8, QSB, etc. into actual effect.

供應商應加強班組建設，全員參與、全面實踐、全速推進，切實保證公司品質文化建設的全面性和實效性，使 GP-8、QSB 等方法工具真正落地。

第一章　第九節

(對應 ISO/TS 16969:2009 條文 - 8.5.1)

1.9.5 SGM SQE and/or SDE can organize improvement workshops (such as cost improvement, quality improvement, onsite improvement, 6 Sigma projects, etc.) in suppliers' plants according to their quality performance and improvement opportunities. Suppliers shall carry out related resource and implement improvement activities positively.

SGM SQE 和 / 或 SDE 可以根據供應商的品質表現和改進機會，在供應商現場組織相關改進 工作的研討會（如成本改善、品質改善、現場改善、6 Sigma 項目等）。要求供應商落實相 關資源，積極執行相關改進工作。

第一章　第十二節

(對應 ISO/TS 16969:2009 條文 - 7.2.1)

1.12 Tier 1 Responsibilities (including suppliers of complex systems/sub-assemblies):
一級供應商職責：

1.12.1 Tier1 supplier is responsible for implementing AIAG and SGM requirements for all components of the assembly including directed buy parts unless otherwise specified by SGM Supplier Quality & Development Director. SGM may assign an SQE to work with the tier1 on selected sub-supplier components.
除非 SGM 供應商品質與開發總監批准，供應商負責對所有的裝配零件包括直接採購的零件 堅持執行 AIAG 和 SGM 的要求。SGM 可以自行決定指派一名 SQE 與一級供應商共同研究 零件的相關問題。

第一章　第十二節

(對應 ISO/TS 16969:2009 條文 - 7.4.1)

1.12.2 Tier1 supplier shall choose the key tier2 suppliers from the Approbatory List of Key Tier2
Supplier Technic Review approved by SGM. If needed, tier2 supplier recommended by tier1 shall get the technic review approbation according to SGM procedure.
一級供應商原則上必須在 SGM 批准的《關鍵二級零件供應商技術評審認可清單》中選取關 鍵二級零件分供方。特殊情況，一級供應商推薦的二級供應商必須按 SGM 流程獲得技術評 審認可。

1.12.3 Tier1 supplier need to take effect to evaluation and validation system for tire2 supplier and push them do continuous improvement 一級供應商需要對其分供方建立評價和驗證系統，並推進持續改進工作。

1.12.4 Tier1 supplier must follow the 4th item: Added Special Requirements for VAA (Value Added Assembly) Supplier, if its Tier2 supplier is located by SGM.
對於有 SGM 定點二級供應商的情況，其一級供應商必須遵照第四條款“對 VAA (集成供 貨) 供應商的特殊補充要求”進行相關業務操作。

第一章　第十三節

(對應 ISO/TS 16969:2009 條文 - 7.2.3)

1.13.4 SGM Supplier Quality procedures and documents can be accessed through SGM Electronic Procurement (EP) System (http://www.shanghaigm.com/eProc_SP/eProcSP_Web/MainServlet?action=SYSTEM_PG_Welcome).
SGM 供應商品質程式和體系檔可通過電子採購系統 (http://www.shanghaigm.com/eProc_SP/eProcSP_Web/MainServlet?action=SYSTEM_PG_Welcome) 獲取。

第二章　第一節

(對應 ISO/TS 16969:2009 條文 - 8.2.3)

二、 Supplier Quality Statement of Requirements Powertrain Addendum
動力總成供應商品質聲明補充要求

2.1 Process Capability & Control Requirements
過程能力及控制要求 :

CHARACTERISTIC 特性	PPAP Requirement PPAP 要求	Ongoing Production 量產
KPC	Xp ≥2.0 Xpk≥1.67	Xp≥2.0 Xpk ≥1.5 Control charting required 控制圖

PQC	Xp≥2.0 Xpk≥1.5	Xp≥2.0 Xpk≥1.5 Control charting required 控制圖
Standard Product Characteristics 標準產品特性	Xp≥1.33 Xpk≥1.00 (Documentation required only for DR Characteristics) （僅 DR 特性需有過程能力資料支持）	Xp≥1.33 Xpk≥1.00 (Control charting required only for DR Characteristics) （僅 DR 特性需有控制圖支援）
Surface finish, and/ or hardness 加工表面粗糙度和 / 或硬度	Xp≥1.0 Xpk≥1.0 (Documentation required only for DR Characteristics) （僅 DR 特性需有過程能力資料支持）	Xp≥1.0 Xpk ≥1.0 (Control charting required only for DR Characteristics) （僅 DR 特性需有控制圖支援）

Xp=Cp & Xpk=Cpk: for stable processes with normal distribution of measured values 針對正態分佈的穩定過程

Xp=Pp & Xpk=Ppk:for stable processes with non-normal distribution of measured values 非正態分佈的穩定過程

Standard Product Characteristic - are characteristics where reasonably anticipated variation is unlikely to significantly affect function or performance of the product. Some Standard Product Characteristics may be designated as Documentation Required (DR) 標準產品特性——是指那些基本可預期的偏差不太可能嚴重影響產品的功能或性能的特性。部分 標準（產品）特性可指定為 DR 特性。

Documentation Required (DR) - Those standard characteristics which are important to function and where reasonably anticipated variation outside of the specification is likely to have moderately negative consequences. This designation shall also be applied to those characteristics which have been designated by Supplier Quality as "pass through".
DR 一 是指對功能重要的標準特性，當這些特性出現基本上可預計的超出規範的偏差時，可能會產生一些溫和（或普通）的負面結果。DR 也可以賦予那些被 SQ 指定為"通過特性"的特性。

If during Product / Process development you believe there will be difficulty meeting the above capability, you MUST immediately notify your Supplier Quality Engineer (SQE) and develop a plan to assure compliance and/or obtain formal written approval to deviate from the capability requirements.
產品 / 過程開發中，如果確信難以滿足以上能力要求，必須及時通知 SQE 並制定保證滿足要求的計畫，和 / 或獲得允許偏離能力要求的正式書面批准。

第二章　第二節

(對應 ISO/TS 16969:2009 條文 - 6.4)

2.2 Cleanliness Requirements:
清潔度要求：
Cleanliness requirements for all parts will be defined in the Product Engineering Statement of Requirement and on the part print drawing. Part and process cleanliness shall be considered during the development of the PFMEA. Appropriate actions shall be taken during the APQP process as driven by the PFMEA RPNs. The supplier shall use GMW16037 Test Method to Quantify Cleanliness of Powertrain Components.
所有部件的清潔度要求會在產品設計的 SOR 及圖紙上注明。PFMEA 開發過程中應該考慮零件和過程中的清潔度。根據 PFMEA 的 RPN，在 APQP 過程中採取適宜的措施來保證清潔度。針對 Powertrain 的零件，供應商必須使用 GMW16037 的測試方法量化清潔度數據。

第二章　第三節

(對應 ISO/TS 16969:2009 條文 - 7.1)

2.3 Process Change Request Requirements:
工藝過程變更申請要求：

2.3.1 Supplier shall apply to customer for process change without any product design impact according to supplier process change request (SPCR) procedure. Process change request shall be submitted to SGM according to SGM SPCR procedure and requirement, if the PPAP approval of related part is released by SGM. Process change of other parts whose PPAP are approved by other GM regions shall be requested to corresponding GM regions with the applicable procedure.
對於所有動力總成部件的工藝更改，若其不涉及影響產品設計特徵，供應商必須按照工藝更改
申請流程向客戶進行申請。其中上海通用汽車負有 PPAP 責任的零件需要按照上海通用汽車供
應商工藝更改申請 (SPCR) 流程向上海通用汽車進行申請；由 GM 其他區域負責進行 PPAP 的零
件按照該區域的相應流程向相應區域進行申請。

2.3.2 SGM Powertrain Supplier Process Change Request (SPCR) applies to the following, but not limited to the following scope:
上海通用汽車動力總成供應商工藝變更申請的適用於下述但不限於下述範圍：

- Production following any Changes in process or method of manufacture
  生產過程或工藝更改。
- Correction of a discrepancy on a previously submitted part
  原零件不符合項更正。
- Production from tooling and equipment transferred to a different plant location or from an additional plant location.
  工裝設備移動，異地生產。
- Production following refurbishment or rearrangement of existing tooling or equipment
  工裝設備重大翻修或維護。

- Change in source for subcontracted parts, materials, dunnage or services (e.g. heat-treating, treating, plating, painting .. etc)
  二級供應商處的變更，包括二級外購零件、原材料、生產耗材或服務供應商的變更。(例 如：熱處理，鍍層，塗層等)
- Product re-released after tooling has been inactive for volume production for twelve months or more
  工裝設備停用一年後的生產件重新批准
- Following a customer request to suspend shipment due to a supplier quality concern
  因品質問題，應客戶要求暫緩零件發運。
- Production from new or modified tools (except perishable tools), dies, molds, patterns…etc.
  使用新工裝或修改工裝（除易損工裝），模具等，包括備用模具和更換模具。

第三章

(對應 ISO/TS 16969:2009 條文 - 8.2.3)

三、 Supplier Quality Statement of Requirements Vehicle Addendum
整車供應商品質聲明補充要求

3.1 Requirements 要求

3.1.1 Mean Shift of the Specifications

均值偏移

For all features Identified on a Component/Assembly GD&T, the combination of process capability (based on CP 1.67) and mean shift with CPK defined below must demonstrate parts to be within tolerance. If a mean shift exists that prevents a supplier from meeting part tolerances with CPK requirements below, tooling must be corrected to enable compliance to specification.

對於所有標注在部件 / 總成 GD&T 圖紙上的特性，無偏移的過程能力（基於 CP 1.67）和有均值偏移的過程能力 CPK 值必須達到零件在公差範圍內的水準。如果均值偏移導致供應商無法滿足下表的 CPK 要求，必須修模以滿足規範要求。

3.2 Capability 能力

For Key Product Characteristics (KPCs) and Product Quality Characteristics (PQCs), reference
GMW 15049 and AIAG PPAP Manual.
對 KPCs 和 PQCs 的要求可參見 GMW 15049 及 AIAG PPAP 手冊。

	6 Requirement	
	PPAP	On- going Production
KPC Special Characteristics / Extra Care	Cpk & Ppk ≥ 1.67 Full Approval Cp & Pp ≥ 1.67 Cpk & Ppk ≥ 1.33 Acceptable	Cp & Pp ≥ 1.67 Cpk & Ppk ≥ 1.67 Full Approval Cp & Pp ≥ 1.67 Cpk & Ppk ≥ 1.33 Acceptable
PQC Special Characteristics / Extra Care	Cp & Pp ≥ 1.67 Cpk & Ppk ≥ 1.0 Full Approval Cp & Pp >1.33 Cpk & Ppk ≥ 1.0 Acceptable	Must be within Specification
Standard Product Characteristics	One Sample checked, Must be within Specification	Must be within Specification

If during Product / Process development you believe there will be difficulty meeting the above capability, you MUST immediately notify your Supplier Quality Engineer (SQE) and develop a plan to assure compliance, modified Control Plan normally providing for 100% inspection, and/or obtain formal written approval to deviate from the capability requirements.
如果在產品 / 過程開發時認為很難達到上述能力要求時，必須儘快通知 SQE，並制定確保產品滿足要求的計畫、經修改的包含 100% 全檢的控制計畫和 / 或獲得允許偏離能力要求的書面批准。

第四章　第一至三節

(對應 ISO/TS 16969:2009 條文 - 7.1)

四、 Added special requirements for VAA (Value Added Assembly) Supplier
對 VAA (集成供貨) 供應商特殊補充要求

4.1 VAA supplier shall responsible for the consignment parts quality control.
VAA 供應商負責分裝零件的品質管制責任。

4.2 VAA supplier should have the Matching Process, do the matching and function validation according to the Matching Process and CVIS\DTS, and submit the information to SGM SQE and PE after first analysis and estimation to support to complete the evaluation and solution of advanced quality and function problem. VAA supplier should establish the audit process to check and validate the integration matching quality and function in launch phase.
VAA 供應商應建立尺寸評估流程，在新專案開發階段，按照尺寸評估流程並根據產品的 CVIS\DTS，對整個總成進行匹配及功能驗證，並進行問題初步分析和判定，將匹配、功能資訊及時傳遞給 SGM，SQE 和 PE，協助完成前期品質和功能問題的評估和解決。在新產品 LAUNCH 階段，建立產品 AUDIT 流程，評審、檢驗總成的匹配品質和功能。

4.3 During new program launch phase, any part quality and function problem of SGM purchasing parts should be alarmed by VAA supplier, and should be record to single issue list, which is the audit content of quality valve.
在新專案開發階段，VAA 供應商應將 SGM 採購零件的品質和功能問題及時提交 SGM 報警，並將此類零部件品質和功能問題列入單一問題清單，作為專案各品質閥的評審內容。

第四章　第四節

(對應 ISO/TS 16969:2009 條文 - 7.3)

4.4 Unless waived by SGM, the Value Added Assembler should participate the PPAP of the individual components, and is responsible for control of those within their facility.
除非 SGM 有另外規定，VAA 供應商需參與單個部件的 PPAP，並負責自己工廠內零件的 PPAP。

第四章　第十節

(對應 ISO/TS 16969:2009 條文 - 7.5.3)

4.10 VAA supplier should follow up the BP according to the continually change in program launch phase, do the FIFO well, and distinguish the different status with integration bar code or mark on integration. VAA supplier need to track all the integration quality problems on site in SGM as well.
對於專案開發階段零件不斷更改的狀況，VAA 供應商應跟蹤各階段的零件中斷點，做好先進先出，並 運用總成條碼或總成上點色標以區分不同零件狀態。VAA 供應商應在 SGM 現場跟蹤與總成相關的 所有品質問題。

第四章　第十一節

(對應 ISO/TS 16969:2009 條文 - 8.3)

4.11 The defects of those parts, which provided by SGM or pulled from local supplier by VAA supplier, should be counted by VAA supplier and reported to relevant SQE once a week. The statistical information should be sent to SGM VAC statistician monthly. Non-conformance parts must be disposed by VAA supplier daily in its plant and be distinguished if it will be charged to VAA supplier, or part suppliers, or be reworked. The above information should be collected and submitted to SGM SQE. Batch problem should be disposed and informed to SGM SQE intraday. SQE shall audit VAA supplier termly.
VAA 供應商需要對 SGM 提供的零件或 VAA 供應商自行拉動的零件進行缺陷統計，並每週向相關 SQE 通報、每月把統計資訊發送至 SGM 資料統計員 . VAA 供應商需要每天對其生產現場不合格零件進行處置，確定是工廢、料廢還是進行返工返修，並製成報表交相關 SQE。批量問題應當天及時處置並通知相關 SQE。SQE 定期對 VAA 供應商進行監督評審。

第六章

(對應 ISO/TS 16969:2009 條文 - 7.1)

六、 Supplemental Requirements to Overseas Design and Local Foot Print Supplier
對海外設計、國內生產供應商的特殊附加要求

6.1 Supplier APQP team shall include the personnel from its engineering and local plant. The local contact window to SGM shall be established. The assigned APQP project manager is nominated to take in charge the overall project, track the proceedings of engineering release, inputs specific product characteristics requirements of SGM, and is responsible for local construction, equipment installation and production readiness, holds program meeting and reviews the status with SGM PDT team on the timely basis.
供應商 APQP 專案小組必須包括海外設計人員和國內生產基地人員，國內生產基地必須設立與 SGM 業務相關的聯絡視窗，由國內生產基地 APQP 專案經理協調整體專案，跟蹤海外設計進度，輸入 SGM 的產品特殊要求，同時負責國內廠房、設備、生產準備。定期與 SGM PDT 小組召開專案會議，跟蹤 APQP 進度。

6.2 Supplier design engineer shall be involved onsite SGM PVV\NS\S build event, deep dive issue investigation in time to achieve the quick response and problem resolution, and initiate engineering changes where required.
供應商海外產品設計工程師必須現場參與 SGM PVV\NS\S 階段的生產裝車，及時幫助開展問題分析以快速解決零件發生的問題，並根據 SGM 裝車情況進行相應的設計更改。

6.3 Supplier design engineer and process engineer shall follow up build status and initiate engineering and process changes during the pre-pilot and PPAP phase.
在國內供應商處進行產品試生產和 PPAP 時，供應商海外產品設計工程師和工藝工程師必須在國內生產基地跟蹤生產狀況，及時根據現場情況進行必要的設計、工藝更改。

6.4 Fundamental resource and capability of local plant is expected for necessity changes on part dimension and tooling, to ensure the miss-matching appeared in regional build vehicle is resolved.
國內生產基地必須具備基本的人力資源和能力，為解決零件在整車上的匹配問題，進行必要的外形尺寸修改和相應的工裝更改。

6.5 The warranty claim will be delivered in form of PR&R by SGM, and the resolution with root cause shall be responded accordingly by Supplier design engineers.
對零件在售後發生的品質問題，SGM 將以 PR&R 形式回饋給供應商，供應商海外設計人員應及時分析根本原因，拿出解決方案。

第七章

(對應 ISO/TS 16969:2009 條文 - 8.3)

七、 Special Requirements to Supplier Repair Process
對供應商返修過程的特殊要求

7.1 SGM tier 1 supplier must have independent process.
SGM 一級供應商必須有獨立的返修流程。

7.2 SGM tier 1 supplier must have independent repair area, and parts in repair area must be well marked. Repair job must follow approved SOS/JIS, which must be confirmed by technique department, quality department and manufacture department.
SGM 一級供應商必須有獨立的返修區域；返修區域零件狀態需有明確標識；返修工作必須按照經過審批的返修作業指導書執行；返修作業指導書需經過供應商的技術部、品質部、製造部的共同確認。

7.3 As for repair of High risk part (including functional repair job /lots of /safety parts), whether the part supplied by tier 1 or sub-supplier, "Request Sheet for Repair Job" must be submitted by tier 1 supplier to related SGM PE/SQE/VQ for approval before repair. Repair Parts List should contain such information as part No/range of repair job /quantity/approved date etc for onsite audit.
對於高風險零件的返修（安全件 / 功能件 / 大批量返修），無論該零件來自于一級供應商或下級供應商，一級供應商必須遞交"供應商返修零件申請單"，經 SGM 相關 PE/SQE/VQ 共同確認後，返修方可進行。供應商現場應有返修零件清單，包含經 SGM 批准的返修零件號、返修範圍、數量、批准時間等，供現場審核。

7.4 Trier1 supplier should be responsible for sub-suppliers' repair process. If any influence or economic losses because of sub-suppliers' repair job, trier1 supplier will take the responsibility. Establish the back-feed and forward-feed system between tier1 and sub-suppliers to avoid and reduce repair risk.
SGM 一級供應商負責下級供應商的返修工作，因下級供應商返修造成 SGM 的損失，由一級供應商承擔。一級和二級供應商之間建立返修的前饋和後饋機制，共同規避返修風險。

7.5 If defective parts need to be sorted or repaired by the third party, the associated cost should be paid by supplier.
如缺陷零件需要由協力廠商進行篩選或返修，篩選或返修的相關費用由供應商承擔。

7.6 If defective parts or repaired parts need to be tested, the associated cost should be paid by supplier.
與缺陷件及返修件相關的測試費用由供應商承擔。

第十二章　第一節

(對應 ISO/TS 16969:2009 條文 - 7.3)

12.1 PTR Regulation: PTR 規定：

12.1.1 Part shall be successfully passed PTR before all new part after BP is shipped as normal to SGM.
所有的中斷點新零件在被供應商作為正常零件供給 SGM 之前，均必須已成功地通過 PTR 的實 施。

12.1.2PTR part shall be qualified, and can be assembled on SGM normal saleable vehicle.
供應商提供的 PTR 零件必須是合格的、可用于 SGM 正常可銷售車生產的零件。

12.1.3 Supplier shall deliver PTR part to SGM before BP.
供應商必須支援在新零件中斷點前向 SGM 提供 PTR 零件。

12.1.4 Supplier is responsible for PTR of sub-supplier’s part. Supplier should inform SQE the result at once for next action when PTR fails.
供應商有責任對 SGM 分供方零件狀態更改實施 PTR。如果 PTR 失敗，供應商必須在第一時間通知 SQE 工程師，以便採取後續措施。

第十五章

(對應 ISO/TS 16969:2009 條文 - 8.2.2)

十五、 Production and System Audit

產品與體系審核

15.1 Flying Audit: To ensure product consistency, SGM SQE have the right do product and process audit without prior notice in the case of suppliers, and follow GP-5 flow depending on the severity of the audit results.

飛行檢查：為確保產品的一致性，SGM SQE 有權利在不事先通知供應商的情況下，對供應商進行產品和過程突擊審核，審核結果視嚴重程度按 GP-5 進行操作。

15.2 During the start of production (including pre-launch/launch), based on suppliers' advanced production development and past supply performance, SGM may designate the third party to have 100% inspection of supplier's production at the supplier's, product launch warehouse (launch warehouse) and the third party's for high-risk parts or high-risk suppliers. If all products are qualified, SGM will pay related costs; if nonconformance is found in the inspection, all associated costs should be paid by suppliers.

在生產啟動階段（包括 pre-launch/launch），根據供應商產品前期開發情況和以往供貨表現，對於高風險零件或高風險的供應商， SGM 可以指定第三方，在供應商處、生產啟動倉庫（launch warehouse）、或協力廠商處，對供應商供貨的產品進行 100％檢驗。如果所有產品檢 驗合格，由 SGM 支付相關費用；如果檢驗發現不合格品，則所有相關費用由供應商支付。

15.3 According to the supplier's past quality performance, SGM may designate the third party to do 100% inspection of the supplier's products for high-risk parts or high-risk suppliers, and / or have supplier's quality system audit (including initial time and in volume time of supply).

根據供應商的以往品質表現，對於高風險零件或高風險的供應商，SGM 可以指定協力廠商，對供應商供貨的產品進行 100％檢驗，或 / 和對供應商的品質體系進行審查（包括供貨初期和批量供 貨期間）。

15.2.1 For the production audit, if all products are qualified as a result of 100% test, SGM will pay related costs; if nonconformance is found in the tests, all associated costs should be paid by suppliers.
對產品審核，如果 100％檢驗結果所有產品檢驗合格，由 SGM 支付相關費用；如果檢驗發現不合格品，則所有相關費用由供應商支付。

15.2.2 For the system audit, if no major nonconformance or other quality Spills are found during the supplier quality system audit, audit fees will be paid by the SGM. If the audit found major nonconformance or other quality spills (such as changing the materials, subcontractor, processing and checking standard without approval, etc.), the related audit fees should be paid by suppliers.
對體系審核，如果對供應商的品質體系審核未發現重大不合格或其他重大問題，審核費用由 SGM 支付。如果審核發現供應商存在重大不合格或其他重大問題（如擅自更改原材料，擅自更改分供方，擅自對過程、工藝作出重大更改等），則相關審核費用由供 應商支付。

15.4 Referring to supplier repair process, SGM relevant department or designated third party will carry out audit aperiodically according to supplier’s actual repair implementation situation. If any serious problem found, GP-5 process will be applied and the relevant cost should be paid by suppliers.
針對供應商返修過程，SGM 相關部門或指定協力廠商，不定期對供應商返修流程以及實際實施情況進行審核。審核中如發現重大問題，進入 GP-5 流程，相關審核費用由供應商支付。

15.5 For parts after PPAP approval, SGM have the rights to spot check aperiodically. Parts for test are provided by suppliers, and sampling methods are decided by SGM. If test results can't meet engineering specifications, all associated testing costs should be paid by suppliers.
對已經獲得 PPAP 批准的零件，SGM 保留不定期入庫抽檢的權利。試驗零件由供應商提供，抽樣方式由 SGM 決定。如試驗結果不滿足工程規範要求，則試驗的相關費用由供應商支付。

第十七章

(對應 ISO/TS 16969:2009 條文 - 8.2.1)

十七、 New Business Hold

停止新業務

SGM decides whether apply New Business Hold Process based on supplier's performance of CS, customer satisfaction PRR, the certificate validity of ISO/TS 16949 and promises fulfillment.

SGM 根據供應商的受控發運、顧客滿意 PRR、ISO/TS 16949 證書的時效性及承諾書的履行等表現決定是否停止其新業務。

第十八章

(對應 ISO/TS 16969:2009 條文 - 8.2.1)

十八、 Yearly Excellence Supplier Evaluation

年度優秀供應商評選

18.1 Quality system and quality performance: ISO/TS16949 certification status, internal audit and process audit result, process stability, continual improvement, KPC, PPM, PR&R, CS, Downtime and other quality data; Respond for Quality: Project management and project development capability, subcontractor management; Quality cost analysis and development, measurement gage and lab management.

品質體系和品質表現： ISO/TS16949 認證情況，體系運作效果和效率，內審和過程審核情況，過程穩定性，持續改進工作，KPC 能力，PPM，PR&R，受控發運，停線時間和其它品質指標；品質方面的回應；專案管理和專案開發的能力，分供方管理；品質成本分析和改進，測量器具和試驗室管理。

2.5 長安福特汽車有限公司

長安福特在 TS 16949 : 2009 條文的基礎上額外的客戶特殊要求 (CSR) 明細 (以下資料節錄自 Ford Motor Company Customer-Specific Requirements) :

第四章 第三節

(對應 ISO/TS 16969:2009 條文 - 4.2.4)

4.3 Control of Records (ISO/TS 16949 cl. 4.2.4)

Part Approval and contracts

Production part approvals, tooling records, purchase orders and amendments shall be maintained for the length of time that the part (or family of parts) is active for production and service requirements plus one calendar year unless otherwise specified by Ford Motor Company (see Definitions, 3.1).

This requirement applies to all details of part approvals, tooling records, Purchase Orders, etc., not just the cover pages.

Inspection and Measurement Records

Records of inspection shall be maintained for each customer specification, unless waived in writing by STA. The actual test result (variable or attribute) shall be recorded. Simple pass/fail records of inspection are not acceptable for variable measurements.

Production inspection and test records (e.g. control charts, inspection and test results) shall be retained for one calendar year after the year in which they were created.

Audits

Records of internal quality system audits and management review shall be retained for three years.

APQP

The organization shall maintain the final External Supplier APQP/PPAP Readiness Assessment (Schedule A) for the life of the part (production and service) plus one year as part of the PPAP record.

Retention periods longer than those specified above may be specified by an organization in its procedures.
Specified retention requirements may be revised at the direction of Ford Motor Company Office of General Counsel.
These requirements do not supersede any regulatory requirements.

第四章　第四節

(對應 ISO/TS 16969:2009 條文 - 5.2, 8.2.4, 8.5.1)

4.4 Customer focus (ISO/TS 16949 cl. 5.2, 8.2.4, 8.5.1)
The organization shall demonstrate enhanced customer satisfaction by meeting the continuous improvement requirements of Q1, as demonstrated in the organization's QOS (Quality Operating System).
The organization shall implement a Quality Operating System as specified in the Q1 Manufacturing Site Assessment available through https://web.qpr.ford.com/sta/Q1.html .

第四章　第五節

(對應 ISO/TS 16969:2009 條文 - 5.5.2.1)

4.5 Customer Representative (ISO/TS 16949 cl. 5.5.2.1)
The organization shall notify Ford Motor Company Supplier Technical Assistance in writing within 10 working days of any changes to senior management responsible for Quality or company ownership.

12家內地整車廠之客戶特殊特性(CSR)明細

第四章　第六節

(對應 ISO/TS 16969:2009 條文 - 5.1, 5.6)

4.6 Management Review (ISO/TS 16949 cl 5.6, 5.1)

The organization management shall hold monthly QOS (Quality Operating System) performance meetings as specified in the Q1 Manufacturing Site Assessment available on https://web.qpr.ford.com/sta/Q1.html . The results of these QOS reviews shall be integral to the senior management reviews.

Note: the frequency of the Manufacturing Site Assessments is specified by the Q1 requirements, available on https://web.qpr.ford.com/sta/Q1.html .

Note: the management review need not be held as one meeting, but may be a series of meetings, covering each of the metrics monthly.

第四章　第八節

(對應 ISO/TS 16969:2009 條文 - 6.2.2.2, 6.2.2.3, 6.2.2.4)

4.8 Training (ISO/TS 16949 cl. 6.2.2.2, 6.2.2.3, 6.2.2.4)

The organization shall ensure that only trained and qualified personnel are involved in all aspects of the manufacture or design (as appropriate) of Ford Motor Company product (new and existing). The training shall include the appropriate Ford systems.

Ford training opportunities are available through Ford Supplier Learning Institute https://fsp.covisint.com log into Ford Supplier Portal and then go to the Ford Supplier Learning Institute (FSLI) application. Additional training is available through https://web.lean.ford.com/cqdc/default.asp

Personnel are to be trained to the current processes and requirements, e.g. trained to the published version of process requirements. Records of training are to be maintained for 3 years from the date of the training.

第四章　第九節

(對應 ISO/TS 16969:2009 條文 - 6.2.2.2, 6.3.1, 6.2.2, 6.2.2.1)

4.9 Resources (ISO/TS 16949 cl. 6.2.2.2, 6.3.1, 6.2.2, 6.2.2.1)

When considering a request for quote, the organization must account for and be able to apply all necessary resources (trained personnel and equipment) to complete the purchase requirements to Ford's satisfaction.

第四章　第十一節

(對應 ISO/TS 16969:2009 條文 - 6.3.2)

4.11 Contingency Plans (ISO/TS cl 6.3.2)

The Organization shall notify the Ford receiving plant, the buyer and the STA engineer within 24 hours of organization production interruption. The nature of the problem shall be communicated to Ford and immediate actions taken to assure supply of product to Ford.

Note: production interruption is defined as an inability to meet the Ford specified production capacity volume.

第四章　第十二節

(對應 ISO/TS 16969:2009 條文 - 7.1, 7.3.1, 4.2.1d, 7.3.4.1, 5.4.1, 5.4.2)

4.12 Planning of Product Realization (ISO/TS 16949 cl. 7.1, 7.3.1, 4.2.1d, 7.3.4.1, 5.4.1, 5.4.2)

Statement of Work

Appropriate to the supplier's responsibilities, the organization shall meet the requirements of the Statement of Work(s). There may be an Engineering Statement of Work (available from the Ford Product Development Engineer), an Assembly Statement of Work, a Manufacturing Statement of Work or other types available from the appropriate Ford organization. See the Global Product Development System (GPDS) for specific timing.

APQP

The External Supplier APQP/PPAP Readiness Assessment (Schedule A) is available through https://web.qpr.ford.com/sta/APQP.html

The organization shall submit completed Schedule As as specified in the Schedule A notification letter for each program (monthly and after any significant change in APQP status). This applies to priority and non-priority suppliers, see Supplier Engagement Process on https://web.qpr.ford.com/sta/GPDSSupplierEngagement.html .

Even if the Supplier has not received a Schedule A notification letter for a program, but has New Tooled End Items (NTEIs) for a Ford program launch, the Supplier is still required to complete a Schedule A for each program milestone for all NTEIs and retain the final Schedule A in the PPAP file for the life of part (production and service) plus one year.

Prototypes

When the organization is also sourced with the production of prototypes, effective use should be made of data from prototype fabrication to plan the production process. The organization records the dimensional data per the Prototype Build Control Plan, reviews the measured characteristics with Ford PD Engineer and obtains approval on the results from the Ford PD Engineer with confirmed acceptance of parts. If prototype parts are not fully compliant to specification, Ford PD Engineering can approve use of the part with a WERS Alert.

The APQP/PPAP Evidence Workbook should be used to record prototype part data for Ford PD review. The APQP/PPAP Evidence Workbook is available through https://web.qpr.ford.com/sta/APQP.html .

Prototype Tooling

Within 30 days of Production Verification (PPAP Phase 2) completion the organization shall i) complete the "Prototype Disposal Request" form, which can be btained through a request to fordtool@ford.com; and ii) submit the completed form to D&R supervisor for signature concurrence; iii) submit signed form to fordtool@ford.com for processing

第四章　第十九節

(對應 ISO/TS 16969:2009 條文 - 7.3.1, 7.3.6.1, 7.3.4)

4.19 Design and Development Review (ISO/TS 16949 cl. 7.3.4, 7.3.1, 7.3.6.1)

The organization shall use GPDS (Global Product Development System) when reviewing product design and development stages. Information on GPDS is available through FSP (Ford Supplier Portal https://fsp.covisint.com) log into Ford Supplier Portal and then go to the Ford Supplier Learning Institute (FSLI) application.

Product Development

For Inverted Delta (▼) parts, design responsible suppliers shall include Ford Engineering and Assembly / Manufacturing in GPDS milestone design reviews, as appropriate.

Where feasible, design responsible suppliers shall include Ford Engineering and Ford Assembly and/or Manufacturing in design reviews for all Ford parts.

第四章　第二十節

(對應 ISO/TS 16969:2009 條文 - 7.3.5)

4.20 Design and Development Verification (ISO/TS 16949 cl. 7.3.5)

The organization shall perform Design Verification (DV) to show conformance to the appropriate Ford Engineering requirements: Attribute Requirements List (ARL) and System Design Specification (SDS). Design verification methods shall be recorded with the test results and submitted to Ford Product Engineering for approval.

For organizations responsible for component level Design Verification (DV) testing, the organization shall have a documented Design Verification Plan and Report (DVP&R) that includes supplier/sub-tier supplier and Ford responsible test(s) as applicable. The supplier provides evidence of successful completion on all component level DV testing on the DVP&R. All tests and results must be approved by the Ford PD engineer. These requirements apply

to all suppliers; regardless of the supplier's or part's PPAP submission level or design responsibility.
ARLs and SDSs are available from Ford Product Engineering.

第四章　第二十三節

(對應 ISO/TS 16969:2009 條文 - 7.4.1.1)

4.23 Statutory and Regulatory Conformity (ISO/TS 16949 cl. 7.4.1.1)
Applicable regulations shall include international requirements for export vehicles as specified by Ford Motor Company, e.g. plastic part marking (E-4 drafting standard - WSS-M99P9999-A1 and European End of Life of Vehicle (ELV) - available on FSP (Ford Supplier Portal https://fsp.covisint.com)..
Material reporting requirements for ELV are specified by WSS-M99P9999-A1 under "Important Documents".

第四章　第二十四節

(對應 ISO/TS 16969:2009 條文 - 7.4.1.2)

4.24 Supplier Quality Management System Development (ISO/TS 169497.4.1.2)
"Goal of supplier conformity with [ISO/TS 16949]" may be met by either of the following:

- Sub-tier suppliers to achieve accredited third party certification to ISO/TS 16949, or the current version of ISO 9000.
- Successful assessments of the Sub-tier suppliers by an STA approved 2nd party auditor. The frequency of these reviews shall be appropriate to the sub-tier supplier impact on customer satisfaction.
  Details of sub-tier supplier development assessments acceptable to Ford are available on https://web.qpr.ford.com/sta/ISO_TS_16949_supplier_development.pdf under " Ford letter authorizing Tier 1 suppliers to audit sub-tier suppliers in support of ISO/TS 16949 7.4.1.2 "

Sub-tier supplier quality management system requirements

- Where a sub-tier supplier is not third party certified to ISO/TS 16949, Ford reserves the right to require the organization to ensure sub-tier supplier compliance with the "Minimum Automotive Quality Management System Requirements for Sub-tier Suppliers" identified in 2.20 of this document. Evidence of effectiveness shall be based on having a defined process and implementation of the process including measurement and monitoring.
- Where any organization has sub-tier suppliers not third party certified to ISO/TS 16949, the organization is encouraged to require sub-tier supplier compliance with the "Minimum Automotive Quality Management System Requirements for Sub-tier Suppliers" identified in 2.20 of this document.
  Ford or supplier second party assessment or third party certification of sub-tier suppliers does not relieve the organization of full responsibility for the quality of supplied product from the sub-tier supplier (including Ford-directed sub-tier suppliers without a Multi-Party Agreement).
  Although all sub-tier suppliers must be assessed per this section, sub-tier supplier improvement efforts shall focus on those sub-tier suppliers with the highest impact on Supplier Improvement Metrics (SIM). Upon request, the organization shall make available to Ford a list of its sub-tier suppliers. The sub-tier supplier list shall be updated at least twice annually.

Sub-tier supplier Management Process

Organizations are encouraged to apply the principles outlined in "CQI-19 AIAG Sub-tier Supplier Management Process Guideline" to all their sub-tier suppliers.

Additionally, Ford reserves the right to require the organization to apply the principles outlined in "CQI-19 AIAG Sub-tier Supplier Management Process Guideline" to address issues identified in the organization's supplier development and management process. Ford will communicate the requirement to apply CQI-19 to the specifically selected organization(s) based on sub-tier supplier management issues attributed to the organization. Evidence of effectiveness shall be based on having a defined process and implementation of the process including measurement and monitoring.

Critical Characteristic Controls at the sub-tier suppliers
For Critical Characteristics, the responsible organization ensures that sub-tier suppliers have controls in place to prevent shipment of non-conforming product at the location where the associated physical characteristics are manufactured by sub-tier suppliers. The sub-tier supplier controls for the Critical Characteristics are identified by the organization in the APQP/PPAP Evidence Workbook. This also applies to Ford-directed sub-tier suppliers without a Multi-Party Agreement.

第四章　第二十六節

(對應 ISO/TS 16969:2009 條文 - 7.4.3.1)

4.26 Incoming Product Conformity to Requirements (ISO/TS 16949 cl. 7.4.3.1)
The organization shall have incoming quality measures and shall use those measures as key indicators of sub-tier supplier quality management.
Any incoming quality inspection shall be commensurate with the risk and quality impact of each sub-tier supplier.
Refer to the Q1 Manufacturing Site Assessment requirements.
Note: "measures" include chemical, dimensional, certifications, and electrical measurements. The organization may add other parameters as appropriate.

第四章　第二十七節

(對應 ISO/TS 16969:2009 條文 - 7.4.3.2)

4.27 Supplier Monitoring (ISO/TS 16949 cl. 7.4.3.2)
In support of Ford's expectation of 100% on-time delivery, the organization shall also require 100% on-time delivery from sub-tier suppliers. Any delay / risk should be communicated to the affected Ford customer.
Any premium freight expenses related to sub-tier suppliers for late deliveries should be monitored and shall be minimized.
These also apply to Ford-directed sub-tier suppliers without a Multi-Party Agreement.

第四章　第三十二節

(對應 ISO/TS 16969:2009 條文 - 7.6.1)

4.32 Measurement Systems Analysis (ISO/TS 16949 cl. 7.6.1)

Gauging requirements

All gauges used for checking Ford components/parts per the control plan shall have a gauge R&R performed in accordance with the appropriate methods described by the latest AIAG Measurement Systems Analysis Manual (MSA) to determine measurement system variability. The Gauge R&R is to be completed using Ford parts.

The control plan identifies which gauges are used for each measurement.

Any measurement equipment not meeting the MSA guidelines must be approved by STA.

Family of gauges

Where multiple gauges of the same make, model, size, method of use and application (including range of use) are implemented for the same part, use of a single gauge R&R covering those multiple gauges (family of gauges) requires STA approval.

Parts and operators for Gauge R&R studies

The production operators that are expected to use the gauge must participate in the MSA studies.

At a minimum:

Variable gauge studies should utilize a minimum of 10 parts, 3 operators and 3 trials. Attribute gauge studies should utilize a minimum of 50 parts, 3 operators, 3 trials. See the Ford PPAP customer specifics for details on attribute gauge measurement systems analysis requirements https://web.qpr.ford.com/sta/Ford_Specifics_for_PPAP.pdf

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第四章　第三十二節

(對應 ISO/TS 16969:2009 條文 - 7.6.3, 7.6.3.2)

4.33 Laboratory Requirements (ISO/TS 16949 cl. 7.6.3, 7.6.3.2)

Commercial/independent laboratory facilities shall be approved by the organization prior to use. The acceptance criteria should be based on the latest ISO/IEC 17025 (or national equivalent), and shall be documented.

Accreditation to ISO/IEC 17025 or national equivalent is not required.

第四章　第三十五節

(對應 ISO/TS 16969:2009 條文 - 8.2.1)

4.35 Monitoring and Measurement (ISO/TS 16949 8.2.1)

The pre-launch Control Plan defines the data collected prior to Production. The Production Control Plan defines the data collected during mass production.

Ford reserves the right to request the data collected by the organization as defined in either the pre-launch or production Control Plans.

第四章　第三十七節

(對應 ISO/TS 16969:2009 條文 - 8.2.2)

4.37 Internal Audit (ISO/TS 16949 cl. 8.2.2)

The internal audits shall review all the organization's identified processes (per 4.1a of ISO/TS 16949). This review shall be conducted at least annually.

Internal Auditor Qualifications

Internal quality management system auditors shall be qualified as stated below.

- Be trained and evaluated in the following areas:
  - The Technical Specification ISO/TS 16949
  - Related core tools (e.g. APQP, SPC, MSA, FMEA, PPAP)
  - Applicable customer-specific requirements, and
  - The automotive process approach to auditing.

And, as part of the training, participates in practice sessions equivalent to one audit day in:

- Case study audits, and/or
- Auditing role plays/simulations, and/or
- On-site audits

Note: Core tools and customer specifics can be taught by company or industry recognized experts/specialists.

- Or, have conducted at least 5 internal ISO/TS 16949 internal audits during the prior 24 months under the supervision of an auditor trained as specified in the section above. The audits will need to have covered all requirements of the technical specification and all processes directly impacting Ford part quality at least once over the 5 or more audits.

Internal Auditor Trainer Qualifications

- The training listed above shall be conducted by trainer(s) who have themselves successfully met the requirements of this section.
- Process and Product audits may be conducted by appropriate process specialists from the affected areas without full quality management auditor training.

第四章　第三十九節

(對應 ISO/TS 16969:2009 條文 - 8.2.3.1, 7.1.2, 7.5, 7.5.2)

4.39 Monitoring and Measurement of Manufacturing Processes
(ISO/TS 16949 cl. 8.2.3.1, 7.1.2, 7.5, 7.5.2)

Table A of this document details the on-going process capability requirements.

All process controls shall have a goal of reduction of variability, using 6-sigma or other appropriate methods.

The Statistical Process Control Manual in 2.11 of this document provides additional guidance where tool wear impacts variability.

All process metrics are to be traceable to Ford requirements.

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第四章　第四十節

(對應 ISO/TS 16969:2009 條文 - 8.2.4, 8.3.4)

4.40 Monitoring and Measurement of Product (ISO/TS 16949 cl. 8.2.4, 8.3.4)

Ford reserves the right to require the use of an independent third party inspector to ensure that only compliant product is shipped to Ford facilities.

第四章　第四十三節

(對應 ISO/TS 16969:2009 條文 - 8.3, 8.5.2, 8.5.3)

4.43 Control of Nonconforming Product (ISO/TS 16949 cl. 8.3, 8.5.2, 8.5.3)

The organization shall have processes and systems in place to prevent shipment of non-conforming product to any Ford Motor Company facility.

Any non-conforming product or process output should be analyzed using the 8D methodology to ensure root cause correction and problem prevention.

Customer Concerns

Organizations shall respond to Quality Rejects (QRs) by:

Note: The clock starts once the notification has been sent to the organization

- Responding in 24 hours
- Implementing containment in the Ford plant. The supplier and/or third party must follow local procedures and site rules while carrying out containment.
- Providing certified stock
- Delivering an 8D, beginning with Symptom and Emergency Response Actions (D0) through Interim Containment Actions (D3)
- Within 48 hours of notification by the Ford plant, notify Ford Service, if the quality issue is suspected of affecting any FCSD shipments
- Within 15 calendar days delivering the 8D or (six sigma) 6 panel with preliminary or verified root cause, and a plan to implement corrective and preventive actions with supporting data

A summary of the Quality Reject Process for North America is available through https://web.qpr.ford.com/sta/QR2NA.htm

Returned Product Test/Analysis

The organization shall have a documented system for internal notification, analysis and communication of all Ford plant returns and warranty returned parts. The organization shall communicate the results of analysis to the responsible Ford and organization work groups and include the results in the associated 8D report.

Ford plant PPM (Parts Per Million) shall be communicated to all organization plant team members.

The organization shall develop a system to monitor Ford plant and warranty concerns. The organization shall also implement corrective actions to prevent future Ford plant and warranty concerns.

Returned product test results are to be included in the monthly QOS report as part of the Management Review.

第四章　第四十四節

(對應 ISO/TS 16969:2009 條文 - 8.3.4)

4.44 Customer Waiver (ISO/TS 16949 cl. 8.3.4)

Ford Motor Company authorization of product differing from Ford specifications is managed by Worldwide Engineering Release System (WERS) , limited to the quantity of parts or time period approved in the WERS Alert. This is applicable to both prototype and production level parts.

PPAP submission and Interim PSW acceptance are required for production use of parts with a WERS Alert.

Alerts must contain the following:

- The specific PPAP requirements that are not completed
- The modified specifications(s) that the part satisfies
- The justification why the modified specification(s) is acceptable
- The containment plan to assure the quality of parts (e.g. extraordinary controls / inspection process / robust measurement systems)
- The period (typically in terms of days), the number of parts and the specific launch build event for which the Alert is effective

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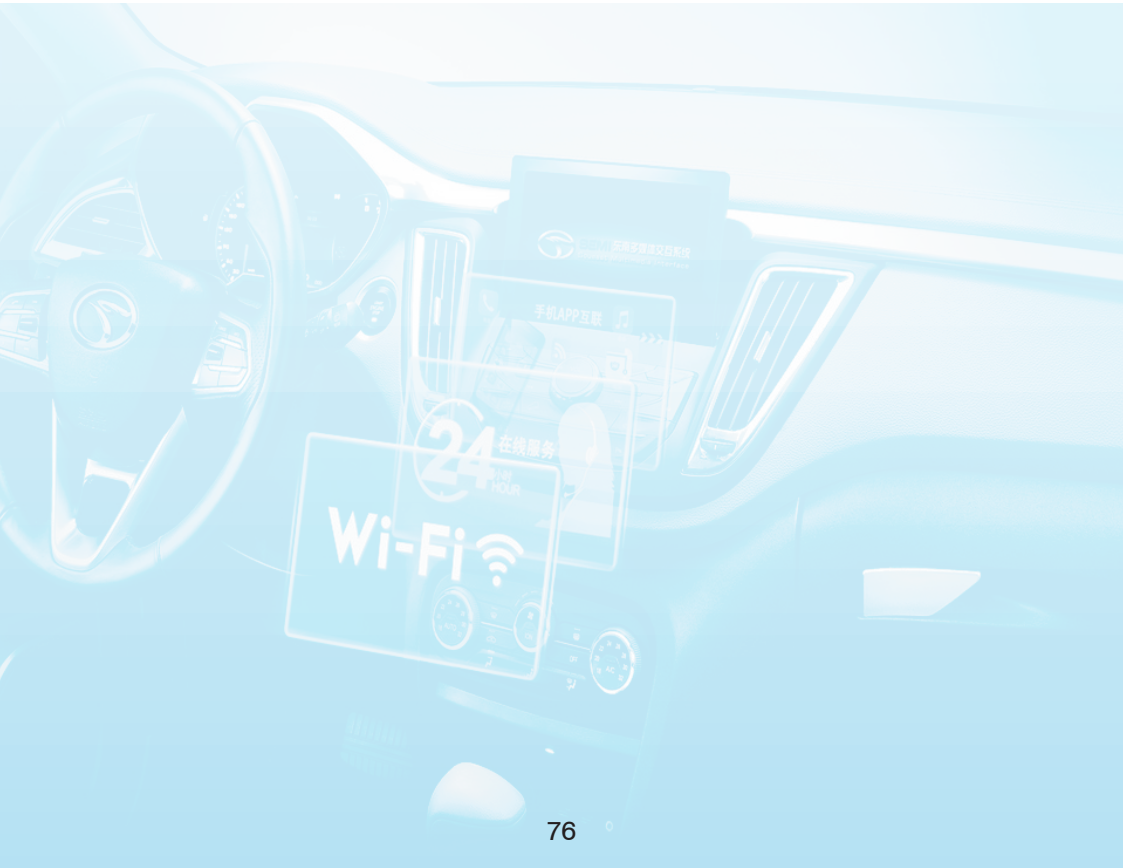
The WERS help desk can provide information on WERS via email:
hwers@ford.com
WERS training is available through http://www.computerconfidenceinc.com/



2.6 長城汽車股份有限公司

長城汽車在 TS 16949 : 2009 條文的基礎上額外的客戶特殊要求 (CSR) 明細 (以下資料節錄自「供應商質量保證手冊」) :

第 1- 2 章　第三節

(對應 ISO/TS 16969:2009 條文 - 4.2.4, 5.2, 7.1.4)

3 要求

供應商應關注安全和環境要求，確保所有發往長城公司的零部件滿足長城公司設計要求的結構、功能、性能要求。關於化學添加物，供應商有責任確保所有零部件符合長城公司的環保要求（相關要求見本章節 1-10）。

3.1 依據變更後要求執行（不包含化學添加物相關件）

3.1.1 適用性確認

- 供應商應使用證實更新後的圖紙（附規格要求）並保證已經得到實施；
- 除長城公司提供的信息外，供應商可從政府部門、海外附屬機構、外部相關組織，收集關於安全和環境的信息並證實提供給長城公司的零部件滿足變更要求。

3.1.2 變更要求的傳遞

供應商應確認對零部件和分供方的變更要求，需要時，需將此類變更逐一通知相關供應商。

3.1.3 變更實施的提升

為滿足變更後的要求，供應商應針對變更信息對零部件的適用性，決定並採取以下適當措施 :

- 保證自己設計開發的零部件變更獲得批准並得到實施（若長城公司提出，需出示或提交變更批准的實施計劃）；
- 按規則實施的聲明（若長城公司提出，需出示或提交變更實施報告和證明）；
- 與長城公司溝通任何會影響已獲批准的變更實施計劃、報告或證書的相關信息；
- 提升製造工藝、檢驗方法和質量管理體系；
- 安裝生產設備和檢驗設施。

第 1- 3 章　第三節

(對應 ISO/TS 16969:2009 條文 - 5.5.2, 7.2.1)

3 要求

供應商指定有資質人員承擔以下要求的責任，管理影響長城公司產品質量的相關操作，並負責與長城公司聯繫。

3.1 職責

質量保證代表由行政管理者級別人員擔任，供應商負責在公司範圍內開展質量保證活動，負責以下關於質量的要求：

- 參加長城公司組織的供應商質量會議；
- 遵循長城公司要求，實施公司內質量提升活動；
- 接收長城公司簽發的供應商質量手冊，並在公司範圍內實施手冊要求；
- 作為代表參加長城公司組織的供應商質量常規審核；
- 代表公司或長城公司要求公司級別溝通時，保持與長城公司聯繫。

3.2 任命質量代表

3.2.1 初期任命

供應商應向長城公司提交“供應商質量代表任命書”，格式見本手冊附表。

3.2.2 “供應商質量代表任命書”中接口人或人員信息變更

“供應商質量代表任命書”中接口人變更或人員信息發生變更，供應商應立即將變更信息通知長城公司、修改“供應商質量代表任命書”並提交長城公司。

第 1- 4 章　第三節

(對應 ISO/TS 16969:2009 條文 - 4.2.4)

3 要求

3.1 供應商檔案建立

供應商在通過長城公司潛在供應商審核後，須同時按以下要求提交相關資料至配套採購本部項目工程師建立供應商檔案：（※ 為必須提交的資料）

- 企業營業執照、稅務登記證、組織機構代碼證正副本清晰彩色掃描件。 ※

- 《供應商調查表》。※
- 質量體系和環境體系（化工類廠家必須有）認證證書清晰彩色掃描件。※
- 職業健康安全管理體系認證證書清晰彩色掃描件。
- “CCC”認證資料清晰掃描件（國家法規要求部分零部件）。
- 滿足歐盟法規有毒有害物質達標試驗報告清晰掃描件。
- 陽光協議清晰彩色掃描件。

注：如無明確説明，提交至長城公司的資料均為中文版本。

第 1- 7 章　第二至三節

（對應 ISO/TS 16969:2009 條文 - 7.1.3）

2 術語定義

2.1 供應商關係管理系統（Supplier Relationship Management，簡稱 SRM）

供應商關係管理系統（SRM）是用來改善企業與其供應商之間的關係，致力於實現與供應商建立和維持長久、緊密夥伴關係的管理思想和軟件技術的解決方案。 SRM 系統是長城公司與供應商之間的信息交互及業務開展的支撐平台，通過此平台與供應商進行雙向交流，加強信息的傳輸速度和實效，以及公司和供應商的溝通效率，實現信息化管理，目前已實現信息協同、績效評估、質量交付問題庫、工程變更、樣件訂單、開發計劃、詢報價、物流信息管理等功能。是長城公司與供應商交流的唯一平台。

2.2 供應商信息平台（Supplier Information Portal，簡稱 SIP）

供應商信息平台（SIP）是供應商關係管理系統（SRM）的重要組成部分，是供應商端使用的應用平台，具有臨時賬號建立、信息外部展現等功能。

3 要求

3.1 SIP 平台賬號建立

供應商添加到 SRM 系統中後，在 SIP 平台中將自動生成供應商的 SIP 平台登陸賬號及密碼，供應商首次登陸 SIP 平台應對登陸密碼進行修改，若供應商用戶密碼遺失應及時聯繫配套採購本部，配套採購本部對該賬戶進行密碼重置。

3.2 SIP 平台的使用

SIP 平台具體的操做方法詳見《供應商信息門戶用戶手冊》。

3.3 信息協同

與供應商進行信息交互，將日常或重要信息通過信息協同中的郵件或通知公告發送給供應商，供應商應每天登陸 SIP 平台瀏覽信息協同中的信息，對其進行確認，並按信息的內容執行。

第 1- 7 章　第四節

(對應 ISO/TS 16969:2009 條文 - 7.1.4)

4.6 工程變更管理

4.6.1 供應商提出的變更

供應商若有變更需求時，在 SIP 平台中提交相應的變更申請，若變更評審通過，供應商接收主責部門回　的變更通知後進行回執。樣件到貨前，供應商在 SIP 平台中將發貨通知發布至主責部門處。主責部門負責在 SRM 系統中記錄樣件的試裝及切換信息，切換完畢後變更記錄歸檔。若變更評審不通過，主責部門負責將評審結果發送至供應商處。

4.6.2 長城公司提出的變更

申請部門負責將變更通知發送至供應商處，供應商接收變更通知後在 SIP 平台中進行回執，樣件到貨前供應商在 SIP 平台中將發貨通知發布至變更申請部門，申請部門需在 SRM 系統中記錄樣件的試裝及切換信息，切換完畢後變更記錄歸檔。

第 1- 11 章　第三節

(對應 ISO/TS 16969:2009 條文 - 8.2.2)

3.1 要求

3.1.1 供應商應接受長城公司實施的質量審核。

3.1.2 供應商應按照長城公司的要求積極進行內部審核，並保證外部審核的順利開展。

3.1.3 供應商內部過程審核頻率應為每半年至少一次；原則上產品審核每種產品應每季度至少一次，在項目開發的每個節點上應至少進行一

次階段審核。

3.1.4 供應商審核員應具備從事審核活動所需的專業技術能力，並具備良好的溝通協調能力。

3.2 審核類別、時機、目的及審核用表

審核類別		審核時機	審核目的	審核表
體系審核	潛在供應商評價	新項目啟動 B 角新供應商開發	驗證供應商質量保證能力，評價其是否可以作為潛在合格供應商開發產品	體系審核報告
供應商開發階段審核		產品開發階段	確認產品開發進度，降低產品開發風險	出差報告或 8D
質量驅動審核		供貨 / 質量風險業績評價處置	查找質量問題發生真因，解決質量問題，降低開發風險	
過程 / 產品審核	PPAP 審核	供應商小批量生產期間	新產品開發過程的全面確認與重要工序鑑定	過程審核表
	供應商 4M 變更審核	供應商重要 4M 變更	驗證 4M 變更後，批量產品質量保證能力	
	年度審核	年度業績評價後	提升供貨業績不佳供應商質量保證能力	

第 1- 12 章　第三節

(對應 ISO/TS 16969:2009 條文 - 5.4.1, 5.4.2, 7.2.1)

3 要求

3.1 質量目標

供應商應承諾所供各車型或具體零部件的質量目標，並簽訂至《配套產品採購合同》附件 B《質量保證協議》中。

3.2 考核信息

PPM 信息：供應商應每日登陸 SIP 平台，查詢問題記錄，保證問題能及時得到解決或申訴，長城公司各信息收集部門每日會將質量問題記錄錄入至 SRM 系統；

IPTV 信息：供應商應每日登陸售後卓越系統，查詢維修明細，保證故障件能夠及時返廠並加以分析、申訴。

供應商應每月完成總結分析報告（PPM、IPTV）包括拆解分析報告，於次月第 5 個工作日前提交至長城汽車各事業部主責部門。

3.3 考核結果

長城公司每月匯總核算上月各車型或具體零部件的質量目標達成結果，每月 17 日前將《質量考核達成及處置通知單》通過 SIP 平台下發至供應商。

第 1- 16 章　第三節

(對應 ISO/TS 16969:2009 條文 - 6.4)

3 要求

3.1 總體要求

3.1.1 供應商應按照長城公司圖紙上標註清潔度的污染物的質量和顆粒度等標準，應策劃並對於造成零部件污染物進行控制。未在圖紙上標註但由於特殊要求需控制污染物的零部件，供應商也應予以控制。

3.1.2 供應商應按照長城公司的要求和自身特點，建立規範的清潔度控制要求和檢驗標準，在整個生產及檢驗環節實施，並留存相應的記錄。

3.1.3 供應商應建立專門的清潔度實驗室，應對室內降塵量進行監控，用於驗證生產過程對清潔度的控制。

3.1.4 對三類污染物重點控制：金屬顆粒、非金屬雜質、纖維物。

3.1.5 總成零部件採取解體至最小不可分割單元進行污染物控制。

3.1.6 零部件清潔度包含零部件的所有工作表面。

第 3 章　第三節

(對應 ISO/TS 16969:2009 條文 - 7.2.2)

3.2 供應商在接收到長城公司《詢價函》後，按《配套產品報價表》要求進行報價，同時填寫《報價承諾書》作為定廠及後期供應商現場審核的依據。《報價承諾書》包含以下幾方面內容：

- 產品開發計劃：開發週期、開發里程碑計劃等；
- 產品平台化情況：是否為成熟平台、平台應用到主流車型及月供量等；

- 生產線體應用情況：生產線關鍵設備名稱、生產廠家、自動化程度及防錯應用情況等；
- 模具情況：模具供應商名稱、模具開發類別、開發週期、模具產值、開發主流車型、模具材質與壽命等；
- 失效預防：長城公司以往產品及所供合資品牌產品失效模式、失效原因、預防措施、排查情況等；
- 試驗驗證：試驗項目、試驗條件、試驗設備、試驗標準等；
- 原材料及核心零部件情況：產品自製情況、採購週期、外包情況等；
- 質量目標：ET 階段、PT 階段、（SOP+3）個月階段、量產階段各階段的產品質量目標。

注：《報價承諾書》樣本及填寫要求見 SIP 平台信息協同版塊。

第 3 章　第三節

（對應 ISO/TS 16969:2009 條文 - 7.2.3）

3.3 對於風險零部件零部件，供應商需對報價進行當面（或視頻）陳述及質量交流。必要時，長城公司將對其實施定廠前現場審核。

3.4 長城公司根據相關供應商提交的《配套產品報價表》、《報價承諾書》或陳述內容進行對比，以保證質量為優先條件最終確定供應商開發資質。

第 3 章　第三節

（對應 ISO/TS 16969:2009 條文 - 7.3）

3.6 供商在收到城公司下的《新品通知》后，行新品的策划，完成并合格后（具　考本手第四章 4.1），城公司　供商《品技》，否不予。

12家內地整車廠之客戶特殊特性(CSR)明細

第 5 章　第四節

(對應 ISO/TS 16969:2009 條文 - 7.4.1)

4.1.8 二級供應商管理

4.1.8.1 供應商需建立二級供應商選擇機制，以滿足產品生產的質量、交付要求；對二級供應商質量管理體系進行確認及提升，如供應商審核等；

4.1.8.2 供應商針對二級供應商變更管理進行明確要求，保證過程受控，信息及時傳遞並進行驗證，建立完善的管理規程；

4.1.8.3 供應商需與二級供應商簽訂質量目標並圍繞質量目標的達成持續開展管理活動；

4.1.8.4 針對二級供應商需建立質量問題反饋及分析解決機制，並形成有效管理；

4.1.9 季節性產品管理

4.1.9.1 供應商需根據季節環境的變化對生產工藝及產品製造過程實施預防性管理工作，同時要求二級供應商開展管理工作。

4.1.9.2 供應商需在每年 4 月及 9 月依據《產品供貨技術協議》對零部件開展試驗工作，在長城公司要求時提供實驗報告等內容。

第 5 章　第四節

(對應 ISO/TS 16969:2009 條文 - 7.3)

4.2.1 樣件、小批試裝採購

4.2.1.1 樣件採購由技術中心依照《技術中心試製樣件的採購及入庫管理規定》要求執行。

4.2.1.2 供應商新產品開發與量產零部件改進按長城公司按《新產品試裝、切換管理規定》執行。供應商依據生管物流部下發的採購訂單安排到貨，零部件需明確“試裝”標識，以便於區分。

第 5 章　第四節

(對應 ISO/TS 16969:2009 條文 - 6.4)

4.2.6.5 供應商應制定《應急預案》，用於應對各種突發原因導致物料不能按要求到貨的情況。在啟動《應急預案》的同時需通知各事業部生管物流部，雙方協調共同採取措施將損失降至最低。

第 5 章　第四節

(對應 ISO/TS 16969:2009 條文 - 7.2.2)

4.2.2 簽訂採購合同

4.2.2.1 在批量生產前，供應商與各事業部生管物流部簽訂《配套產品採購合同》及《配套產品採購合同》補充協議。

4.2.2.2 供應商與售後服務公司簽訂《長城公司配套產品備件供應及委託服務協議》。

4.2.3 採購訂單確認

4.2.3.1 生管物流部於每月 27 日（2 月份除外）下發《__月採購訂單》至各供應商。供應商根據生管物流下發的《__月採購訂單》中的品種、數量進行備貨。為保證物料供應，須準備適當庫存。

4.2.3.2 雙軌供貨物料，供應商供貨比例由配套採購本部依據雙軌供應商質量指標達成結果每季度進行調整，對 IPTV、PPM 指標達成較差的，大幅降低其供貨比例，直至優化。

4.2.3.3 單軌供應商 IPTV、PPM 指標達成較差且改善效果不明顯的，配套採購本部負責引進優秀供方資源，立項開發。

第 5 章　第四節

(對應 ISO/TS 16969:2009 條文 - 6.3.2)

4.2.2 簽訂採購合同

4.2.2.1 在批量生產前，供應商與各事業部生管物流部簽訂《配套產品採購合同》及《配套產品採購合同》補充協議。

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4.2.3.3 單軌供應商 IPTV、PPM 指標達成較差且改善效果不明顯的，配套採購本部負責引進優秀供方資源，立項開發。

第 5 章　第四節

(對應 ISO/TS 16969:2009 條文 - 6.5.3)

4.2.6.2 供應商產品外包裝標識要求參見《標識與追溯》章節具體要求。供應商產品應在產品外包裝箱外標明供應商名稱、包裝數量、產品名稱、簡碼、產品零件號及生產日期，物料標籤格式符合長城公司要求。

第 5 章　第四節

(對應 ISO/TS 16969:2009 條文 - 6.3.2)

4.2.6.5 供應商應制定《應急預案》，用於應對各種突發原因導致物料不能按要求到貨的情況。在啟動《應急預案》的同時需通知各事業部生管物流部，雙方協調共同採取措施將損失降至最低。

第 5 章　第四節

(對應 ISO/TS 16969:2009 條文 - 8.5.2)

4.3.2 質量信息的反饋

4.3.2.1 供應商依據長城公司事業部生管物流部向供應商發行的《不合格品聯絡書》對進貨檢驗發現的包裝 / 工位器具不合格、批次順序遵守、零部件標識與實際物品不符等問題進行整改，並按要求進行回　。

4.3.2.2 供應商依據長城公司事業部商品技術部向供應商發行的《不合格品聯絡書》對批量供貨的產品出現不合格（除 4.3.2.1 中不合格以外的進貨檢驗問題、現場裝配問題、性能試驗問題、售後問題）信息展開調查，調查供應商庫存、中轉庫及生產線產品的狀態及數量，分析不合格發生的原因及流出的原因，進行整改，並按要求進行回　。

4.3.2.3 針對發生及流出原因，採取 100% 挑選、返工返修等臨時的應急措施加以糾正，各供應商應防止不合格的再次發生，消除其不合格發生及流出的根本原因，制定切實可行的長遠措施，並採取必要的糾正措施和預防措施，將整改過程中涉及到的文件資料進行標準化。

4.3.2.4 供應商應將上述內容填寫在《不合格品聯絡書》的回　欄，或依據《不合格品聯絡書》的要求向長城公司提供《XXXX 公司項目結題報告》（8D 報告），並在三個工作日之內反饋長城公司事業部商品技術部。（如涉及海外供應商問題，供應商需與商品技術部進行溝通並達成共識）

第 5 章　第四節

（對應 ISO/TS 16969:2009 條文 - 7.5.5）

4.4.4 先入先出

所有包括配件和在加工件都應當按照先入先出原則進行控制。先入先出原則同樣適用於一般不流通的項目，如倉儲零部件、應急庫存、維修配件等。包括配件和在加工件在內的所有零部件都應遵循先入先出原則。非定期循環的項目，如倉儲零部件、應急庫存、維修配件等應當以同等方式處理。

第 5 章　第四節

（對應 ISO/TS 16969:2009 條文 - 7.5.1）

4.6 生服

4.6.1 人需求

供商收到城公司口管理部的、件、真等方式的通知后依据通知中的服目、人技能要求提供固定服人 / 短期服人 / 服人。

4.6.2 人明

供商根据位技能要求固定服人 / 短期服人行培，考核合格后，向城公司需求提出部提交《外服人明信》。

4.6.3 人前面及教育

供商的固定服人 / 短期服人的身份及能力必得到商品技部的可，确合格的服人，需加商品技部的于廉　制度、保密要求、日常行范等容的宣教育，并　城公司《XX 事部服》，不合格的需要供商提供的服人重新行培或更人。

4.6.4 上理

服人从城公司部取理的上，固定服人取正式的上，短期服人取上，服人不理上。

第 6 章　第三節

(對應 ISO/TS 16969:2009 條文 - 8.2.1)

3 工作程序

由長城公司的技術中心、工程院、事業部（商品技術部、品質管理部和生管物流部）、配套採購本部、售後服務公司依據《供應商日常業績評價標準》在開發、質量、交付、備件等方面對供應商進行評價。評價標准採取扣分制，各單項出現問題後實行累計扣分，並根據扣分情況確定業績等級。

3.1 供應商日常評價問題錄入

長城公司各評價部門確認供應商在開發、質量（售前問題和售後問題）、交付、備件等方面發生的日常業績問題後的兩個工作日內將問題錄入到供應商關係管理系統（即： SRM 系統）中。

注：長城公司配套採購本部將於次月的第五個工作日內錄入本月的供應商售後問題。

3.2 供應商日常評價問題查看及反饋

供應商應每天登陸供應商信息管理平台（即：SIP 平台）查看長城公司錄入的日常業績評價問題，以便及時反饋並解決。（具體操作方法詳見 SIP 平台操作手冊）

- 對評價問題無異議的，供應商應在 SIP 平台上確認該問題。
- 對評價問題有異議的，供應商應於問題評價後兩個工作日內在 SIP 平台中對問題進行反饋申訴，申訴應有充分理由或證據。
- 供應商因未按時登陸 IP 平台，造成查看和確認評價問題不及時或對異議問題的申訴不及時的，視為供應商默認而保持扣分，扣分將在月底形成月度評價結果。

2.7 美國偉世通公司

偉世通在 TS 16949 : 2009 條文的基礎上額外的客戶特殊要求 (CSR) 明細 (以下資料節錄自 Visteon Corporation - Customer Specific Requirements) :

第四章 第一節

(對應 ISO/TS 16969:2009 條文 - 4.1.1)

4. Quality management system

4.1 General requirements

The entire facility (producing automotive products for Visteon) must be certified to the applicable standard. Where the entire facility does not produce automotive products, a clear definition of what product lines are registered shall be included in the registration scope.

第四章 第二節

(對應 ISO/TS 16969:2009 條文 - 4.2.3)

4.2.3.1 Engineering Specifications

a. CQI-9 Special Process: Heat Treat System Assessment
b. CQI-11 Special Process: Plating System Assessment
c. CQI-12 Special Process: Coating System Assessment

All processes at each supplier and supplier's manufacturing site shall be assessed annually (at all tier levels) using the appropriate assessment available through AIAG, http://aiag.org. Assessments shall also be performed following any heat treat process and/or heat treat equipment changes.

Any items identified in these assessments as "not satisfactory" or "needs immediate action" shall be addressed using formal root cause analysis and action plans. Action plans shall have corrective and preventive actions as well as containment actions that immediately protect all components being shipped to Visteon and/or customer.

Records of the annual assessments shall be readily available and retained (by the supplier) for a minimum of Current Year (CY) + 2 years from the assessment completion date or issue ("not satisfactory" or "needs immediate

action”) closure date, whichever is longer.

Additional OEM customer specifics may also be required depending on the OEM customer, see OEM customer specific requirements and contact your site SPE for additional information.

第四章　第二節

(對應 ISO/TS 16969:2009 條文 - 4.2.4)

4.2.4 Control of records

Production part approvals, tooling records, purchase orders and amendments shall be maintained for the length of time that the part (or family of parts) is active for production and service requirements plus ten calendar years unless otherwise specified by Visteon for their respective products. This includes any customer owned tooling.

Production inspection and test records (e.g., control charts, inspection and test results) shall be retained for one calendar year after the year in which they were created. Records of inspection shall be maintained for each inspection or test performed. Where practical, the actual test result (variable or attribute) should be recorded. Simple pass/fail records of inspection are not acceptable for variables measurements. Records for internal quality audits and management review shall be retained for Current Year (CY) + three years.

The above does not supersede any regulatory requirements.

第五章　第二節

(對應 ISO/TS 16969:2009 條文 - 5.2)

5. Management responsibility

5.2 Customer focus

The supplier shall demonstrate customer satisfaction through meeting continuous improvement objectives consistent with a well-developed QOS/BOS. In addition, Visteon reserves the right to conduct plant visits and facility reviews upon request.

12家內地整車廠之客戶特殊特性(CSR)明細

第五章　第五節

(對應 ISO/TS 16969:2009 條文 - 5.5.2.1)

5.5.2.1 Customer representative

The supplier's customer representative is the primary interface with Visteon. When the customer representative changes, or any other significant personnel change occurs, the supplier shall notify Visteon Commodity Purchasing within 10 business days of announcement and shall update the Report Card contacts as appropriate (updates will be in Supplier Relationship Management (SRM)).

第五章 第六節

(對應 ISO/TS 16969:2009 條文 - 5.6)

5.6 Management review

The supplier's management shall hold regular QOS/BOS performance meetings. The meetings need not be held as one meeting but may be a series of meetings.

第六章　第二節

(對應 ISO/TS 16969:2009 條文 - 6.2.2)

6.2.2.2 Training

The supplier shall ensure that only trained and qualified personnel are involved in all aspects of the design and manufacturing of Visteon products. This training shall include the appropriate Visteon systems.

第六章　第三節

(對應 ISO/TS 16969:2009 條文 - 6.3.1)

6.3.1 Plant, facility and equipment planning

The supplier shall have lean manufacturing implementation plans.

第六章　第三節

(對應 ISO/TS 16969:2009 條文 - 6.3.2)

6.3.2 Contingency plans

The supplier shall prepare a contingency plan. Upon request, the supplier shall provide a copy of their contingency plans to Visteon.

The supplier shall notify Visteon receiving plants, the buyer and the SPE of record on Report Card within 24 hours of supplier's production interruption. The nature of the interruption shall be communicated with the immediate actions taken to assure supply of product. Production interruptions may include (but are not limited to) natural disasters, political unrest, war, capacity issues, quality issues, labor strikes or other events that prevent the supplier from meeting the specified capacity volumes.

第六章　第四節

(對應 ISO/TS 16969:2009 條文 - 6.4)

6.4.2 Cleanliness of premises

This requirement includes the dunnage used to transport the product including returnable dunnage.

第七章　第一節

(對應 ISO/TS 16969:2009 條文 - 7.1)

7.1 Planning of product realization

The supplier shall carry out APQP on all new Visteon components. The supplier will lead the APQP Process for any new Visteon component and shall provide updates to Visteon as required.

12家內地整車廠之客戶特殊特性(CSR)明細

第七章　第二節

(對應 ISO/TS 16969:2009 條文 - 7.2.1, 7.2.2, 7.2.3)

7.2 Customer-related processes

ISO14001 certification is required. End of life vehicle (ELV) reporting requirements are required as follows: Report into IMDS prior to PPAP of the product and confirm completion for PPAP. Please contact the Global Visteon IMDS Manager (abisho17@visteon.com) for specific reporting requirements.

第七章　第三節

(對應 ISO/TS 16969:2009 條文 - 7.3)

7.3.1.1.1 Multidisciplinary approach

FMEA

FMEAs shall be prepared using the AIAG Potential Failure Mode and Effects Analysis reference manual. Design engineering and SPE approval is required for FMEAs for designated safety or regulatory items regardless of the site's PPAP level. Approval may take the form of PPAP approval by SPE and the responsible design engineer, but the preferred method is to sign the documents. Approval of changes to these documents after initial acceptance is also required. Visteon reserves the right to require approval of a FMEA for any Visteon purchased part from any supplier.

FMEAs may be written for families of parts where batch processes and common tooling are used. Families shall be clearly defined and have a full part number listing of the family. Visteon engineering shall approve the family designations.

Upon request by Visteon, the supplier shall provide a copy of the FMEA document for review. If the document is considered proprietary, the supplier will provide qualified technical support and bring the FMEA to the requestor for review without retention of copies.

7.3.2.3 Special characteristics

Notification of special characteristics shall be accomplished through the use of a Special Characteristic Identification Form (SCIF). See your assigned SPE for information on the special characteristics requirements.

7.3.6.3 Product approval process

PPAP submissions shall follow the AIAG PPAP manual and SP-GL-SGL004 Supplier Guidelines for the Visteon Production Part Approval Process.

Subcontractors are to meet all requirements of PPAP.

NOTE: When a PPAP identifies that a part does not fully conform to all specifications, the supplier must raise a temporary change in the Global Bill of Material and Change (GBC) system to seek approval from the receiving plant and to authorize the supplier to ship this product. The issue that required the temporary change must be corrected within 90 days or a second temporary change must be raised. Please refer to http://www.GBC.visteon.com to obtain training and system access.

PPAP submission must be no later than 10 business days prior to the Visteon PPAP required date.

第七章　第四節

(對應 ISO/TS 16969:2009 條文 - 7.4.1)

7.4.1.2 Supplier quality management

For sub-suppliers and subcontractors to the supplier:

NOTE:

- Sub-suppliers to the supplier are those that add significant value to the product.
- Subcontractors provide contract manufacturing services that provide a substantial portion of the process. Examples of subcontractors are painting subcontractors, semiconductor wafer foundries or contract assembly services. In this role, they provide a substantial portion of the value add.

a. The supplier is responsible for ensuring that the quality and conformance of their supplier material meets Visteon's requirements. Evidence of conformance of the supplier's sub-supplier material shall be made available at Visteon's request unless it forms a direct part of the supplier’s PPAP submission.

b. Visteon reserves the right to audit the supplier's sub-suppliers in the presence of the supplier's representative. Coordination of the audit will be through the supplier's representative.

c. The supplier shall ensure product delivered to Visteon is traceable according to the requirements of ISO/TS16949 and any program specific requirements.

d. The supplier shall cascade the intent of these customer specific requirements to their suppliers where applicable.

e. Sub-suppliers to the supplier shall meet the minimum ISO/TS 16949:2009 requirements by having an ISO-9001:2008 quality system through certification.

f. Visteon bulk material suppliers shall be certified to ISO 9001:2008 and use the Visteon Customer Specific Requirements.

g. PPAP requirements for bulk suppliers will follow the Appendix F of the AIAG PPAP manual.

第七章　第五節

(對應 ISO/TS 16969:2009 條文 - 7.5.1)

7.5.1.1 Control plans

The AIAG Advanced Product Quality Planning and Control Plan reference manual shall be used as a guide for the development and format of Control Plans along with Appendix A in ISO/TS 16949:2009

Design engineering and SPE approval is required for control plans for designated safety or regulatory items regardless of the site's PPAP level. Approval may take the form of PPAP approval by SPE and the responsible design engineer, but the preferred method is to sign the documents. Approval of changes to these documents after initial acceptance is also required.

Visteon reserves the right to require approval of control plans for any Visteon purchased part from any supplier.

Repaired and/or reworked product shall be re-inspected to all control plan requirements and documented procedures.

7.5.5.1 Storage and inventory

The supplier shall use the AIAG MMOG process as a guide to maintain an orderly delivery system. The supplier shall agree on a packaging specification with the appropriate plant packaging engineer. It is the responsibility of the supplier to ensure that material is delivered to the Visteon customer plant in accordance with the packaging specification and labeling standards approved by Visteon. The general specifications can be found on the Visteon Supplier Portal (G2V) at http//G2V.visteon.com.

第七章　第六節

(對應 ISO/TS 16969:2009 條文 - 7.6.1)

7.6.1 Measurement System Analysis

Visteon approval of the gage/check fixture supplier, gage/check fixture strategy and design is required. Gages not meeting the specification in the AIAG MSA must have a containment plan (such as 100% inspection, gage improvement, or other means) that is approved by SPE.

In order to provide adequate measurement system discrimination, for measurement equipment used to measure special characteristics, the apparent resolution of the equipment shall be at most one-tenth of the total process to six sigma standard deviation (reference AIAG Measurement System Analysis).

第八章　第二節

(對應 ISO/TS 16969:2009 條文 - 8.2.1)

8.2.1.1 Customer satisfaction - supplemental

The Visteon Supplier Report Card shows the performance of each supplier manufacturing location through the web at the Report Card login page. The supplier shall register to access their Report Card at the Gateway to Visteon (G2V) portal: http//G2V.visteon.com. The Report Card generates a Green, Yellow or Red Quality Rating. Maintaining a good quality rating

is integral to be considered for future business as part of the commodity strategy. A RED quality rating may mean that the supplier will be included on the Visteon No-Quote list. The supplier shall commit to reviewing weekly and maintaining their Report Card entries. Where the supplier shows consistent underperformance, it is expected that they will initiate the Quality Improvement "Roadmap" process to facilitate improvements. Where a supplier delivers to a Visteon plant that does not use systems that support the Visteon Report Card system, local procedures and reporting shall apply. Report Card quality performance shall be included in the regular management review.

Supplier Significant Quality Event

Visteon uses significant quality events to deduct points from the Report Card system due to supplier quality issues:

Standard Event: -10 points (Issues such as 8D responsiveness, stop shipment at a Visteon facility) Major Event: -50 points (Issues such as breach of trust, stop shipment at the OEM) Certification Event: -50 points (two major events within 12 months determined to be business critical or high impact breach of trust)

The issuing of a Certification Significant Quality Event requires the supplier to notify their quality certification body in accordance to the terms and conditions of their quality certification. This notification shall take place within 5 business days of receiving the Certification SQE and the Visteon Supplier Performance Manager and Purchasing Manager will be copied on the notification.

8.2.1.2 Quality Improvement

The Third Party Controlled Shipping or the Third Party Supplier Improvement process will be considered by SPE management when quality improvement actions enacted by the supplier do not stop the flow of non-conforming material to either Visteon plants or their Customers. The Third Party Controlled Shipping or Third Party Supplier Improvement process will be initiated based on, but not limited to, any of the following criteria being confirmed:

a. Part quality non-conformance issue resulting in production line disruption or stop shipment at a Visteon plant or at a customer plant.

b. Part quality non-conformance issue requiring 3rd party containment to assure continuous supply of conforming parts.

c. Reoccurring Quality Rejection (QR) issues following ineffective corrective action.

d. Quality issues impacting new product launches at either Visteon plants or at our Customer's.

NOTE: If the supplier is placed under either the Third Party Controlled Shipping or the Third Party Supplier Improvement process by the SPE management groups, the supplier will be required to pay all costs associated with the third party process. The supplier must accommodate Third Party personnel and provide adequate floor space for quarantine, containment and inspection as required.

Visteon Supplier Chargeback Process

Visteon Supplier Chargeback Process for Quality Incidents documents the Visteon process for chargeback of reasonable costs. Reasonable costs are to be charged back to the supplier as a direct result of supplier responsible concerns from quality, sub-supplier and warranty defects. Some examples of chargeable issues follow below, but are not exclusively limited to these:

a. If suitable response and agreement is not secured within 12 hours, Visteon may return by expedited freight, at the supplier's expense, non-conforming product. This is to facilitate the supplier's containment and investigation activities.

b. All non-conforming products identified as a result of the concern and remedial actions taken at the Visteon plant shall be returned to or disposed of by the supplier at their expense.

c. Any non-conforming material remaining at the Visteon location after a reasonable timescale identified by that location, will be disposed of at the supplier’s expense after suitable prior notification.

d. A proportion of the value (to be agreed between the supplier and Visteon) of the non-conforming customer product or a proportion of the cost incurred by Visteon as a result of specific customer warranty agreements. Non-conforming product meeting any agreed Quality Targets may also be charged back if forming part of a customer charge back to Visteon.

e. The cost of disruption to Visteon's production (e.g. immediate sorting operations until the supplier has responded, machine breakdown caused by non-conformance, inefficiency to production, excess handling, recall of product supplied to Visteon's customer, expedited freight charges attributable to the concern, etc).

f. The cost of disruption to Visitor’s customer as a direct result of the supplier responsible concern.

This disruption can include Stop Shipments to the customer, loss of customer production, reworking of customer product, expedited freight charges and recall campaigns.

The administrative costs incurred by Visteon dealing with the supplier responsible concerns will be systematically charged back per the Visteon Supplier Chargeback Process available on the Visteon Supplier Portal (G2V) at http//G2V.visteon.com.

Read Across / Zoomerang

Read Across is Visteon's process to identify, cascade, and assure implementation of lessons learned and best practices globally. As a supplier to Visteon, your company is expected to deliver superior product quality and apply continuous improvement practices. An important aspect of achieving this goal is sharing best practices and cascading lessons learned.

Visteon has selected the online survey tool, Zoomerang, to communicate lessons learned (called “Read Across”). Important Read Across concerns will be cascaded to the supply base via e-mail to keep you informed and gather feedback. Any supplier selecting Zoomerang's "Opt Out" feature will be contacted and asked to provide the name of another company representative to receive the Read Across concerns and respond to a limited number of questions.

第八章　第二節

(對應 ISO/TS 16969:2009 條文 - 8.2.2)

8.2.2 Internal audit

Internal auditors shall have completed an internal auditing training class. The supplier shall have at least one lead auditor who has passed an accredited lead auditor class. The lead auditor may support several sites within the corporate organization. When the supplier does not have a lead auditor meeting these requirements a contracted third party with the above qualifications shall perform the audits. Audit records shall be retained for a minimum of Current Year (CY) + three years.

NOTE: An individual who is assigned as a Lead Auditor must have successfully completed an accredited "Lead Auditor" course to ISO/TS 16949, as well as courses pertaining to the customer specific requirements for "Core Tools"

第八章　第二節

(對應 ISO/TS 16969:2009 條文 - 8.2.4)

8.2.4.1 Layout inspection and functional testing

A layout inspection shall be performed annually. All cavities shall have one sample each with lay out data. As part of this process, the supplier will update the PPAP document files to include the new dimensional layout data and a self-certified PSW cover sheet. A full dimensional layout will include all significant characteristics and all key functional dimensions (seal rings and locking tabs, e.g.) . This document is to remain on file with the original PPAP. A Visteon representative or third party may request a copy of this document. If so, it should be made available within 24 hours.

The annual layout data shall be included in the control plan and PPAP records.

8.2.4.2 Appearance items

Appearance items will be designated on the engineering drawing. For specific direction on appearance item requirements, contact the respective Visteon Product Development group. Suppliers shall develop appearance acceptance standards, or "boundary samples" for Visteon approval as appropriate. The Visteon appearance approval report (AAR) form and any additional guidelines can be found on the Visteon Supplier Portal (G2V) at http//G2V.visteon.com.

第八章　第三節

(對應 ISO/TS 16969:2009 條文 - 8.3)

8.3 Control of nonconforming product

Identification of nonconforming product:

a) The supplier shall implement immediate containment for any nonconforming product, agree to the terms for immediate containment at the effected Visteon plant and evaluate the risk of any material contained in the supply chain. The supplier shall open an 8D investigation and report D0 "Emergency Response Actions" immediately and then update down to D3 "Interim Containment" within 24 hours.

b) The supplier shall organize their own representatives or agree with the effected plant how to continue containment and sorting at the Visteon facility within 12 hours.

c) The supplier, in consultation with the Visteon Supply Chain Management department shall immediately replace the non-conforming stock if required.

d) Completion of the investigation shall be timely and agreed with Visteon.

Confirmation of corrective actions:

a) Visteon normally requires several consecutive batches of product free from the non-conformity before any exceptional containment measures at Visteon's receiving area will be removed. The duration of the containment measures shall be at Visteon's discretion given the due weight of the concern.

b) If the level of containment is considered inadequate and the corrective actions are ineffective, a reduction will be made in the supplier's Report Card rating by using the Significant Quality Event and 3rd party Controlled Shipping may be invoked.

Any non-conforming product or process output shall be analyzed using the Visteon 8D methodology to ensure root cause corrective action and problem prevention. When a QR is issued for a lot quantity, the supplier will respond with a Returned Material Authorization (RMA) and replenishment of unaffected product within 48 hours.

8.3.4 Customer waiver

When the supplier requires a waiver to ship nonconforming material, there are two methods to use:

a. For a temporary change bound by time or a lot of material, the supplier shall submit a request for temporary change using the Visteon Global Bill of Material and Change (GBC) system. Please refer to http://www.gbc.visteon.com. The temporary change is bound for a specific amount of material or for a maximum of 90 days. The approved temporary change number is to be added to the shipping documents.

b. For a temporary change that should become a permanent change or for the future upcoming changes to process, design, material, manufacturing location the supplier shall process a Supplier Change Request (SCR) and obtain Visteon approvals (SCR, PPAP and FCR). The guidelines for processing an SCR are available at the Gateway to Visteon (G2V) portal: http//G2V.visteon.com. The supplier is not approved to ship non-conforming material until the supplier obtains an approved Temporary Change using the GBC system. or an approved PSW cover sheet and approved FCR.

12家內地整車廠之客戶特殊特性(CSR)明細

2.8 美國德爾福公司

德爾福在 TS 16949 : 2009 條文的基礎上額外的客戶特殊要求 (CSR) 明細 (以下資料節錄自 Delphi Customer Specific Requirements) ：

第四章　第一節

(對應 ISO/TS 16969:2009 條文 - 4.1.1)

4. Quality Management System:

4.1 General Requirements. Supplier’s entire facility shall be registered to the applicable standard. Delphi satisfies the goal of Supplier conformity to ISO/TS16949 as follows (also see Sections 4.2.2, 7.2.3 and 7.4.1.2):

a. Registration to ISO9001 (minimum) or TS16949 (preferred) applies to Suppliers that manufacture direct product or materials for Delphi.

b. Delphi shall be added to the scope at Supplier's initial certification or recertification to TS16949.

c. Only accredited certification bodies shall be used for registration to ISO9001 or TS16949.

d. Every manufacturing site of a Supplier shall be individually registered either by single site or by corporate scheme. (See IATF Certification Reference or consult the certification body.)

e. A clear summary definition of what product value added process shall be included in the registration scope (example: manufacturing, assembly, etc.) along with the address for each manufacturing site.

NOTE: When a Supplier to Delphi either: (i) provides less than $100,000 APV, and may not have adequate resources to develop a system according to ISO/TS16949 or ISO 9001; or (ii) has automotive sales that are less than 10% of its total business, Delphi may waive the ISO/TS16949 or ISO9001 requirements. Delphi may also consider the type of product supplied, quality system, manufacturing and delivery systems capability, and any risk to Delphi prior to granting any waiver.

第四章　第二節

(對應 ISO/TS 16969:2009 條文 - 4.2.2)

4.2.2. Quality Manual. All ISO/TS 16949 requirements and all of the requirements of this document shall be integrated into the Supplier's quality system.

第四章　第二節

(對應 ISO/TS 16969:2009 條文 - 4.2.4)

4.2.4 Control of Records. Production part approvals, tooling records, purchase orders and amendments shall be maintained for the length of time that the part (or family of parts) is active for production and service requirements, plus one (1) calendar year, unless otherwise specified by Delphi for the respective products. This includes any Delphi owned tooling.

Production inspection and test records (e.g., control charts, inspection and test results) shall be retained for one (1) calendar year after the year in which they were created. Records of inspection shall be maintained for each inspection or test performed. The actual test result (variable or attributes) shall be recorded. (Refer to Section 8.2.4.1)

Records for internal quality audits and management review shall be retained for three (3) years.

Some programs may require longer retention periods than specified above.

Supplier may specify the longer retention period in its procedures or specifications.

The above shall not supersede any regulatory requirements.

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第五章　第六節

(對應 ISO/TS 16969:2009 條文 - 5.6)

5. Management Responsibility:

5.6 Management Review. The Supplier management shall hold regularly scheduled quality/business operating system performance meetings to review the customer-focused metrics, objectives and performance trends. Quality and delivery metrics shall be included in the Supplier's management reviews and shall use zero defects and 100% on time as the goals.

第七章　第一節

(對應 ISO/TS 16969:2009 條文 - 7.1)

7. Product Realization:

7.1 APQP:

Planning of Product Realization. The Advanced Product Quality Planning (APQP) and Control Plan reference manuals shall be used to develop and report progress on new programs. For reporting of APQP status, Supplier shall utilize the forms associated with APQP and process flows unless otherwise identified or approved by the responsible Delphi AQE/SQE.

SPDP contains the major standards for advanced quality planning and current production cycle. The Delphi Supplier Development documents are posted on the DSP. (Refer to Section 7.2.3) The Delphi AQE/SQE shall communicate any waivers from the SPDP.

第七章　第二節

(對應 ISO/TS 16969:2009 條文 - 7.2.1)

7.2.1.1 Delphi-designated Special Characteristics. Supplier shall use any specific symbols Delphi has defined for use on control plans, drawings or FMEAs. The AQE/SQE shall notify the Supplier of such requirements, if any.

第七章　第二節

(對應 ISO/TS 16969:2009 條文 - 7.2.2)

7.2.2.2 Manufacturing Feasibility. Supplier shall perform manufacturing feasibility reviews and shall include Supplier and Delphi team members as appropriate. Requests from Delphi for volume changes of 20% or more over Supplier's previously verified volume capability shall require full volume feasibility studies. Supplier's capacity study shall include identification of the capacity constraints and evaluation of risk to Delphi.

Supplier shall provide the results of this study to the Delphi SQE/AQE. The capacity information provided with the Supplier quote shall reflect its available daily capacity and operating plan (hrs./day, days/week).

Supplier's operating plan shall meet Delphi's weekly volume requirements and current model service requirements and shall be 100 hours per week or less. Supplier shall notify the Delphi buyer for approval of any operating plan using more than 100 hours per week. Supplier shall have capability to provide 15% above its quoted volume without additional investment from Delphi.

第七章　第二節

(對應 ISO/TS 16969:2009 條文 - 7.2.3)

7.2.3 Customer Communication. Supplier shall register to the DSP through Covisint and register a Supplier Profile Administrator as required for its locations. Supplier shall have the appropriate hardware and software needed to access and use the applications within DSP. Supplier shall obtain and maintain a Dun and Bradstreet DUNS number(s) to support the DSP system applications.

Registration to Delphi Problem Solver is a requirement for all manufacturing locations conducting business with Delphi. The Supplier shall regularly access Delphi Problem Solver, weekly at a minimum; however, Supplier shall monitor its Problem Cases as they are generated and respond as required.

The Supplier shall have at least one person, and should have one back-up, who is familiar with the DSP at each of its locations. The Supplier shall utilize the Delphi help desk resource to help resolve DSP problems as needed.

Quality Certification Documentation. Supplier should post its latest valid and complete quality management system certificate in the Supplier Profile application on the DSP. Supplier shall include all requested quality certification information in the specified fields of the Delphi RFQ notebook on all quotation submissions. Supplier quality certificates shall be in English or include an accurate English translation on them. Supplier shall ensure that its certificate name and address information matches the DUNS location that is in the Supplier Profile.

Certification Body/Registrar Notification. Suppliers registered to ISO 9001 or ISO/TS 16949 shall notify Delphi of certificates that are revoked or placed on suspension. Supplier shall notify its Delphi SQE if it plans to change registrars.

Manufacturing Site Change. Supplier shall not change manufacturing location without prior written approval from Delphi. Any request by Supplier to change manufacturing location shall be submitted through SCRR.

Customer Representative Change. If Supplier's customer representative changes, the Supplier shall update contact information in the Supplier Profile application on the DSP.

Inquiries. Supplier shall respond to all inquiries from Delphi in writing or via E-mail on or before the due date stated on the inquiry.

第七章　第三節

(對應 ISO/TS 16969:2009 條文 - 7.3)

7.3.4 Design and Development Review. When reviewing product design and development stages, the Supplier shall participate in and execute APQP requirements.

7.3.5 Design and Development Verification. The Supplier shall perform design verification to show conformance to Delphi design validation and qualification requirements. At component levels, the Supplier shall develop a qualification plan with the design engineering activity at Delphi. Verification methods shall be recorded with the test results. Go/No Go results should be avoided and, where available, the actual value for variables data shall be recorded.

7.3.6.2 Prototype Program. The Delphi buyer shall provide Supplier with relevant prototype requirements for any prototype programs.

Supplier shall provide prototype control plans, FMEAs and other quality documents if requested by Delphi engineering.

Prototype Parts. The Supplier shall submit inspection reports when delivering sample parts, as instructed by the Delphi receiving unit.

If Delphi's review of the inspection report indicates that the parts do not agree with the prints, or examination of the parts discloses an unsatisfactory condition not covered by the inspection report, Supplier shall resolve all discrepancies with the Delphi Product Design Engineer and communicate the resolution in writing to the Delphi buyer.

If resolution of the discrepancy results in a tooling, material or processing change, the Supplier shall correct the situation (at the Supplier's expense), resubmit an inspection report on the revised parts, and communicate the resolution in writing to the Delphi buyer as soon as possible.

7.3.6.3 Product Approval Process. The Supplier shall comply with the current edition of the AIAG PPAP manual unless otherwise specified by Delphi.

Copies of Supplier PPAPs shall immediately be made available upon request from Delphi.

Run at Rate: In accordance with Delphi's SPDP and APQP, Supplier shall conduct Run at Rate to verify production capacity and quality system effectiveness. Supplier shall develop and implement an FTQ improvement process, prioritizing FTQ issues, to achieve continuous FTQ improvement.

7.3.7 Control of design and development changes. The Supplier shall retain documentation of Delphi approval of all implemented changes for the life of the material. Supplier shall label shipments of new or revised material per instruction from the Delphi receiving location until notified by Delphi Production Control.

Supplier Change Requests. Suppliers shall use SCRR for all change requests.

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第七章　第四節

(對應 ISO/TS 16969:2009 條文 - 7.4.1)

7.4.1.2 Supplier Development of Specially Designated Small Sub-Suppliers of Direct Automotive Product and Materials. When a sub-supplier to Supplier is so small as to not have adequate resources to develop a system according to ISO/TS 16949 or ISO 9001, or supplies non-engineered products, certain specified elements may be waived by the Supplier.

"Small" here may refer to the volume supplied to the automotive industry or to the sub-supplier's annual sales volume. Supplier shall consistently apply the assessment criteria below to determine the specially designated sub- suppliers to which this provision may apply.

At a minimum, Supplier shall assess the sub-supplier's size, dollar value of the business, type of product supplied, quality system, manufacturing and delivery systems capability and any risk to Delphi caused by the sub- supplier's failure to develop a quality system. In addition, Supplier shall ensure that sub-suppliers develop a quality management system that facilitates defect prevention, monitoring and improvement.

第七章　第四節

(對應 ISO/TS 16969:2009 條文 - 7.4.3)

7.4.3.1 Incoming Product Quality. The Supplier shall ensure the quality of the parts it produces, its sub-supplier's quality and delivery performance and subcontracted services, including that sub-suppliers directed by Delphi meet Delphi specifications and requirements. When the Supplier determines incoming inspection of sub-supplier material is necessary, this activity shall be consistent with the risk and quality impact of the Supplier on Delphi's product quality. Such incoming inspections shall include variables data where appropriate and be used as a key indicator for sub- supplier quality management. Where high risk has been identified in the sub-contracted process, the Supplier shall ensure containment is in place to protect Delphi. For attribute data sampling, the acceptance level shall be zero defects.

第七章　第五節

(對應 ISO/TS 16969:2009 條文 - 7.5.1)

7.5.1.1 FMEA and Control Plan Approvals. Delphi Design engineering and Supplier Quality approval is required for Supplier's FMEAs and control plans for designated safety items regardless of the site PPAP level. Approval may take the form of a Part Submission Report (PSW) but the preferred method shall be by signature of Delphi Quality Engineer. Approval of changes to these documents after Delphi's initial acceptance is also required.

Furthermore, Delphi reserves the right to require approval of FMEA and/or control plans for any other part or process from any Supplier.

FMEAs. FMEAs shall be prepared using the AIAG Potential Failure Mode and Effects Analysis reference manual unless otherwise approved by Delphi Supplier Quality.

FMEAs may be written for families of parts where batch processes and common tooling are used. Families shall be clearly defined and have a full part number listing of the family. Family designations must be approved by Delphi Engineering and Supplier Quality.

Upon request by Delphi, the Supplier shall provide a copy of the family FMEA documents for review. If the document is considered proprietary, the Supplier may provide the applicable section, or provide qualified technical support and bring the FMEA to the Delphi requestor for review without retention of copies. A letter stating the proprietary nature of the FMEA shall be included in the Production Part Approval submission package.

NOTES*:

When developing PFMEA's for production parts or material supplied to Delphi, the Delphi rating tables for 'Severity', 'Occurrence' and

'Detection' shall be used in place of the rating tables referenced in AIAG FMEA Current Edition, unless otherwise approved by Supplier Quality, based on the specific part or program circumstances. Delphi's approval of Supplier's PPAP shall serve as the approval for the rating method utilized.

Potential failure modes with a severity of seven or greater shall be continually improved to reduce the occurrence to a one or reduce the detection to a five or lower.

Control Plans. The APQP manual, available from AIAG, shall be used as a guide in developing and maintaining control plans. Supplier shall maintain a change history as part of its control plan to document implementation of changes.

Supplier shall have control plans for all parts supplied to Delphi. Family control plans may be used for parts with common processes. Supplier shall clearly define the family on the control plan so that applicability is defined. The control plan shall include, as a minimum, the elements specified in ISO/TS 16949, Annex A.

Supplier's design and process controls shall focus on prevention rather than detection and correction. Special attention shall be placed on the identification of input control characteristics rather than post processing inspection and containment.

Repaired, reworked or out-of-process product shall be re-inspected to all control plan requirements and documented procedures.

第七章　第五節

(對應 ISO/TS 16969:2009 條文 - 7.5.3)

7.5.3 Identification and Traceability Labels. Supplier shall package and label products in accordance with Delphi's written requirements (including, without limitation, Delphi Global Packaging and Shipping Manual, Delphi Global Container Label Requirements Standard and Delphi European Odette Label Requirements Standard) located on www.delphi.com.

第七章　第五節

(對應 ISO/TS 16969:2009 條文 - 7.5.4)

7.5.4.1 Tool Inventory/Disposal. The Supplier shall furnish a tool inventory of all Delphi-owned tools (active and inactive) in the Supplier's possession. The tool inventory shall be submitted to the Delphi buyer annually by January 31st. The inventory shall contain the following information for each Delphi-owned tool:

Tool part number(s) (typed in numerical order)

Current tool revision

Description

Date parts last ordered

Total cost of tool

Quantity of parts produced from tool

Remaining tool life

Previous part number if tool has been changed to produce a new part number

Delphi Design Engineer name

Delphi shall determine the disposition of all Delphi-owned tooling and such disposition shall be communicated to the Supplier in writing by Delphi and include a Return Material Authorization.

If requested by Delphi, Supplier shall mark tooling Property of Delphi, or Property of Delphi's customer, as applicable.

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第七章　第六節

(對應 ISO/TS 16969:2009 條文 - 7.6.1)

7.6.1 Measurement System Analysis. Supplier shall perform a gauge study on each gauge used for checking a special characteristic (significant, critical or Supplier identified) in accordance with the methods and timing described in the latest AIAG Measurement Systems Analysis Manual (MSA) to determine measurement system capability. Supplier shall have a containment plan for gauges that do not meet the specification in the MSA (such as 100% inspection, gauge improvement or other means). Supplier shall maintain gauge study records. The above requirements apply to measurement systems referenced in the control plans. (See Appendix 28 of SPDP).

第八章　第一節

(對應 ISO/TS 16969:2009 條文 - 8.1.1)

8.1.1 Identification of Statistical Tools. The Supplier shall use the latest edition of AIAG SPC for manufacturing process controls and AIAG MSA for measurement system equipment management.

第八章　第二節

(對應 ISO/TS 16969:2009 條文 - 8.2.1)

8.2.1 Customer Satisfaction. Delphi requires Supplier to establish processes and designs to achieve zero defects,100% on time delivery and green quality and shipping scorecards.

Scorecards. Delphi monitors Supplier quality and shipping performance and drives corrective actions for quality and shipping improvement through the Supplier Scorecards. Supplier shall review and verify this monthly update and ensure action plans are developed as applicable to achieve green quality and shipping scorecards.

Scorecard Usage to Drive Improvement. If the scorecard has red indicators or quality/shipping scores, the Supplier shall establish aggressive plans to drive improvement to green.

If Supplier has a yellow quality or shipping score, supplier shall develop and implement action plans to improve to green.

If Supplier is in Controlled Ship Level 2, in New Business Hold or has a twelve (12) month average score of red on its quality and/or shipping scorecard, supplier shall expedite appropriate corrective action steps.

第八章　第二節

(對應 ISO/TS 16969:2009 條文 - 8.2.2)

8.2.2 Internal Audit. Supplier's internal auditors shall be qualified as recommended in ISO 19011 Guidelines for quality and/or environmental management systems auditing. In addition, its internal auditors shall be competent in understanding and applying the Process Approach of Auditing (see ISO/TS 16949) and the AIAG.

第八章　第二節

(對應 ISO/TS 16969:2009 條文 - 8.2.4)

8.2.4 Engineering Specification (ES) Test Performance Requirements. The Supplier shall develop a plan to meet in process testing requirements and submit it for approval as part of its PPAP package. Supplier shall include reaction plans to failures in the IP test plan.

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第八章　第三節

(對應 ISO/TS 16969:2009 條文 - 8.3)

8.3 Control of Nonconforming Product. The Supplier shall have an internal containment procedure that integrates the requirements of the Delphi Supplier Containment Procedure.

第八章　第五節

(對應 ISO/TS 16969:2009 條文 - 8.5.1)

8.5.1 Continual Improvement. The Supplier shall use the SCRR in conjunction with continual improvement activities.

第八章　第五節

(對應 ISO/TS 16969:2009 條文 - 8.5.2)

8.5.2 Corrective Action. Problem Case Response: Supplier shall monitor and respond to all Problem Cases issued by Delphi. Supplier's initial response to a problem is due within 24 hours. Final response (with verified root cause analysis) is due within 15 calendar days, unless additional time has been requested and approved by the Delphi problem owner. Supplier shall complete a 5-Why Analysis as a means of ascertaining and verifying root cause analysis.

Delphi shall communicate any cost recovery to Supplier with a Problem Case and through a cost recovery notice in Delphi Problem Solver. Supplier shall respond to the cost recovery notices within seven (7) days.

2.9 重慶長安鈴木汽車有限公司

長安鈴木在 TS 16949 : 2009 條文的基礎上額外的客戶特殊要求 (CSR) 明細 (以下資料節錄自長安鈴木供應商支持手冊)：

第一章 第二節

(對應 ISO/TS 16969:2009 條文 - 4.1.1)

2・品質體系要求

2.1 供應商建立的品質管制體系應覆蓋長安鈴木所有產品及生產全過程，並加強分供方的監控。

2.2 要求所有供應商通過 ISO/TS16949 認證，供應商應選擇長安鈴木推薦的認證機構之一進行 協力廠商認證，否則長安鈴木將不認可審核結果。長安鈴木向供應商推薦 ISO/TS16949 認證公司。 名單見附件 12。

2.3 對於首次與長安鈴木簽訂《試製技術協定》的供應商要求從簽訂協定之日起一年半內建立 並通過 ISO/TS16949 品質管制體系協力廠商認證。如供應商未按要求的日期完成 ISO/TS16949 質 量管理體系協力廠商認證，長安鈴木將考慮取消供應商新產品的開發資格，並取消供應商參加評 選優秀供應商資格。

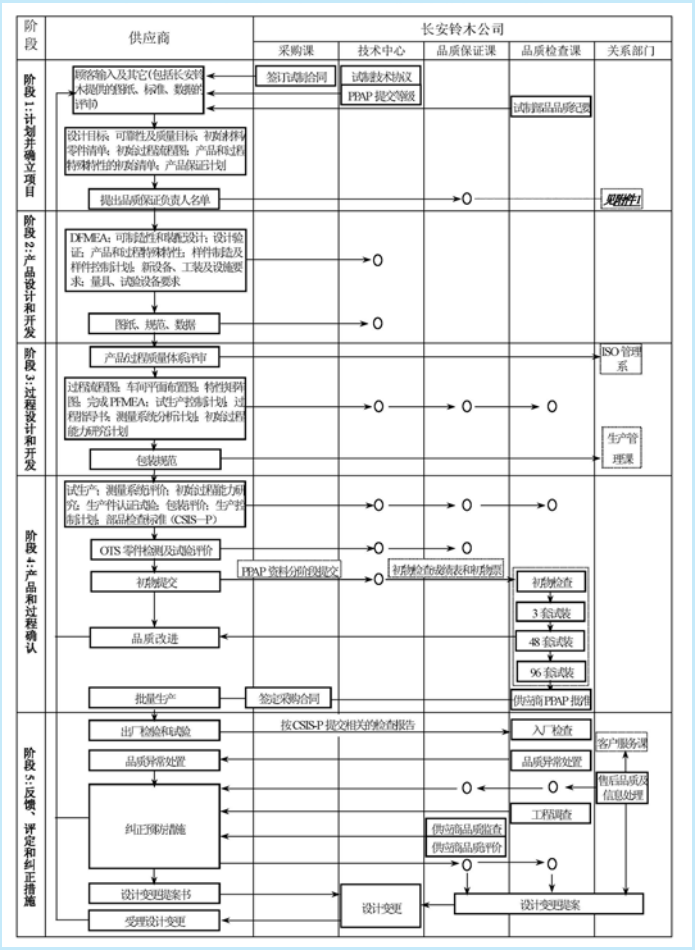
2.4 供應商應在進行初期認證和監督審核前 15 日將審核計畫傳真到長安鈴木，長安鈴木將視情 況決定是否參與見證審核。現場審核後不符合項的整改情況將成為長安鈴木品質監查的重點之 一。供應商獲得認證證書後，應及時提交長安鈴木品質保證課 ISO 管理系備案，否則將視為未 通過認證處理。

2.5 當供應商體系存在較大缺陷或品質監查得分低於 75 分時，長安鈴木公司將與認證機構溝通， 必要時追加協力廠商審核。

第二章

(對應 ISO/TS 16969:2009 條文 - 7.1)

第二章 供應商與長安鈴木公司的品質保證體系圖

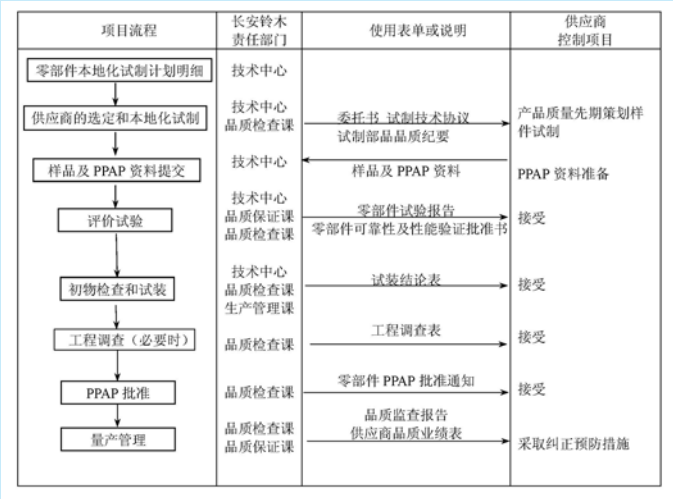


第三章　第二節

(對應 ISO/TS 16969:2009 條文 - 7.3)

第三章　　零部件當地語系化開發品質控制

2・管理流程



第四章

(對應 ISO/TS 16969:2009 條文 - 7.3)

第四章 生產件批准

1・控制目的

確定供應商是否已經瞭解長安鈴木工程設計記錄和規範的所有要求，該過程是否具有潛在 能力，並在實際生產過程中，以規定的生產節拍來提供滿足長安鈴木要求的產品。

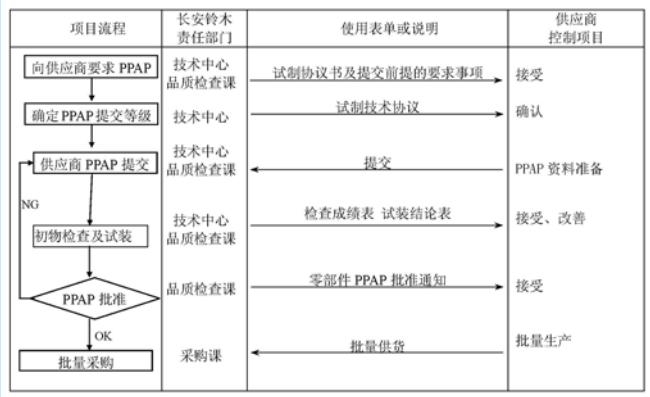
2・名詞定義

2.1 生產件：是指在生產線上使用生產工裝、模具、量具、工藝過程、材料、操作者、環境和 過程參數 (如進給量 / 速度 / 迴圈時間 / 壓力 / 温度等) 製造出來的產品。

2.2 外觀件：被指定為“外觀專案”的零件。

2.3 生產件批准提交：在一個典型生產過程中抽出少量產品為基礎，而這個生產過程是用生產 工裝、工藝過程和迴圈次數來進行的，用於由供應商按照所要求的工程批准進行生產件批准而 提交的零件。

3・管理流程



4・執行方法

4.1 PPAP 提交的前提 在以下情況時，要求供應商向長安鈴木提交生產件批准所需的檔和產品，在長安鈴木 PPAP 批准後，進行產品的批量供貨。如以下變更由供應商提出，應提交《設計變更提案書》，待長安鈴木審批確認後，方可實 施以上流程（詳見《技術開發手冊》第 4.5.1.2）

4.1.1 新的零件或產品（即未曾提供給長安鈴木的指定產品）；

4.1.2 產品經由設計變更而修改設計記錄、規格、材料時；

4.1.3 對以前提交產品的不合格處進行矯正；

4.1.4 下列情況應主動通知長安鈴木，並由長安鈴木決定是否提交 PPAP：

1. 和以前批准的零件或產品相比，
2. 使用了其它不同的加工方法或材料； 使用新的或改進的工裝（不包括易損工裝）、模具、包括附加的或替換用的工裝；
3. 在對現有的工裝或設備進行翻新或重新佈置之後進行生產；
4. 生產是在工裝和設備轉移到不同的工廠或在一個新增的廠址進行的；
5. 二次供應商對零件、非等效材料或服務（如：熱處理、電鍍）的更改，可能影響長安鈴 木的裝配、成型、功能、耐久性或性能的要求；
6. 在工裝停止批量生產達到或超過 12 個月以後重新啟用而生產的產品；
7. 涉及到由內部製造的或由二次供應商提供產品和過程更改，當這些部品可能會影響到銷 售產品的裝配性、成型、功能、性能和 / 或耐久性時；
8. 新技術的採用（不影響接受準則）。

4.1.5 長安鈴木認為必要時。

4.2 確定提交 PPAP 等級

4.2.1 長安鈐木技術中心在與供應商所簽定的《試製技術協定》時識別產品特性並確定提交的

PPAP 等級， PPAP 各等級需提交的資料內容按下表：

NO	提交的文件資料項目	审批部门	提交阶段	提交等级				
				等级 1	等级 2	等级 3	等级 4	等级 5
1	设计记录	技术中心	3 套试装	R#	R#	S#	★#	R#
2	工程更改文件，如果有	技术中心	3 套试装	R	S	S	★	R
3	长安铃木工程批准，如果要求	技术中心	3 套试装	R	R	S	★	R
4	设计 FMEA	技术中心	3 套试装	R	R	S	★	R
5	过程流程图	技术中心	3 套试装	R	R	S	★	R
6	过程 FMEA	技术中心	3 套试装	R	R	S	★	R
7	尺寸测量报告（n=3）	品质检查课	3 套试装	R	S	S	★	R
8	材料、性能测试结果	技术中心	3 套试装	R	S	S	★	R
9	初始过程研究（重要特性方面 Cpk≥1.67）	品质检查课	96 套试装	R	R	S	★	R
10	测量系统分析研究	品质保证课	96 套试装	R	R	S	★	R
11	具有资格的实验室文件	技术中心	3 套试装	R	S	S	★	R
12	控制计划	技术中心	3 套试装	R	R	S	★	R
13	零件提交保证书（PSW）***(格式见附件 2)***	技术中心	3 套试装	S	S	S	S	R
14	外观件批准报告（AAR），如果有	品质检查课	3 套试装	S	S	S	★	R
15	散装材料要求检查表	生产课	3 套试装	R	R	R	★	R
16	生产件样品	品质检查课	3 套试装	R	S	S	★	R
17	标准样品	品质检查课	3 套试装	R	R	R	★	R
18	检查辅具	品质检查课	3 套试装	R	R	R	★	R
19	检查标准	品质检查课	96 套试装	S	S	S	S	S

第五章

(對應 ISO/TS 16969:2009 條文 - 7.3)

1・控制目的

明確試裝流程及相關職責，確保試裝的順利實施和對試裝內容的可追溯性。

2・適用範圍

2.1 新的零件或產品（即未曾提供給長安鈐木的指定產品）；

2.2 產品經由設計變更而修改設計記錄、規格、材料時；

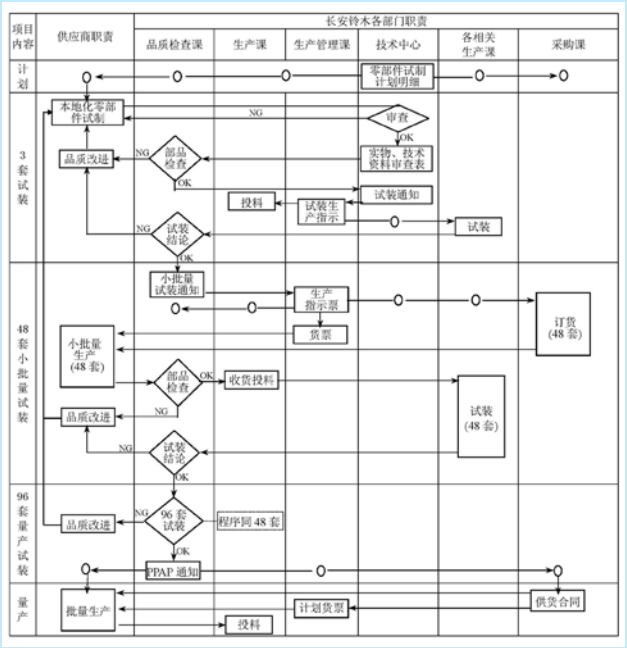
2.3 對以前提交產品的不合格處進行矯正；

2.4 下列情況應主動通知長安鈐木，並由長安鈐木決定是否進行初物試裝：以下情況提交長安鈐木技術中心：

1. 和以前批准的零件或產品相比，使用了其它不同的加工方法或材料；

2. 二次供應商對零件、非等效材料或服務（如：熱處理、電鍍）的更改，可能影響長安鈴 木的裝配、成型、功能、耐久性或性能的要求；
3. 涉及到由內部製造的或由二次供應商提供產品和過程更改，當這些部品可能會影響到銷 售產品的裝配性、成型、功能、性能和 / 或耐久性時；
4. 新技術的採用（不影響接受準則）。 以下情況提交長安鈴木品質檢查課：
5. 使用新的或改進的工裝（不包括易損工裝）、模具、包括附加的或替換用的工裝；
6. 在對現有的工裝或設備進行翻新或重新佈置之後進行生產；
7. 生產是在工裝和設備轉移到不同的工廠或在一個新增的廠址進行的；
8. 在工裝停止批量生產達到或超過 12 個月以後重新啟用而生產的產品；

3・管理流程



4・執行方法

4.1 試裝部品的收貨

4.1.1 試裝部品首次送樣數為 5 車付，由供應商免費提供，其中 2 車付用於破壞性檢查或初物的 保留，3 車付用於部品檢查合格後的試裝。

4.1.2 供應商每次送試裝部品時應填寫《初物票》，《初物票》應牢固地置於試裝部品之上。（《初 物票》內容及格式見附件 3）

4.1.3 3 套試裝部品由技術中心專職人員根據試裝計畫通知供應商送樣、收貨並對相關技術資 料進行確認，但因停產整頓的 3 套試裝部品由品質檢查課相關專職人員通知送樣、收貨並對相 關技術資料進行確認。

4.1.4 48 套、96 套試裝部品由採購課根據生產管理課計調系《生產指示票》採購部品，由相關生產課根據《試裝指示票》和《貨票》收貨。

4.2 送檢 供應商提供的試裝部品由技術中心專職人員或各相關生產課收貨後及時通知品質檢查課相關檢驗人員。檢驗人員對部品檢查完畢後，將部品檢查結果填寫在初物票上並簽名。

4.3 投料試裝

4.3.1 初物 3 套試裝由技術中心專職人員根據品質檢查課對部品檢查合格後（含可特殊採用品） 填寫《試裝通知書》；但因批量供貨出現品質問題被停貨整頓後恢復的 3 套試裝，由品質檢查 課相關專職人員填寫《試裝通知書》。生產管理課計調系根據《試裝通知書》安排 3 套試裝並 發《試裝指示票》。

4.3.23 套試裝合格後，48 套試裝和 96 套試裝部品原則上由品質檢查課根據部品當地語系化的進度 安排和部品必要的市場考核時間等確定試裝時間並聯絡生產管理課進行。

4.4 試裝結論

4.4.1 試裝結論分 3 套、48 套和 96 套試裝結論，由品質檢查課負責組織相關部門作出並填寫《試裝結論表》。3 套試裝結論是試裝部品是否進入小批量試裝階段的重要依據，96 套試裝結 論是試裝部品是否可進入批量生產的重要依據。

4.4.2 品質檢查課根據批准的 96 套試裝結論及相關部門對 PPAP 資料的審批結果，對《零部件 PPAP 批准通知》進行批准，並由技術中心統一發放給供應商及長安鈴木相關部門。

4.5 量產

採購課根據《試製技術協定》和《零部件 PPAP 批准通知》與供應商簽定供貨合同；生產 管理課根據《零部件 PPAP 批准通知》和生產情況安排具體的量產時間並提前通知相關部門。

第六章

(對應 ISO/TS 16969:2009 條文 - 7.5.4)

第六章 初期流動管理

1・目的 供應商在新開發部品的量產初期，對生產的部品的品質管制做出規定，使量產初期的產品品質能夠儘快穩定。

2・範圍

2.1 本要領適用于供應商在新開發部品量產初期時使用。

2.2 本要領初期流動管理的時間是指從量產開始的 3 個月。

2.3 本要領初期流動管理的制定部門是供應商品質部門。

3・定義 無

4・管理流程

無

5・管理辦法

5.1 初期流動管理的計畫立案

5.1.1 部品從長安鈴木試裝開始，聯絡各相關部門對初期流動物件的部品，指示初期流動管理的 實施。

5.1.2 確定初期流動品質管制的專案和實施計畫書及解除申請書，並發送到各相關部門，各相關 部門負責起草和調整管理專案，形成最終實施檔，並經過主管領導批准後實施。

5.1.3 初期流動管理的專案必須包含以下專案： a. 批次管理。 b. 工程能力的調查。（確定重點檢查項目，檢查方法及檢查頻率） c. 不良項目的發現及改善。d. 試生產期間不良項目的改善結果的確認。e. 初期流動中的檢查方法。

5.1.4 將初期流動管理計畫書及管理專案彙報長安鈴木品質檢查課。

5.2 品質管制的實施

5.2.1 以品質部門確認後的管理項目及實施計畫書及解除申請書為基礎進行初期流動管理。

5.2.2 指定初期流動管理的總負責人、具體責任部門、責任人及具體實施人員。

5.3 不良發生的處理

5.3.1 責任部門的負責人把握初期流動發生的不良，採取早期對策。

5.3.2 責任部門的負責人針對初期流動不良發生的情況以及對策內容，每天向主管部門進行匯 報。

5.3.3 主管部門把各部門的不良報告內容進行匯總，每天報告總負責人。

5.3.4 各相關部門負責人進行對策推進管理，謀求促進對策。

5.4 初期流動時間的解除

5.4.1 當滿足以下條件時，主管部門可發行解除申請書。 a. 工程能力滿足要求。 b. 試生產期間的不良項目已經得到有效改善，且效果得到認可。 c. 初期流動期間被指出的問題已經改善，且效果得到認可。

5.4.2 總負責人確認解除申請內容，判斷是否解除初期流動管理及解除時間，並將決定向長安鈴 木品質檢查課彙報，獲得同意後方可解除初期流動管理。

第七章

(對應 ISO/TS 16969:2009 條文 - 8.2.4)

第七章 進貨產品控制

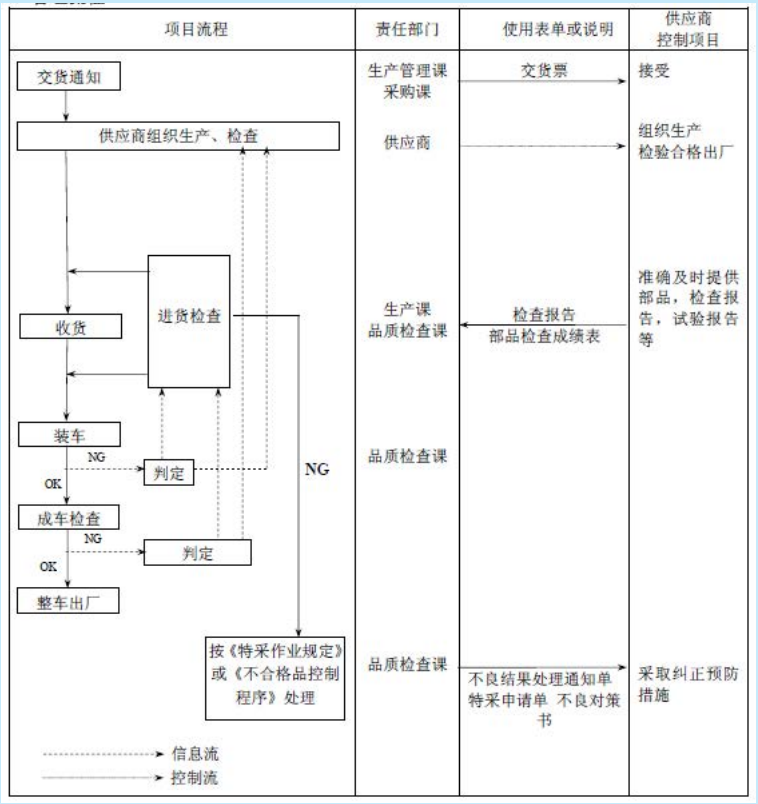
1. 目的：為了保證供應商供貨部品品質符合要求，防止不良品流入。

2. 範圍：應用於量產裝車及服務性所需的各種外加工部品。

3・進貨檢驗：長安鈴木以供應商對部品的檢查報告作為產品合格與否的基本依據，因此，供 應商必須向長安鈴木品質檢查課提交部品的檢查報告，供應商對自己按照雙方認可的技術標準 生產的合同貨物的品質負全面責任。長安鈴木在部品入廠到成車出廠的整個環節中，通過第 5 條的流程和第 7 條的檢查方式進行抽檢。

4・職責：生產管理系負責編制“交貨票”和通知供應商交貨，各相關生產課負責收貨， 檢查負責對部品實施進貨檢查。

5・管理流程



6・工作程式

6.1 交貨通知:生產管理課根據生產計畫編制“交貨票”，通知供應商供貨。

6.2 交貨：供應商交貨、各相關課負責收貨，部品的包裝和標識應該滿足長安鈴木的相關要求。

6.3 進貨檢查：為了確認供貨的量產部品是否符合品質要求而進行的實物檢查、試驗評價、報 告審核等檢查驗證性工作。

7・部品檢查報告的提交及檢查方式

7.1 供應商提交部品檢查報告的方式

供應商應按長安鈴木部品檢查標準（CSIS-P）的要求向長安鈴木定期提交產品的合格檢查 報告，其中〇 A 部品按每月、〇性 部品和〇 T 部品每三個月、一般部品每六個月提供一次，檢查報告 至少應包括以下資訊：生產廠家、產品名稱、產品件號、產品批次號、生產時間、檢查項目、 檢查資料、合格與否判定等。長安鈴木以此做為產品合格與否的判定依據，對不按時提交檢查 報告的，長安鈴木將視其產品為不合格產品，並按《特采作業規定》或《不合格品控制程式》 執行。

7.2 不良品跟蹤檢查

《不良品處理結果通知單》和《入廠控制委託票》作為跟蹤檢查的依據，從即日起將該部 品和檢查控制專案列入“不良品跟蹤檢查表”明細中，並實施為期 2 個月的跟蹤檢查。跟蹤檢 查除了對裝車現場已交貨部品實施外，還應對供應商的倉儲庫存以及現場庫存進行檢查。跟蹤 檢查頻次：第一周：1 次 / 天；第二周：2 次；第三周、四周：1 次；第二月：1 次，並將檢查 結果記錄在《不良品跟蹤檢查記錄 / 報告表》中，每月底評審是否可以結束跟蹤。原則上任何 一次不良都自動返回到第一周檢查。

7.3 試驗檢查

要求供應商按照長安鈴木部品檢查標準（CSIS-P）實施檢查，凡 CSIS-P 中有要求的試驗 專案，要求供應商至少每年提供一次試驗檢測報告。長安鈴木定期或不定期開展零部件的抽查 試驗檢測，對不合格的，供應商應賠償相關試驗檢測費用。

經檢查不合格但可特采使用的，按“特采作業規定”執行，經檢驗不合格且不能特采使用 的，按“不合格品控制程式”執行。

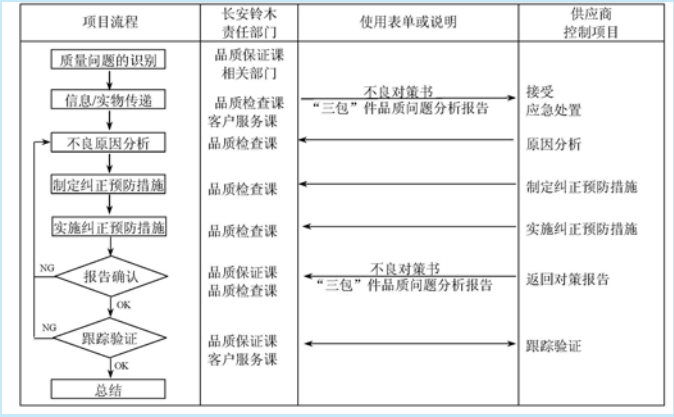
第八章

(對應 ISO/TS 16969:2009 條文 - 8.5.2)

第八章 糾正與預防措施

1・控制目的 防止已發生的實際品質問題的再發生、預防潛在品質問題的發生，明確糾正預防措施管理程式和工作職責。

2・管理流程



3・執行方法

3.1 在長安鈴木內發現品質不良： 在長安鈴木內發現部品品質不良時，品質檢查課將發行《不良品處理結果通知單》並向供應商發出《不良對策書》要求整改，供應商應立即作出反應，按《不良對策書》確定的 8 個步驟實施品質不良處理。（《不良對策書》的格式及填寫內容參考附件 5：《不良對策書》）。

3.2 在市場上發現的品質不良：

3.2.1 市場返回零件的領取： 根據基本合同的相關規定，供應商人員或其授權的人員應與長安鈴木品質檢查課人員一同對市場返回的零件狀態進行確認，並最終認領。確認狀態包括：

1. 是供應商生產的零件；
2. 該返回零件滿足三包期規定的時間及里程條件；
3. 具備完整的零件更換資訊；
4. 零件本身不存在影響功能分析的分解、拆卸及損壞。

如果將不滿足以上條件的零件領回，則此類零件不計入供應商申訴範圍，屬於供應商全部責任。

3.2.2 市場返回件的分析：

供應商應如實對返回的不良舊件進行再現試驗分析、對策，將分析結果、對策內容填寫在《三包件品質問題分析報告》、《市場回饋件檢查分析明細》中，在規定日期前返回到長安鈴木 品質檢查課。（具體格式詳見附件 6：《三包件品質分析報告》和附件 7：《市場回饋件檢查分析 明細》）。若長安鈴木要求供應商在“三包”件品質分析過程中有試驗要求的，供應商應積極 完成並提交相關實驗報告。

3.2.3 三包分析報告的確認： 供應商應在兩個月內返回三包分析報告，對於不按時返回三包分析報告以及分析不仔細、對策不充分、報告內容不完整規範或不真實的，長安鈴木將拒收其分析報告並可在零件領取之後的第三個月按照領回數量對供應商進行索賠。

3.2.4 品質申述：

1. 接受品質申述的前提條件：
   a 品檢課已認可供應商對市場返回件的分析方法及手段。
   b 供應商對屬於各方責任的零件已提出具體有效的對策。
   c 滿足其他申訴條件（保留實物、在申訴有效期內等）
2. 對於供應商認為的不屬於供應商責任的“三包”件，在 2 個月內（從報告實際返回日算 起）不能破壞或銷毀，長安鈴木將根據情況可能對這部分“三包”件予以核查確認。
3. 在核查過程中，如果發現在供應商申訴零件中，經過相關試驗證明確實仍然有供應商責 任的產品存在，則該批申訴零件全部判定為供應商責任。長安鈴木品質檢查課將根據供應商的 情況，將作出審核結果適用的期限（僅限於一次審核或使用與本年度）
4. 長安鈴木品檢課在接受供應商的品質申訴後，將根據供應商提交的報告以及必要時到廠 家現場確認的結果，填寫《三包件分析申訴回饋單》，對申訴結果給以書面的回復，並傳遞給 客戶服務課確認。審核結果根據情況可適用一次審核或本年度的責任判定。

3.3 在供應商內發現的品質不良： 供應商應建立並保持實施糾正和預防措施程式，為消除實際和潛在的不合格原因採取糾正和預防措施，並與問題的嚴重性及所承擔的風險程度相適應。對於已送達長安鈴木的部品如為危險批次時，必須和長安鈴木品質檢查課聯繫。

3.4 特別採用申請： 當不合格發生的數量較多、等待合格品的輸入時間較長、會對長安鈴木生產導致延遲但在裝配上、性能上、法規上都沒有什麼問題的情況下，可以向長安鈴木品質檢查課申請特別採用。對於特別採用申請書（見附件 8：《特采申請書》）要記入不合格內容、不合格件數、理由及批 次號等必要事項，必要時附加樣品。

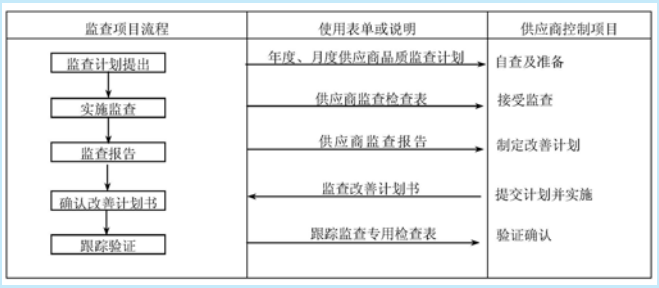
第九章

（對應 ISO/TS 16969:2009 條文 - 8.5.2）

第九章 供應商品質監查

1・目的 為了加強供應商的品質管理，提高產品品質，由長安鈴木品質保證課組織對供應商進行品質監查，考核供應商的品質管理水準及品質管制體系的運行狀態，其監查結果將納入供應商的年度綜合評價中。

2・管理流程



3・執行辦法

3.1 監查計畫：

3.1.1 定期監查

長安鈴木將根據供應商年度綜合評價結果和產品重要度決定監查頻次，原則上〇 A 部品供應 商每年一次；〇性 和〇 T 部品供應商每 2 年監查一次；一般部品供應商每 3 年監查一次。

3.1.2 臨時監查 當出現下列情況時，將對供應商實施臨時監查。

由於部品不合格造成市場信譽和成車品質異常時 部品工藝變更時 試生產（生產試製、批量試製）發生品質問題時 被列為年度高風險供應商時

3.2 監查內容（見附件 9: 供應商品質監查檢查表）

3.3 監查實施及報告： 長安鈴木品質保證課按照品質監查計畫，組織相關人員對供應商進行品質監查。監查結果以《供應商監查報告書》的形式報主管領導確認後通知供應商。對監查結果得分在 80 分以下的供應商，將要求其進行限期整改，並視整改狀況決定是否追加品質監查。如品質監查得分在 80 分以下，將取消其參加評選優秀供應商的資格。品質監查得分在 60 分以下的供應商，將視 情況建議取消其配套資格。長安鈴木品質保證課將在每季度末對本季度所有監查情況進行總結，並以《供應商監查通報》的形式在公司 TSCM 系統上進行發佈。

3.4 改善計畫書及驗證

對監查報告書中指出的問題，供應商要在指定日期前將改善的具體內容，以《供應商改善計畫書》的形式在其內部簽字確認後提交長安鈴木品質保證課確認。

長安鈴木在下一次監查時，品質保證課將根據改善實施計畫書的內容進行跟蹤確認，對不 完善的項目再次提出改善。

第十章

(對應 ISO/TS 16969:2009 條文 - 8.2.2)

第十章　　供應商產品審核

1・目的 為了加強供應商的品質管理，督促供應商按體系要求進行產品審核，並識別出產品與顧客要求的不符之處，長安鈴木將有重點地對供應商產品進行審核，以便從顧客的角度對重要的產品特性及其關鍵過程加以評價，並在必要時採取糾正措施。其審核結果將納入供應商的品質評 價中。

2・審核的實施及整改措施

2.1 審核計畫： 產品審核依據產品審核計畫，或者根據產品的實際品質狀況，提出產品審核申請，報請相關主管領導申請後實施。

長安鈴木將根據供應商年度品質評價、產品的重要性、現場及市場品質表現來制定供應商 的產品審核計畫。

產品審核人員向供應商發出產品審核通知，供應商接到產品審核通知後，應盡可能的安排 審核產品在審核之日的生產，並按通知要求做好審核資料的準備。

2.2 審核的實施： 長安鈴木產品審核只涉及少量的產品的部分重要特性，抽樣數量原則上不少於 3 件。根據缺陷可能產生的影響，將缺陷等級分為 A、B、C 級，在審核時可以不進行很耗時的耐久試驗等的檢查，在這種情況下，可以採用供應商對該產品的最新結果（自己或委託協力廠商的結果）。 重要特性包括，如：

1. 供應商的產品審核流程、產品審核執行情況及過去的審核記錄。
2. 圖紙、控制計畫、材料清單、作業標準、檢查標準等檔資料
3. 與顧客要求不符的特性及過去發生的顧客抱怨
4. 產品的外觀、包裝、標識及批次號、批次檢查報告
5. 相關尺寸（基本尺寸、性能尺寸、裝配尺寸等）
6. 材料（化學成分及物理性能）
7. 性能（型式及可靠耐久試驗）
8. 滿足這些產品品質特性相關的過程。

當準備交付的產品在供貨前發現有 A 和 B 級缺陷時，應通過有效的立即整改措施（隔離 / 挑選 / 全檢）防止提供有缺陷的產品，並及時採取必要的糾正措施。對出現的 C 類缺陷，應在 短期內和長安鈴木品質檢查課共同確定必要的措施。

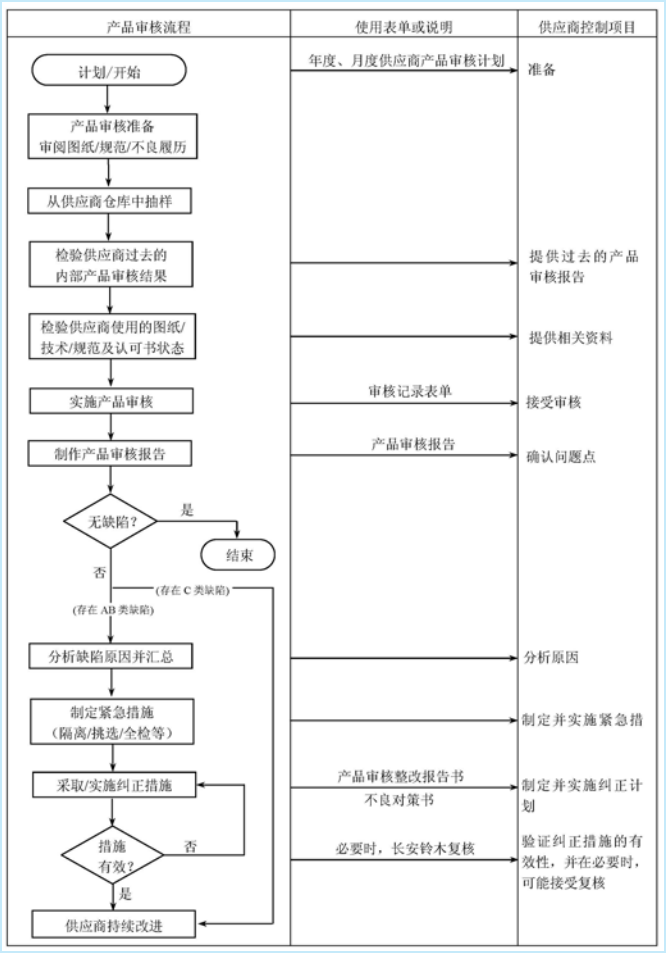
用於審核檢驗的零件直接從倉庫或準備交付顧客的原包裝中抽取。檢驗零件時，同時對檢 驗工具及方法進行評價。

長安鈴木實施的供應商產品審核是檢驗準備交付的產品與顧客要求是否一致，不計算品質 特徵值（QKZ）。

3・缺陷定級、決策、措施

缺陷级别	缺陷描述/后果	立即整改措施	后续整改措施
A	肯定会引起顾客投诉的缺陷： 1.Ⓐ部品Ⓐ项目 2.Ⓑ部品Ⓑ项目 3.Ⓒ部品Ⓒ项目 4.非常严重的外表面缺陷	1. 隔离、挑选涉及批次的所有零件 2. 通知长安铃木并评估风险 3. 在制造过程/检验过程采取纠正措施，有必要时进行全数检查 4. 对过程和成品采取更为严格的检验措施 5. 如有必要，入厂检查时进行全数检查	1.对过程/检验活动进一步分析 2.修订并实施纠正措施 3.提供过程能力证明 4.验证所采取措施的有效性 5.可能面临***停货整改、限期整改、特采***的处理结果 6.必要时，更改技术规范
B	可能会引起顾客投诉或不满的缺陷： 1. 预计功能可能会出现故障 2. 影响可使用性的缺陷		
C	其他缺陷： 1.对使用或性能无影响 2.不影响可使用性的缺陷	通知长安铃木，并提交整改报告	

4・實施流程


产品审核流程
使用表单或说明
供应商控制项目
计划/开始
产品审核准备
审阅图纸/规范/不良履历
从供应商仓库中抽样
检验供应商过去的
内部产品审核结果
检验供应商使用的图纸/
技术/规范及认可书状态
实施产品审核
制作产品审核报告
无缺陷?
是
结束
否
(存在 C 类缺陷)
(存在 AB 类缺陷)
分析缺陷原因并汇总
制定紧急措施
(隔离/挑选/全检等)
采取/实施纠正措施
措施
有效?
否
是
供应商持续改进
年度、月度供应商产品审核计划
准备
提供过去的产品
审核报告
提供相关资料
审核记录表单
接受审核
产品审核报告
确认问题点
分析原因
制定并实施紧急措
产品审核整改报告书
不良对策书
制定并实施纠正计
划
必要时，长安铃木复核
验证纠正措施的有
效性，并在必要时，
可能接受复核

第十二章

(對應 ISO/TS 16969:2009 條文 - 8.2.1)

第十二章　供應商評價

1・目的 為了監控供應商供貨品質的表現，促進供應商不斷提高供貨品質，長安鈴木每半年和全年根據供貨的品質情況對供應商進行定期品質評價。並且為了進一步提高供應鏈的管理水準，長安鈴木全年根據品質評價、品質監查結果、交付評價、服務評價結果進行供應商綜合評價。

2・定義

2.1 品質評價：長安鈴木每半年對供應商的現場實物品質和市場實物品質進行評價。

2.2 綜合評價：長安鈴木每年度對供應商的現場和市場實物品質、品質監查、交付品質、服務 品質等進行綜合評價。

3・品質評價辦法

3.1 品質評價是對供應商半年和全年所供產品的現場實物品質和市場實物品質進行評價，其計 算公式為：（滿分 100 分）

評價分數 =100- 現場不良實物扣分 - 市場不良實物扣分 - 停退貨評價扣分

3.2 現場不良實物的評價 現場不良率 = 長安鈴木公司內發生的不良件總數 / 供貨總數 ×100%

A. 不良件總數 = 入廠檢查和現場裝車不良數 + 不良品處理通知單中的不良數，注：試裝 的零部件不記入考核。

B. 現場不良率在 0.2% 至 5% 的範圍內，每增加 0.1% 則扣分增加 0.5 分；現場不良率 >5% 時，一次性扣 30 分。

3.3 市場不良實物的評價 市場不良率 = 供應商從長安鈴木領走的三包不良件總數 / 供貨總數 ×100% A. 市場不良率超標評價（M）

M= 本年度實際市場不良率 - 市場不良率目標值（單位：%，本文件中 M 的含義相同）。每個產品的市場不良率目標值在每年初供應商大會發佈的《供應商業績表》中已 經給出。

最大超标率（M）	扣　分	一年内累计最大扣分值
0<M≤0.1%	5	≤25
0.1%<M≤0.3%	10	
0.3%<M≤0.5%	15	
0.5%<M	25	

B. 產品市場超標種數評價（C）

產品市場超標種數評價 (C)= 本年度超標項的百分比 - 上年度超標項的百分比。超標項的百 分比 = 未達到市場不良率的供貨部品種類數 / 供貨部品總的種類數

超标项达标率（C）	扣　分	一年内累计最大扣分值
0≤C≤30%	5	≤15
30%<C≤60%	10	
60%<C≤100%	15	

3.4 長安鈴木公司現場裝車或市場發生品質問題而引發拒收的評價

拒收内容	次数	扣分	一年内累计最大扣分值
更换/返修/退货	1 次	5	≤20
减货/停货	1 次	10	

注：

因重大品質問題已經構成停貨條件，但由於其它因素而無法停貨的（如獨家供貨的供應 商）按照停貨處理方式來扣分；

在試驗中發生重大不良，因試驗評價已經扣分，則不對其停貨進行扣分。

3.5 供應商品質等級的劃分

品 质 等 级	等 级 要 求	评 价
A（优秀）	评价分数≥95	好
B（良好）	80≤评价分数<95	
C（一般）	65≤评价分数<80	
D（差）	评价分数<65	差

現場實物品質和市場實物品質的具體狀況品質檢查課將以供應商《品質業績表》的形式， 每半年通知各供應商，並作為年度對供應商綜合評價的考核項目之一。

4・綜合評價

4.1 供應商綜合評價除了包含以上品質評價結果以外，還包含交貨品質、服務品質、品質監查、 試驗評價。

其計算公式如下： 綜合評價得分 =（品質評價得分 ×60%+ 交付品質評價得分 ×20%+ 服務品質評價得分 ×20%）

×80%+ 品質監查評價得分 ×20%- 試驗扣分

4.2 交貨品質考核辦法

4.2.1 交貨評價得分計算公式：（滿分 100 分） 交貨品質評價得分 =100- 當年所有扣分折算之和

项目	扣分内容	扣分值
1、包装容器：	同一配套件包装容器颜色、大小、装容量不一致。	1-4
	未定期对包装容器进行清洁、维修、维护、更换。	1-4
	内包装（如塑料袋）上标识与实际装容量不一致。	2
	使用过程中，有泄漏、变形、破损、划伤、锈蚀现象。	1-4
2、交货准确	未能按交货计划所确定的交货时间交货。	4
	实际交货数量与交货票数量不一致。	2
	试装件交货不及时准确，没有正确附加明显标识（如初物票、新品标识等）。	2
	不良品退换不及时（不良品发生之日起，三个工作日内完成退换），不配合生产课维修不良品工作。	2-4
3、现场配合	送货车辆未在指定区域按规定停放。	2
	交货人员未按公司要求规范着装，有违规行为。	1-2
	不遵守现场管理制度，不按到货先后顺序交货，违反工作流程。	2
4、计划执行	因供应商责任，造成其全年配套计划未能按时按量完成，根据未完成情况按比例扣分。	1-15
	不配合做好配套件的在库量普查及信息沟通。	2-4
5、交货异常	因生产线缺件造成紧急交货，供应商未积极配合，在规定时间内未能及时送到。	5-10
	因供应商的违约造成我公司生产线异常运行。	5-10
6、异常对策	对于交货过程中出现的违约行为，视情节轻重、生产线受损程度向违约方出具《交货异常对策书》。	2
	违约方在收到《交货异常对策书》后，在规定时间内未按流程完成相关工作。	8
	经确认对策措施不到位或未认真实施的。	10

4.2.2 考核

生產管理課將根據供應商交貨品質匯總情況，以年度為單位做出相應的評價。

4.3 服務品質考核辦法

4.3.1 評價得分的計算公式：滿分 100 分

評價分數 =100-（4.3.2.1 至 4.3.2.4 扣分之和）

4.3.2 一年內扣分計算方法：

4.3.2.1 未按要求時間對售後維修舊件進行確認、清退，則按如下評價點：

未按时间要求进行确认、清退	扣　分	一年内累计最大扣分值
1 次	5	≤20

4.3.2.2 未按要求對維修舊件認真進行品質分析及返回分析報告，則按如下評價分：

协作内容	扣　分	一年内累计最大扣分值
《不良对策书》、《三包件品质分析报告》或双方约定事项等	1	≤15

4.3.2.3 未實事求是分析維修舊件品質問題，由按如下評價分：

未实事求是分析维修件	扣　分	一年内累计最大扣分值
1 次	5	≤20

4.3.2.4 未按時返回索賠單，則按如下評價分：

未按时返回索赔单	扣　分	一年内累计最大扣分值
1 次	3	≤20

4.3.4 供應商售後服務品質評定結果于年底由客戶服務課負責收集評定。

4.4 品質監查評價得分

4.4.1 監查評價得分的採用：以最近一次的品質監查評價得分進行評價。

4.4.2 品質監查結果評價得分：由品質保證課根據監查計畫到供應商現場實施監查的結果評價 得分。

計算公式：品質監查評價得分 =（監查合格點數量 / 監查總項目數）× 100

4.4.3 未實施品質監查時的監查評價得分

实际运行的质量体系(三方认证)	未实施品质监查的监查评价得分
ISO/TS16949	80
ISO9000	70
其余体系或未通过体系认证	60

4.5 試驗評價扣分

4.5.1 新產品開發和試裝試驗時發現的問題，不參與試驗評價扣分。

4.5.2 試驗評價扣分 試驗評價扣分包含整車試驗評價的零部件不良扣分及部品試驗評價不良扣分。

故 障 等 级	扣 分
一类故障	30 分/次
二类故障	15 分/次
三类故障	3 分/次

注：試驗評價中已經扣分的部品可免除該部品因此次試驗不合格造成的停貨扣分。

4.6 優秀供應商與高風險供應商評選 品質保證課將依據綜合評價的情況進行排名，並將作為評選優秀供應商、高風險供應商的主要依據。

第十三章

(對應 ISO/TS 16969:2009 條文 - 8.3)

1. 目的：對因產品品質問題給長安鈴木造成的損失進行賠償；
2. 方法：詳見《國內零部件及材料採購基本合同》第 17 條；
3. 長安鈴木將每月對發生索賠的供應商進行公佈。

2.10 海馬汽車集團股份有限公司

海馬汽車在 TS 16949 : 2009 條文的基礎上額外的客戶特殊要求 (CSR) 明細 (以下資料節錄自供方質量控制手冊 - 動力總成零件) :

第三章 第三節

(對應 ISO/TS 16969:2009 條文 - 4.2.3)

3.3 文件控制 (ISO/TS16949 : 2009 cl.4.2.3)

當供方使用海馬轎車發動機的文件時 , 必須確保使用適當的版本。最新版本可以從海馬轎車發動機獲得。

全部零件 / 產品的文件 (例 : 產品圖樣、工裝圖樣、控制計劃、作業指導書等) 必須保存到該零件 (或系列零件) 滿足生產和服務要求的時間後再加一個日曆年。視為供應商默認而保持扣分，扣分將在月底形成月度評價結果。

第三章 第四節

(對應 ISO/TS 16969:2009 條文 - 4.2.4

3.4 記錄控制 (ISO/TS16949 : 2009 cl.4.2.4)

3.4.1 供方應指定質量記錄控制的責任人。

3.4.2 工裝樣件檢驗和試驗記錄、生產件批准記錄、APQP 過程記錄、採購單、更改通知單等必須保存到該零件 (或系列零件) 滿足生產和服務要求的時間後再加一個日曆年。

其他記錄保存期限不小於“表 1 : 記錄保存年限”的規定。

3.4.3 與訴訟、召回活動等有關的文件，不管指定的保存期如何，文件應保存至問題解決後。

3.4.4 要求保存的零件 / 產品的文件記錄包括分承包方對應的記錄。

3.4.5 記錄保存期開始於記錄作成之時並按指定期限保存 (例 : 檢驗 / 試驗記錄，特許申請，生產過程的記錄)

表 1：記錄保存年限

編號	文件	最短保存期（年）		備注
		A,AR 級零件	B,C 級零件	
1	供方質保責任人註冊表	10	10	包括修訂的文件
2	內部質量體系審核記錄	3	3	
3	管理評審記錄	3	3	
4	檢驗和試驗記錄	10	3	進料，過程，出貨，年度計劃，材料，性能和耐久性檢驗 / 試驗
5	不合格品處理記錄	10	3	讓步、返修、報廢
6	內部批次記錄	10	2	原料批、爐批、加工批的切換記錄，流程卡等
7	交付批次記錄	10	2	交付海馬轎車的日期、數量和批號
8	生產過程記錄	10	2	生產條件，使用設備，使用裝置，檢驗 / 試驗設備的點檢、更換等
9	糾正和預防措施記錄	10	1	工廠和市場質量問題
10	特許申請	3	3	供方超差產品發貨申請單

第三章　第五節

（對應 ISO/TS 16969:2009 條文 - 5.2; 8.2.4; 8.5.1）

3.5 以顧客為關注焦點（ISO/TS16949：2009 cl.5.2、8.2.4、8.5.1）

供方必須通過持續改善，證實顧客滿意度的提高，並在其質量體系運行中被證實。

海馬轎車發動機通過組織生產件批准（PPAP），工程監察等活動，獲取證據證實供方質量體系的有效性。

供方應有文件化的系統以監測海馬轎車發動機方面的抱怨並採取適當的糾正措施，必須採取預防措施防止將來可能的海馬轎車發動機的抱怨。

第三章　第六節

(對應 ISO/TS 16969:2009 條文 - 5.4.1; 8.2.1; 8.4)

3.6 質量目標（ISO/TS16949：2009 cl.5.4.1）

3.6.1 海馬轎車發動機每年提出年度質量目標，該質量目標適用於所有供方，供方應該對其進行分解，研究並採取適當的措施對策以達成此目標。當要求時，供方應以適當的文件向海馬轎車發動機品管部提交達成此目標的措施對策及質量改善路徑圖以進行審核和評價。

3.6.2 供方在其質量目標上所達成的業績將作為海馬轎車發動機供方評定體系中對供方評定及撤消的一項最重要的依據，詳情參閱海馬轎車發動機編制的“供方評價控製程序”、“供方工程監察程序”。

一般的質量目標包括：

●月度流入不良 PPM： 專指在海馬轎車發動機範圍內的不良。

$$\text{計算方法：PPM 值} = \frac{\text{不合格品數}}{\text{裝機數}} * 1000000$$

注：① 不合格品數 = 當月裝配、熱試過程隔離的不能用於裝機的零件總數（不包括讓步、返修的數量）；

② 裝機數 = 當月累計下線合格台數 x 單台用量；

③ 月度 PPM 不用於考核缸體、缸蓋、曲軸、軸承蓋毛坯以及氣門座和氣門導管。

●月度整機流入整車不良 PPM：專指在海馬轎車發動機範圍外的整車裝配不良。

$$\text{計算方法：PPM 值} = \frac{\text{不合格品數}}{\text{流出數}} *1000000$$

注：① 不合格品數 = 當月導致車間發生額外返修費的 LP 件不良數

② 流出數 = 當年（往前推 12 個月）總的 LP 件供貨零件數

③ 該值為累計平均值，累計區間為一年，每月統計一次；供貨不足 1 年的逐月累計，供貨一年以上的取後 12 個月為統計區間；

●月度市場流出不良 PPM：專指在海馬轎車發動機範圍外的銷售、售後不良。

$$\text{計算方法：PPM 值} = \frac{\text{不合格品數}}{\text{流出數}} * 1000000$$

注：① 不合格品數 = 當月售後發生理賠的 LP 件不良數
② 流出數 = 當年（往前推 12 個月）總的 LP 件供貨零件數
③ 該值為累計平均值，累計區間為一年，每月統計一次；供貨不足 1 年的逐月累計，供貨一年以上的取後 12 個月為統計區間；

●毛坯不良率（缸體、缸蓋、曲軸毛坯）：
計算方法：

$$\text{毛坯不良率} = \frac{\text{料廢毛坯總數}}{\text{下線合格毛坯總數} + \text{料廢毛坯總數} + \text{工廢毛坯總數}} * 100\%$$

●工程監察之過程審核評分：
海馬轎車發動機每年一次組織評審組按“審核報告”（附錄 2）評分。
3.6.3 海馬轎車發動機定期向供方發布質量業績表（包括 PPM（每月）、質量考評得分（每年）等），描述其質量業績。

第三章　第七節

（對應 ISO/TS 16969:2009 條文 - 5.5.2）

33.7 管理者代表（ISO/TS16949：2009 cl.5.5.2）

每一供方應必須指定一名質量管理責任人作為管理者代表，負責促進質量保證（QA）活動，並向海馬轎車發動機品管部註冊，註冊內容參見附錄 4 一《供方質量保證責任人註冊表》填寫要領。

對直接向海馬轎車發動機交付組件或分裝零件的分承包方，供方也應將其包含在《供方質量保證責任人註冊表》中。

註冊人員變動，供方應在 10 日之內通知海馬轎車發動機品管部並重新提交新的《供方質量保證責任人註冊表》。

12家內地整車廠之客戶特殊特性(CSR)明細

第三章　第八節

(對應 ISO/TS 16969:2009 條文 - 5.5.2)

3.8 質量代表（ISO/TS16949：2009 cl.5.5.2.1）

供方在指定管理者代表的同時，應指定一名與海馬轎車發動機緊密聯繫的質量代表，若干名質量聯絡員，並在《供方質量保證責任人註冊表》註冊。

質量聯絡員應駐鄭州，發生質量問題時，質量聯絡員應到現場證實並調查分析問題，落實臨時和永久性糾正措施。

第三章　第九節

(對應 ISO/TS 16969:2009 條文 - 5.1; 5.6)

3.9 管理評審（ISO/TS16949：2009 cl.5.6、5.1）

供方必須召開月度績效會議，對其質量目標達成情況進行評價，海馬轎車發動機提供的月度質量目標達成情況應作為其管理評審的輸入之一。

第三章　第十節

(對應 ISO/TS 16969:2009 條文 - 6.2.2)

3.10 培訓（ISO/TS16949：2009 cl.6.2.2.2、6.2.2.3、6.2.2.4）

供方必須確保只有經過培訓並合格的人員才可以參與對海馬轎車發動機產品質量有影響的活動（如設計、製造、檢驗等）。培訓的內容至少包括：

- ISO/TS16949：2009 質量管理體系

第三章　第十二節

(對應 ISO/TS 16969:2009 條文 - 6.3.2; 7.2.3)

3.12 應急計劃（ISO/TS16949：2009 cl. 6.3.2）

供方必須形成文件，在發生緊急情況（生產中斷、關鍵設備故障、整批發生不良等）後的 24 小時之內通知海馬轎車發動機採購部，必須將問題的真實情況傳達給海馬轎車發動機，並且採取緊急的行動確保海馬轎車發動機的供貨。

第三章　第十三節

(對應 ISO/TS 16969:2009 條文 - 6.4)

3.13 生產現場的清潔（ISO/TS16949：2009 cl. 6.4.2）

供方應形成文件，對生產現場進行“整理、整頓、清掃、清潔、素養”的 5S 管理，此要求包括對產品及零件周轉箱的要求。

第三章　第十四節

(對應 ISO/TS 16969:2009 條文 - 7.4.3)

3.14 入廠產品的質量（ISO/TS16949：2009 cl.7.4.3.1）

供方必須形成文件化的質量標準，對入廠產品及原材料進行與其風險和質量影響相適應的檢驗和試驗，並參考本手冊的要求對分承包方質量進行管理。

檢驗結果作為對分承包方評價的關鍵指標。

第三章　第十五節

(對應 ISO/TS 16969:2009 條文 - 7.5.2; 8.1.1; 8.1.2; 8.2.3)

3.15 過程的監視和測量（ISO/TS16949：2009 cl.8.2.3.1、7.1.2、7.5、7.5.2）

3.15.1 採用統計過程控制（SPC）的過程生產的產品，當證實過程穩定和過程能力 Cpk≥1.33，並識別和消除了特殊原因後，必須使用下表對過程輸出採取適當的措施：

<table>
<tr><td rowspan="2">使用判異原則對最近點的判斷結果</td><td colspan="3">對過程輸出採取的措施</td></tr>
<tr><td>Cpk 小於 1.33</td><td>Cpk1.33 ～ 1.67</td><td>Cpk 大於 1.67</td></tr>
<tr><td>受控</td><td>100%檢查</td><td colspan="2">接收產品，持續減少產品變差</td></tr>
<tr><td>過程失控，超出規範的可能性減小樣本中的所有個體都在規範之內。</td><td>識別特殊原因
100%檢查</td><td colspan="2">應用學到的經驗，以改進相似的過程性能</td></tr>
<tr><td>過程失控，超出規範的可能性增大。樣本中的所有個體都在規範之內。</td><td>識別並糾正特殊原因
100%檢查</td><td>從上一個受控點開始作 100 % 檢驗</td><td>接收產品，不斷減少過程變差</td></tr>
<tr><td>過程失控，並且樣本中有一個或多個個體超出規範</td><td>識別並糾正特殊原因
100%檢查</td><td colspan="2">從上一個受控的樣本後開始對生產的產品作 100%檢驗。</td></tr>
</table>

3.15.2 未採用統計過程控制方法進行控制的特性，應選用下列一種或多種控制方法：

a. 對技術特性進行抽樣驗證；

b. 按常規的基本要求對產品進行審核；

c. 週期性的全尺寸檢驗和實驗室試驗。

當發現不合格時，必須採取下列措施：

結果	對過程的措施	對批次的措施
沒有不合格件	繼續運行	接收
一件或多件不合格品	查出根源並糾正過程	從上一合格批次開始作 100%檢查

注：抽樣驗證推薦的樣本容量

狀態	I	II
每批最小樣本	200	50
轉換到其他狀態的條件	如果在連續 20 批產品中樣本都合格，允許狀態 II	如果有任意抽樣中發現任何不合格產品，要求轉到狀態 I

樣本容量不隨批量大小改變：如果批量大小等於或小於抽樣數，則做100%檢查，每批數量不得超過
8 小時或一天的產量，以其中小者為準。
首次申請產品驗證採取狀態 I 。

第三章　第十六節

(對應 ISO/TS 16969:2009 條文 - 7.5.1; 8.2.4; 8.3)

3.16 產品的監視和測量（ISO/TS16949：2009 cl.8.2.4、8.3.4）

3.16.1 年度全尺寸檢驗和功能試驗（ISO/TS16949：2009 cl. 8.2.4.1）

一般零件全尺寸檢驗和功能驗證（按材料和功能參數），應每年至少要進行一次。缸體、缸蓋、曲軸毛坯每 2 萬件進行一次全尺寸檢驗和功能驗證（按材料和功能參數）。當要求時，供方應向海馬轎車發動機品管部提交全尺寸檢驗和功能驗證的報告及樣品、試樣、試棒等用於復驗。

3.16.2 工程規範試驗要求

工程規範的試驗頻率要求必須在控制計劃中清晰標明，對這些頻率的任何修訂需要有海馬轎車發動機開發部的批准。

試驗失效，供方必須立即停止生產發運，並採取抑制措施。同時，供方必須立即通知海馬轎車發動機採購部和發動機品管部。對於可疑產品禁止在未經挑選或返工以排除失效原因前發運。對任何已發運的可疑批必須進行標識。在試驗失效的根本原因確定、糾正和驗證後，供方才能恢復發運。

這些工程規範要求同樣也適用於分承包方。

海馬轎車發動機保留要求使用獨立的第三方檢查的權利，以確保只有合格產品才能發運至海馬轎車發動機。

第三章　第十八節

(對應 ISO/TS 16969:2009 條文 - 5.6; 7.5.1)

3.18 預防性維護（ISO/TS16949：2009 cl.7.5.1.4）

供方必須有文件化的預防性維護系統，這必須包括對有計劃的維護活動的及時評審和文件化的待處理事件的措施計劃，其結果必須納入管理評審。當要求時，供方應向海馬轎車發動機品管部提交相關文件。

第三章　第十九節

(對應 ISO/TS 16969:2009 條文 - 7.6.1)

3.19 測量系統分析（ISO/TS16949：2009 cl.7.6.1）

所有根據控制計劃用於檢查海馬轎車發動機零件 B 類以上特性的量具必須依據測量系統分析手冊（MSA）對量具進行分析，以判定測量的能力。

分析報告有效期應小於 1 年。

設備、人員變動時應重新分析。

任何不符合 MSA 規範要求的測量系統投入使用，必須經過海馬 (鄭州) 動力品管部的批准。

計量型量具研究應該使用 10 個零件，3 個操作員，3 次。

計數型量具研究應該使用 50 個零件，3 個操作員，3 次。

第三章　第二十節

(對應 ISO/TS 16969:2009 條文 - 7.6.3)

3.20 實驗室要求（ISO/TS16949：2009 cl.7.6.3）

在經過海馬轎車發動機開發部的文件化批准，或符合最新 ISO/IEC17025(或等同的國家標準) 時，供方可以請託商業 / 獨立實驗室進行試驗及提供報告。否則海馬轎車發動機不認可試驗結果。

第三章　第二十二節

(對應 ISO/TS 16969:2009 條文 - 8.3; 8.5.2)

3.22 不合格品的控制（ISO/TS16949：2009 cl.8.3、8.5.2）

供方必須建立文件化的不合格品控製過程和系統，防止向海馬轎車發動機發運不合格品。

供方在《供方質量保證責任人註冊表》註冊的人員應培訓“不合格品控製程序”，在海

馬轎車發動機發現不合格時配合處理。

供方發現不合格並且缺陷產品很可能已經運往或交付海馬轎車發動機，供方應立即書面

通知海馬轎車發動機品管部啟動不合格品控製程序。

供方發現不合格或狀態未知（如在預定日期未完成試驗等），但缺陷產品未交付，供方

應填寫“供方超差產品發貨申請單”向海馬轎車發動機品管部申請特許批准。

僅當此不符合對以下方面沒有影響時才能考慮特許批准：

- 海馬轎車的品牌和 / 或產品的市場效應；
- 零件 / 產品的功能、性能或壽命（應提交證據）；
- 海馬轎車發動機內零件 / 產品的裝配作業。

如果還有足夠的存貨，海馬轎車發動機將不會批准特許申請。特許申請只在批准的數量

和 / 或時間段有效。獲批准的特許申請不能申請對設計圖紙或規范進行永久更改，（圖紙或

規範有問題除外）。

供方超差產品發貨申請單的填寫參考附錄 5 一《供方超差產品發貨申請單》填寫要領。

第三章　第二十三節

(對應 ISO/TS 16969:2009 條文 - 8.5.2; 8.5.3)

3.23 糾正和預防措施（ISO/TS16949：2009 cl.8.5.2、8.5.3）

供方必須建立文件化的糾正和預防措施控製過程和系統，保證不良原因得到識別和防止，保證海馬轎車發動機的“糾正措施要求”、“預防措施要求”（附錄 6）得到執行。

海馬轎車發動機要求對問題使用“分析問題五原則表”（附錄 7）分析，以求找到體制上的根本原因。

供方在《供方質量保證責任人註冊表》註冊的人員應培訓“糾正和預防措施程序”及“五原則表填寫要領”等文件。

3.23.1 防錯

供方應理解和應用防錯技術，並通過顧客反饋、缺陷零件分析、錯誤報告、SPC、FMEA 等查找不良產生的根本原因並採取對策措施，考慮在所有可能產生問題的場所採用相應的防錯方法。

3.23.2 退貨產品試驗 / 分析

供方必須有文件化的系統對海馬轎車發動機的退貨進行內部通知、分析和溝通。必須將分析結果與海馬轎車發動機發動機開發部和品管部進行溝通。

退貨產品試驗結果應該包含在月度質量分析報告中，並作為管理評審的一部分資料。

第三章　第二十五節

(對應 ISO/TS 16969:2009 條文 - 7.6.1)

3.25 產品防護（ISO/TS16949：2009 cl.7.5.5）

3.25.1 防銹要求

供方應採用設計圖紙的防銹措施要求（如：表面處理、防銹油、塗裝等）的最高級別，防銹期不得少於六個月，包裝設計應建立在充分防鏽的基礎之上。

3.25.2 包裝要求

供方應使用海馬轎車發動機開發部批准的包裝方案。

針對特定狀態的零件，供方在批准的包裝方案之外加特殊標籤：本手冊的附錄 9- 標籤中找到。

● PPAP 樣件

供方應在提交海馬轎車發動機的 PPAP 樣品零件的每一貨盤或集裝箱的外側附貼“PPAP 樣件”標籤。

● 零批量供貨零件

供方應在提交海馬轎車發動機零批量供貨零件的每一貨盤或集裝箱的外側附貼“OS 供貨零件”標籤。

● 首次量產供貨零件

供方應在提交海馬轎車發動機首次批量供貨零件的每一貨盤或集裝箱的外側附貼“首次量產供貨零件”

● 更改零件

供方應在提交海馬轎車發動機設計 / 過程更改零件的每一貨盤或集裝箱的外側附貼“更改零件”標籤。此要求僅用於變更零件的首次批量供貨。更改後走 PPAP 的，填對應的標簽。

● 限度樣本

向海馬轎車發動機提交限度樣本進行評審時，每個單獨的零件應當予以正確標識。供方應完整地填寫“限度樣本”標籤，並將標籤貼在每一零件的貨盤或集裝箱包裝上。

● 特許批准零件

供方應在運往海馬轎車發動機的特許批准零件的每一貨盤或集裝箱的外側附貼“特許批準零件”標籤。

第三章　第二十六節

(對應 ISO/TS 16969:2009 條文 - 7.1; 7.2.1)

3.26 接收準則（ISO/TS16949：2009 cl.7.1.2）

3.26.1 抽樣方案

無特別要求時，海馬轎車發動機零件進貨檢驗抽樣方案按附表 1 執行。所有抽樣方案以製造批為單位抽樣，供方必須確保批次的組織準確無誤。

所有項目的接受水平為零。

3.26.2 檢驗基準

海馬轎車發動機提供雙方共用的檢驗基準書，供方應每 3 個月向海馬轎車發動機品管部諮詢一次，以保證使用的檢驗基準書為最新版本。

3.26.3 試驗標準

適用試驗標準的順序：設計圖樣→技術協議→ MES →汽車行業標準→國家標準。

3.26.4 提交資料（量產狀態）

●供貨送檢單

●出廠檢驗報告

注：●不管海馬轎車發動機採用何種抽樣方案進行進貨檢驗，供方必須按雙方協議的檢驗基準書逐批提供出廠檢驗報告，即使是免檢，供方也必須提交出廠檢驗報告。

●出廠檢驗報告應附帶必要的支持數據和報告。

●材料試棒

海馬轎車發動機應與關鍵重要件供方協商一致，每個原料批或熔批按試驗標準提供一定數量的材料試棒。

●金相試樣

海馬轎車發動機應與關鍵重要件供方協商一致，每個熱處理批提供金相試樣供海馬轎車發動機複檢。

第三章　第二十七節

（對應 ISO/TS 16969:2009 條文 - 7.1.4; 7.3）

3.27 更改的控制（ISO/TS16949：2009 cl.7.3.7）

3.27.1 供方必須形成文件，保證技術、生產、質量等領域執行海馬轎車發動機發動機開發部發出的“更改通知單”。

3.27.2 供方必須形成文件，保證以下情況變動時以“更改申請單”通知海馬轎車發動機開發部，並保證執行下表規定的驗證程序：

類別	產品更改	過程更改	驗證程序
Ⅰ類	①A、AR 類產品質量特性更改； ② 涉及海馬轎車知識產權、企業標識的；	① 過程更改可能會影響到 A、AR 類特性的； ② 生產場地變更的（包括分供方）； ③ 分供方變更的；	→樣件認可→ 生產件批准→量產

Ⅱ類	①B、C 類產品質量特性變更	①B、C 類產品質量特性變更作業人員顯著變更（30% 以上的作業） ② 使用新的或改進的機器設備，工裝夾具等 ③ 機器設備的全面檢修 ④ 設備、工裝超過 6 個月沒有進行批量生產 ⑤ 機器設備重新佈置 ⑥ 過程材料的變更 ⑦ 使用的材料，過程材料存放時間超過一年 ⑧ 製造方法的變更，製造條件變更（如焊接、塗裝、表面處理、熱處理、煅造、沖壓、研磨等工藝參數的大幅調整） ⑨ 過程的添加、刪除或合併	→生產件批准→量產
Ⅲ類		① 作業人員的變動，如人員輪換，換班，臨時頂崗，刀具和鑽具等的更改 ② 機器和設備的維護 ③ 材料批次的更改 ④ 班次的更改 ⑤ 作業步驟變更 ⑥ 規範 / 公差要求範圍內的生產條件變更 ⑦ 操作者的作業順序變更	供方自行評審、記錄→量產

“更改申請單”填寫參考附錄 10 一《更改申請單》填寫要領。更詳細的情況請諮詢海馬轎車發動機
開發部或參考“海馬轎車發動機——設計更改管理規範”。

12家內地整車廠之客戶特殊特性(CSR)明細

第四章　第六節

(對應 ISO/TS 16969:2009 條文 - 7.4.1)

4.6 分承包方（ISO/TS16949：2009 cl.7.4.1.2）

供方要求分承包方得 ISO/TS16949：2009 或有效版本的 ISO9000 。第三方量不能供方其分承包方的品量的完全任。供方必向海　品管部提供分承包方清，分承包方清更改必通知海　。

第四章　第七節

(對應 ISO/TS 16969:2009 條文 - 7.4.3)

4.7 分承包方進度安排（ISO/TS16949：2009 cl.7.4.3.2）

為了滿足海馬轎車發動機 100％準時交付的期望，供方必須也要求分承包方 100％準時交付。

第四章　第八節

(對應 ISO/TS 16969:2009 條文 - 7.4.1)

4.8 顧客批准的資源（ISO/TS16949：2009 cl.7.4.1.3）

當合同規定時，供方必須按照海馬轎車發動機的要求從規定的貨源處採購產品、材料，對於從海馬轎車發動機所指定的貨源處採購的產品，供方不能免除其所購產品的質量責任。

2.11 汽菲特克斯勒汽有限公司

汽菲特在 TS 16949 : 2009 條文的基礎上額外的客戶特殊要求 (CSR) 明細：

第一章 第一至第五節

(對應 ISO/TS 16969:2009 條文 - 4.1.1)

第一章 總則

1.1 品質管制體系

供應商必須通過 ISO/TS16949 品質體系認證，以建立和運行有效的品質管制體系，從而確保符合 廣汽菲亞特的品質要求。

1.2 供應商符合性審核

對於新的供應商（潛在供應商），在簽訂供應商定點意向書之前，該供應商必須通過廣汽菲亞特的 符合性審核。該符合性審核基於 ISO/TS16949 品質體系標準，由廣汽菲亞特 SQE 參照潛在供應商 評估流程（PSA）執行。 對於現有供應商（已通過符合性審核並批量供貨），如果提供新的產品，或者提供的產品來自於新 的生產線、新的工藝或者變更後的工藝，則該生產線必須通過廣汽菲亞特的過程審核（PA）。

1.3 供應商品質工程師

廣汽菲亞特的外購件品質控制由採購部供應商品質管理科的供應商品質工程師（SQE）執行。 供應商品質工程師（SQE）對供應商的品質控制包括但不限於以下內容：

- 負責供應商生產線的符合性審核；
- 負責供應商品質體系和過程能力的審核（包括定點前、開發階段以及量產階段）；
- 參與供應商定點決定，否決不符合要求的供應商；
- 主持和推進供應商產品開發；
- 參與產品驗證過程；
- 負責供應商產能評估（PDR）；
- 同供應商一起識別並分析產品關鍵特性；
- 要求並監控供應商早期生產或發生品質問題時實施加嚴控制；
- 系統地監控供應商品質表現，指導供應商制定及時有效的改善措施，開展持續改進活動；
- 協調相關部門及時解決外購件品質問題。

1.4 供貨一致性檢查

廣汽菲亞特保留對供應商的供貨產品在接受和使用時進行一致性檢查的權利，從而保證供應商提供 的產品符合客戶要求。供貨產品一致性檢查包括以下幾種形式：

- 在供應商處檢查；
- 在廣汽菲亞特生產工廠檢查；
- 在經銷商處檢查；
- 在終端客戶處檢查。

第一章　第五節

(對應 ISO/TS 16969:2009 條文 - 7.3)

1.5 可行性

供應商在開發新產品或新工藝過程時，必須首先向廣汽菲亞特保證它們有能力開發和製造符合客戶 所有技術、產能及生產工藝要求的產品。該可行性保證內容及要求包含在採購正式發出的詢價包中。

第一章　第六節

(對應 ISO/TS 16969:2009 條文 - 4.2.3)

1.6 技術檔

1.6.1 供應商技術檔 供應商必須制定、執行和及時更新系統性的技術檔（如產品圖紙、工藝規程、控制計畫、品質手 冊、材料標準、測試報告等），從而確保提供給廣汽菲亞特的產品滿足品質和可靠性要求。 當廣汽菲亞特供應商品質工程師需要審核時，供應商必須及時提供相應的技術檔。

1.6.2 來自廣汽菲亞特的技術檔 根據廣汽菲亞特供應商選擇和定點流程，以及採購合同要求，廣汽菲亞特提供給供應商必要的技術 資訊和檔，如產品圖紙、材料標準、測試規程等。 供應商必須及時更新這些技術檔，以確保有效的控制製造過程和產品品質。 在不違背“智慧財產權保護”的情況下，供應商可向廣汽菲亞特採購申請獲取對圖紙、標準、採購規 程、技術、設備、測試、控制設備和規程等相關檔的補充資訊和解釋。

第一章　第七節

(對應 ISO/TS 16969:2009 條文 - 7.2.1)

1.7 產品的物質成分資訊

供應商提供的產品必須遵守安全、生態和環境等相關的中國法律、法規、標準以及相應的國際法規。 供應商必須通過 IMDS 提交產品的材料成分報告，包括危險物質、禁止 / 限制或控制使用的物質資訊。

第一章　第八節

(對應 ISO/TS 16969:2009 條文 - 7.4.1)

1.8 分供方管理

供應商在選擇下級供應商（分供方）前必須審核分供方的符合性，並確保其分供方的品質管制體系 等同于供應商的。如果分供方的品質管制體系不夠完善，那麼供應商必須對該分供方實施管控措施， 從而確保產品品質。

必要時，廣汽菲亞特的供應商品質工程師可以到分供方工廠實施審核。 供應商在提交產品材料物質成分報告時，必須包含其分供方的資料和資訊，並對該資料和資訊負責。 除保證有效的品質體系外，供應商還必須保證其與分供方一起對不合格品（與分供方有關）及時實施遏制以及糾正措施。 在供貨時，分供方處的任何變更將被視為供應商的過程變更，因此，分供方處的任何變更必須事先 獲得廣汽菲亞特的書面許可。

第一章　第九節

(對應 ISO/TS 16969:2009 條文 - 7.4.1)

1.9 轉手零件管理

1.9.1 目的

供應商的零件的構成零件有一個或幾個是廣汽菲亞特的轉手零件時：

- 供應商按照廣汽菲亞特採購規定的職責責任對其提供的零件進行品質一致性保證。

- 轉手零件製造供應商應按照廣汽菲亞特採購規定的職責責任對轉手零件進行品質一致性保證。

1.9.2 定義

No.	術語	定義
1	轉手零件	廣汽菲亞特製造或者從零件製造供應商處採購的、從該零件製造供應商直 接或者通過廣汽菲亞特提供給受給單位。
2	受給單位	將轉手零件用於本公司零件上的供應商。
3	轉手零件製造供應商	製造轉手零件的供應商。
4	複合品質特性	在轉手零件和受給單位的製造零件之間，有可能相互發生有聯繫的品質問 題的品質特性。
5	綜合品質特性	受給單位的完成零件的品質特性。

1.9.3 責任

責任方	主要責任
受給單位	1) 轉手零件的收貨檢（檢的具體要求與廣汽菲亞特協商） 2) 轉手零件不良時，要求轉手零件製造供應商進行分析和對策 3) 保證受給單位及轉手零件製造供應商製造的零件的綜合品質特性
轉手零件製造供應商	1) 保證轉手零件製造供應商製造的零件的品質特性 2) 向受給單位及廣汽菲亞特提供轉手零件的品質管制所需要的資訊 3) 在受給單位要求時，實施轉手零件不良的分析和對策（包括由受給單位實施的過程審核）
廣汽菲亞特	1) 對受給單位制造的零件召開保證複合品質特性的分工整合會 2) 保證廣汽菲亞特製造的轉手零件的品質特性 3) 將轉手零件的品質管制所需要的資訊提供轉手零件製造供應商及廣汽菲亞特的受給單位

1.9.4 保證零件的複合品質特性的分工整合

受給單位及轉手零件製造供應商在廣汽菲亞特有要求時，參加保證零件的複合品質特性的分工整合 會，整合零件的複合品質特性管理所需要的專案，至少包括以下項目：

1) 轉手零件的交貨包裝狀態；
2) 保證零件的品質特性的分工；
3) 發生不合格時的處理方法；
4) 受給單位及轉手零件製造供應商在廣汽菲亞特有要求時，應將整合會上達成一致的作業內容 等形成檔進行管理。

第一章　第十節

(對應 ISO/TS 16969:2009 條文 - 7.1)

1.10.1 產品分類

產品分類按照下列原則並在圖紙中標出：

- 等級 1：與安全有關的產品，對整車安全性能有間接影響。
- 等級 1D：產品具有安全特性，直接影響整車安全性能。
- 等級 2：在使用功能、企業形象和 / 或具有較高索賠費用等方面被認為是非常重要的產品。
- 等級 3：等級 1D、1 和 2 以外的其他產品。使用等級標明在圖紙中。

1.10.2 特性分類 廣汽菲亞特要求供應商在聯合開發設計或產品開發過程中應用下表中所給出的原則來確定特性的重 要程度。

重要性等级	偏离标准对产品的可能影响	符号/标记		
		整车零件		动力总成零件
安全特性	与标准的偏差将导致安全问题	▽	S	PQC-S
关键特性	与标准的偏差将损害产品效率和/或使用功能以及客户满意度	H	D	PQC
一般特性	与标准的偏差只会引起较小问题（不会损害功能和性能）	无		无

1.10.3 品質要求

供應商必須識別圖紙、標準規定的特性等級，來確定生產程序控制計畫。

對於安全特性以及關鍵特性，供應商必須採用統計過程方法（SPC）來監控生產過程（當不適用時， 可不實施 SPC 控制，但必須事先得到 SQE 的批准），以保證品質的穩定性並預防不良的產生。 關於初始過程性能以及穩定過程的能力要求，如下表所示：

特性分类	Ppk范围	Cpk范围	接受标准
安全特性	Ppk≥2	Cpk≥1.67	过程符合顾客要求。
	1.67≤ Ppk <2	1.33≤ Cpk <1.67	过程可接受，但需要改善。
	Ppk <1.67	Cpk <1.33	过程不稳定，不符合顾客要求。
关键特性	Ppk≥1.67	Cpk≥1.67	过程符合顾客要求。
	1.33≤ Ppk <1.67	1.33≤ Cpk <1.67	过程可接受，但需要改善。
	Ppk <1.33	Cpk <1.33	过程不稳定，不符合顾客要求。

第一章　第十一節

(對應 ISO/TS 16969:2009 條文 - 8.4)

1.11 資料獲取和提交

供應商必須定期收集過程監控以及檢測設備獲取的資料，並在必要時採取相應的預防性或糾正措施， 從而保證產品的一致性。 當廣汽菲亞特要求供應商提交相關資料和報告時，供應商必須及時按照上述要求採集並提交相關數 據和報告。

第一章　第十二節

(對應 ISO/TS 16969:2009 條文 - 7.5.5)

1.12 產品的包裝和運輸

產品的包裝方式對產品的品質有重要影響。 供應商必須向廣汽菲亞特諮詢，以使用合適的包裝和運輸方式，從而保證所有產品到達目的地時仍 能保持一致性並滿足客戶品質要求。

該諮詢必須通過特定的檔方式進行並達成包裝協定。 在達成包裝協定後，供應商如需變更包裝或運輸方式，必須事先獲得廣汽菲亞特的書面許可。

第一章　第十三節

(對應 ISO/TS 16969:2009 條文 - 7.5.3)

1.13 產品標識

供應商必須實施有效的產品標識系統並保證以下產品能被清楚標識並有效區分：

- 倉庫中的原材料和半成品；
- 整個製造過程中的“合格品”和“不合格品”；
- 待檢成品和已檢產品。

第一章　第十四節

(對應 ISO/TS 16969:2009 條文 - 8.3)

1.14 偏差放行

如果零件品質發生偏差，並且在廣汽菲亞特要求的供貨節點前不能被糾正，那麼這些產品是禁止發 運的，除非能夠預先獲得廣汽菲亞特的偏差放行批准。

偏差放行由供應商提出申請， 偏差放行申請必須包括以下內容：

- 廣汽菲亞特工廠名稱和收貨地址；
- 產品（零件）名稱和圖紙號；
- 偏差類型和特性；
- 受影響（偏差）的零件數量；
- 偏差放行的有效期限。 廣汽菲亞特將完成偏差申請的評估和批准，並由供應商品質工程師授權供應商執行。 偏差放行批准將明確供應商的義務和責任，供應商將承擔偏差產品可能帶來的全部費用和損失。 在獲得偏差放行批准後，供應商在發貨前，必須在所有涉及到的偏差產品的包裝上作出標識。

12家內地整車廠之客戶特殊特性(CSR)明細

第一章　第十五節

(對應 ISO/TS 16969:2009 條文 - 4.2.4)

1.15 試驗和檢驗結果的記錄和儲存

供應商必須建立一個合適的系統來記錄生產和程序控制獲得的結果和資料，並按照以下要求儲存這 些記錄：

- 供應商必須對產品的所有試驗和檢查結果進行記錄，並在規定的時限內保存好這些記錄：對於 安全特性和法規特性的試驗和檢驗記錄保存期為 15 年，同時供應商必須能隨時提供其產品無品質缺 陷的相關證明資料；
- 對於其他受控特性的試驗和檢驗記錄保存期為 2 年。

  供應商還必須保證其下級供應商（分供方）同樣按照此要求對相應的產品（零件）記錄進行儲存。供應商必須保證所有記錄檔（包括分供方處的記錄檔）的有效性，並確保滿足廣汽菲亞特的審 核和提交要求。

第一章　第十六節

(對應 ISO/TS 16969:2009 條文 - 8.3)

1.16 產品可追溯性

供應商必須建立並實施可追溯性系統，以保證記錄並追溯到產品批次的相關資訊，如製造日期、生 產批號、檢測結果、原材料批次、檢查工號等。 供應商的可追溯系統在使用前必須得到廣汽菲亞特的批准。同時，分供方也必須實施類似的系統以 保證產品和特性的追溯性。

第三章　第一節

(對應 ISO/TS 16969:2009 條文 - 7.5.1)

第三章 量產階段的供應商品質保證活動

3.1 量產初期加嚴控制計畫

3.1.1 目的

本程式目的在於：

- 審批和認可供應商的加嚴控制計畫
- 在量產初期（爬坡階段），杜絕不合格發生
- 確保任何可能出現的品質問題在供應商處能被識別、控制和解決

3.1.2 使用範圍

本程式適用於量產早期階段的所有產品（包括備用件），或 3 個月停產後的生產重啟，或生產過程發 生較大改進後的生產重啟，或產品再認證後的生產啟動。 為了滿足本程式的要求，加嚴控制計畫必須詳細制定。相對于供應商的生產控制計畫，該計畫必須 有顯著的加嚴，並能確保顧客工廠接收的所有產品符合廣汽菲亞特要求。 加嚴控制計畫必須考慮所有已知的產品和過程關鍵點。加嚴控制計畫中檢測專案、樣本容量、檢測 頻率的定義必須被 SQE 檢查並批准。雖然 SQE 進行檢查並批准，但供應商負責計畫的制定、並基 於其經驗考慮所有重要的過程和產品特性。

3.1.3 加嚴控制計畫的構成和內容

a）構成

加嚴控制計畫的構成必須與供應商制定的生產控制計畫保持一致，並必須至少包括 ISO/TS16949 體 系規範中要求的基本元素。 供應商必須制定一個包含所有檢查特性的控制計畫，並對加嚴 / 補充檢查特性用不同的顏色或符號標注。加嚴檢查應該填寫在正常檢查下方，而補充檢查則應該填寫在控制計畫的底部。

b）內容 加嚴控制計畫必須包括以下內容：

- 生產控制計畫的加嚴檢查內容，如增加樣本容量和檢查頻率；
- 未定義在生產控制計畫中的補充性檢查；
- 包裝和標籤過程檢查，包括對備用件的要求；
- 防錯裝置有效性的檢查；
- 一旦補充 / 加嚴檢查發現不合格時，快速遏制和糾正措施的實施。

備註：在加嚴控制計畫中探測到不合格，必須相應地更新 FMEA 和生產控制計畫。

3.1.4 活動

供應商必須建立對生產控制計畫的驗證流程，至少包括以下內容：

- 從管理層中定義一個代表，負責加嚴控制計畫的制定和實施；
- 加嚴控制計畫實施開啟和關閉日期以及退出標準；
- 定義加嚴檢查的控制操作崗位，必須是離線的、單獨的並獨立于正常生產工藝的，或可安排在 生產線末。控制操作崗位必須得到 SQE 的批准；
- 缺陷彙報計畫的定義；
- 應將分供方納入到該加嚴控制中。

3.1.5 過程檔

供應商必須檔記錄加嚴控制計畫的實施過程，通過以下方式：

- 利用類似于正常檢查的表格來記錄加嚴控制計畫定義的加嚴檢查的結果，但必須注明該表格用 於補充 / 加嚴檢查；
- 對加嚴控制計畫中定義的補充 / 加嚴檢查，有清晰的檢查操作說明；
- 使用缺陷分析表格，分析加嚴控制中探測到的缺陷。收集的資料必須便於 SQE 檢查。

3.1.6 待檢零件的標識

為證明完整地執行了該加嚴控制計畫流程，供應商必須在每一個產品標識卡上粘貼一個綠色的圓形

（直徑 25mm）卡片，並附有該加嚴控制計畫負責人的簽名。

與其他流程保持一致，必須對返工 / 返修後的合格品和正常合格品加以標識區分。

3.1.7 加嚴控制計畫實施持續時間和退出標準

a）持續時間 加嚴控制計畫必須根據定義的持續時間、零件數量、或退出標準（取決於哪個先實現）實施。下面 詳細說明了退出標準。如果沒有詳細說明持續時間或零件數量，加嚴控制計畫必須持續到爬坡計畫 結束或量產開始後的 8 個星期，取決於哪個先實現。

b）退出標準 當達到以下標準時，供應商可以退出加嚴控制計畫。如果供應商不能滿足退出標準，或者加嚴檢查 中持續發現不合格，供應商必須繼續實施必要的控制方法以保證合格的產品發運到顧客，直至品質 問題得到解決以及生產控制計畫得到認可。一旦供應商不能解決探測到的不合格問題，則必須實施 受控發運（CSL2/CSL3）。

退出標準如下：

- 達到顧客規定加嚴檢查的零件數量，並且所有零件必須滿足顧客需求。或者在加嚴控制計畫實 施期間，基於顧客（或 SQE）認可的標準。在供應商加嚴檢查中和顧客工廠中沒有探測到任何 品質問題；
- 如果供應商加嚴檢查中或顧客工廠探測到不合格，則加嚴控制計畫必須繼續實施一定的時間或 一定數量的零件，直至所有糾正措施完成或達到重新定義的實施時間（或零件數量）。該重新定 義的實施延長時間或零件數量必須得到 SQE 的認可；
- 如果在上述實施時間完成後，加嚴檢查仍然探測到不合格，不管糾正措施是否完成，供應商必 須在生產控制計畫中加入相應的補充 / 加嚴檢查。這與受控發運（CSL2/CSL3）的實施無關。

3.1.8 發運不合格材料的後果

在加嚴控制計畫期間，如發運不合格材料給顧客，將導致：

- 受控發運（CSL2）：如果該不合格特性已經定義在加嚴控制計畫中；
- 在加嚴控制計畫中增加該不合格特性的加嚴檢查：如果該特性未包含在加嚴控制計畫中。

在上述的兩種情況下，根據以上的退出標準，加嚴控制計畫必須被重新討論。

如果 SQE 認為加嚴控制計畫程式未被供應商正確執行，則將導致開啟受控發運（CSL2）。

第三章　第二節

（對應 ISO/TS 16969:2009 條文 - 7.5.1）

3.2 變更管理

3.2.1 產品變更

在未得到顧客的正式書面授權前，供應商不得發生任何產品變更（參照 ODM 管理流程）。 如果出於自身需要，供應商計畫變更產品（無論是供應商或是顧客的設計），供應商必須向顧客提交 正式申請。僅在顧客正式批准後（通過修改相應的技術檔，並且產品變更的再驗證測試合格），變更才被允許 執行。

該產品變更流程同樣適用於對產品特性產生影響（可能未在技術檔上定義）的過程變更。 對顧客提出的變更申請，或者是供應商提出的且顧客已批准的變更，供應商必須有一個標識系統， 能夠識別出產品

變更的實施日期。

3.2.2 過程變更 在未得到顧客的正式書面授權前，供應商不得發生任何過程變更。 供應商必須按照下表（表 3-1）提出正式申請，過程變更的申請由 SQE 評估和批准。 過程變更包括但不限於以下內容：

- 設備變更；
- 工藝參數變更；
- 模具變更；
- 工裝夾具變更；
- 生產地點變更；
- 分供方變更；
- 檢測方法變更；
- 生產佈局變更。 為了避免生產安全問題的變更是一個例外，對該類變更，供應商可在上述的正式書面授權前實施。 供應商必須有一個標識系統，能夠識別在生產流程中（材料，工藝，後續處理等）的實施日期。

供应商变更申请表
Supplier Change Request Form

车型名称 Model Name		车型代码 Model code					变更编号 CR No.		
零件名 Part Name		零件号 Part Number		ODM号 ODM No.		申请人 Applicant		申请日期 Request Date	
供应商名称 Supplier Name		供应商代码 Supplier Code				审核人 Checked By		审核日期 Check Date	
变更理由Reasons of change									
变更内容 Description of Change									
变更前 Before change				变更后 After change					
行动计划 Action Plan									
变更实施 Implementation of Change								日期Date	责任人Owner
变更验证 Verification of Change								日期Date	责任人Owner
顾客批准 Approval by customer									
1.批准 Approval	□	2.拒绝 Reject	□	备注Note					
PU 采购			QA 质量			PE产品技术			Other department (if required) 其他部门(如需要)
确认Check	审核Confirm	批准Approve	确认Check	审核Confirm	批准Approve	确认Check	审核Confirm	批准Approve	确认Check	批准Approve

3.2.3 斐更戶品的噓 i 正和批准

交更後的戶品需要重新店功噓旺和批准，勻卉友附段的新戶品量戶批准美似，但 i 玄重新瞌 正迂程取 快於斐更內容，相美責任部 !'l 特決定是否需要自功相莊的 瞌 正活劫。

功於整車零件，SQE 特決定是否需要自功 PA， SQE 和戶品技朮部特決定是否需要重新局功供座商自我驗證，品質部將決定是否需要重新開機工廠驗證，產品技術部將決定是否需要重新開機綜合測 試。所有需要的驗證完成並通過後，變更後的產品才被允許用於廣汽菲亞特正式生產。對於發動機零件，SQE 將針對變更內容，與相應的責任部門（如發動機品質或產品技術）決定需要 啟動的 PPAP 活動。所有需要的活動完成並通過後，變更後的產品才被允許用於廣汽菲亞特正式生 產。

3.2.4 變更產品標識 在變更後的初次發運時，供應商必須在發貨檔上（包裝單、產品標識單、產品品質與一致性聲明） 做好標識（初物管理卡），以通知顧客工廠。

第三章　第三節

（對應 ISO/TS 16969:2009 條文 - 7.5.1）

3.3 供應商品質監控與評估

3.3.1 目的

進入量產階段後，廣汽菲亞特將對供應商的品質和服務水準進行監控和評估，主要目的在於：

- 確保供應商交付給廣汽菲亞特的物料均符合技術和品質規範，對影響正常生產的品質問題（由物料品質不合格或與物料相關的其它異常或失效產生）進行有效管理，以保證整車符合 要求的品質和服務目標；
- 確保售後零部件倉庫將符合技術和品質規範的售後零部件存儲和發佈至銷售網路，並以有效 的方式對可能的不良狀況進行管理，從而保證終端客戶的滿意度；
- 使供應商在車輛生命週期的所有階段（從新產品的開發到售後服務）交付的物料的品質和服 務績效始終受控；
- 針對品質和服務績效差或供貨不穩定的供應商採取必要的糾正性、預防性、改進性行動；

- 對所有直接物料供應商進行評審，並定義品質和服務目標；
- 在新車型開發階段為供應商的選擇提供資訊和資料；
- 定義並優化採購策略。

3.3.2 過程和方法

為了實現上述監控的目的，對整個監控過程的執行方（WHO）、執行活動（WHAT）、執行時間（WHEN）和操作模式（HOW）進行了定義，旨在：

- 針對工廠內部和售後零部件倉庫發現的不合格物料，在經過必要的解析並確認為供應商責任 後，供應商必須制定解決方案；
- 通過相關監控指標（IP、PPM、IP/E 等）對供應商的供貨品質和服務水準進行評價。

品質監控的流程如下：

A) 調查每個品質和服務問題（不良）

- 進行分析和檢查以確定問題對生產過程的影響程度和影響範圍（如有需要，可啟動受控 發運）；
- 給不良項分配適當的代碼（通過使用特定代碼和權重進行分類，見附件 1）；

B) 記錄品質和服務問題並通知供應商 根據調查得到的資訊和資料創建不良品通知單，並發佈給供應商。

C) 管理不合格物料

- 通過挑選確定“不合格”物料的數量（屬於供應商責任）；
- 對不合格物料進行可行的返修（供應商返修，並由廣汽菲亞特實施檢查）；
- 根據挑選和返修結果，在不良品通知單中記錄不合格 / 合格品數量；
- 確認不良可能引發的生產損失；

D) 供應商針對不良品通知單作出回復

- 供應商必須即時回復（對於與品質相關的不良品通知單，必須在 36 小時給予回復；對於 與服務相關的不良品通知單，必須在 24 小時內給予回復）並採取必要的遏制措施以減少不良 的影響（包括對不合格物料進行可行的返修）；
- 在作出回復後，供應商應選擇執行以下兩個備選項之一（僅可選擇一項）：

a) 申請取消或修正不良品通知單上顯示的資料（“取消”—見附件 5）。該申請由發單部 門受理（品質部、供應鏈管理部、或銷售部零部件科）。無論是接受申請還是駁回申請，都應給 出書面說明；
b) 必須在 5 個工作日內回饋根本原因和糾正措施（“問題解決”報告—見附件 4）。
E) 處理最終資料並生成指標（績效、退貨）
- 收集不良資料，包括“不良物料”、“實際退回物料”、“直接物料供貨的服務問題” 的數量；
- 對資料進行處理並生成評價供應商品質和服務水準的評價指標（IP、PPM、IP/E 等）；
- 使採購部和公司其它相關部門可獲取資料以便製作特定的報告。

第三章　第四節

（對應 ISO/TS 16969:2009 條文 - 8.2.1）

3.4 受控發運和新業務終止

3.4.1 目的

該標準的實施有兩個目的：

- 提供與客戶工廠達成一致的供貨產品；
- 當有不合格供應時，為解決品質問題給供應商提供支持。 受控發運分為三個等級：一級受控發運 CSL1；二級受控發運 CSL2；三級受控發運 CSL3，即加強型二 級受控發運。根據在供應過程中發現的不合格嚴重程度及頻率，執行不同級別的受控發運。CSL2 和 CSL3 由廣汽菲亞特批准的協力廠商服務機構實施。

3.4.2 內容

受控發運後的零件交付必須附有 CQC，CQC 上需填寫零件號、不合格特性、提交原因、協力廠商服務機 構等資訊，受控發運將延伸到所有使用引起該不合格發生的相關生產過程及產品。 在產品受控發運期間，對於受控特性，供應商必須使用額外特定的控制站對製造的產品開展 100% 檢 查，檢查人員必須是被指定的培訓過的人員。如果 100% 檢查不能被實施，例如破壞性檢查或需多次 測量的檢查項目，這些檢查項目的頻次需與負責的 SQE 達成一致。 對於經過受控發運檢查的零件，供應商必須在每一個包裝箱上作出標識並被品質負責

人簽字。 顧客通過零件抽樣檢查、CQC 檔符合性確認的方式驗證受控發運的效果，無不合格品繼續發生將 作為關閉受控發運的必要條件。如果顧客檢查發現不合格品或者 CQC 檔內容與發運的零件不一致， 將立即通知 SQE，要求供應商給出對策。

當處於二級受控發運情況下時，將由被顧客認可的協力廠商機構對準備發送給客戶工廠的零件批實施

100% 的檢測。同時供應商必須提供一個區域給服務提供者，以供其對零件實施 100% 額外檢測。 當處於三級受控發運情況下時，即當確認供應商的生產及控制體系存在系統性問題，供應商自身已 經無法解決。除了開展 CSL2 所有活動之外，將由被顧客認可的協力廠商機構對其生產工藝和品質控制 提供必要的支持，此機構將幫助供應商消除產生被檢測到的不符合項的根本原因。

備註： 請注意，當發生 CSL2/3 時，在物料發送到協力廠商服務機構檢查區域前，供應商需要先完成 100% 檢查， 以保障供應商及廣汽菲亞特的利益。實際上，從物料被發送到協力廠商檢查區域後，協力廠商將全權完 成檢查，任何被檢測的不符合項不允許被返工並且必須填寫協力廠商檢查報告中。否則的話，SQE 將 有權決定延長受控發運的期限。 客觀來說，如果被檢測到的不合格專案由二級供應商引起，一級供應商將負責對二級供應商實施同 樣的控制措施。

3.4.3 受控發運的步驟

受控發運過程分為如下幾個步驟：

- 初始評估；
- 過程開啟；
- 終止。

3.4.3.1 初始評估

SQE 分析來自產線或銷售網站回饋的零件品質問題報告，並通知供應商品質負責人。 當如下（不限於）情況發生時，將啟動受控發運。

- 在客戶工廠發現的零件品質問題；
- 在銷售網路發現的零件品質問題；
- SQE 在供應商生產現場發現的影響產品品質水準的嚴重缺陷；
- 不合格的 ICP、TOC 測試結果或因零件問題導致的整車發運停止。 根據如下情況來定義受控發運等級：

- 由於供應商過程能力不能滿足要求，導致一個甚至多個關鍵特性超差，為了保護廣汽菲亞特產 品，可立即開啟 CSL1；
- 根據特性的嚴重程度，如果處於 CSL1 狀態的產品，在廣汽菲亞特工廠，仍發現不符合的產品， 將實施 CSL2/CSL3；
- 假如有證據表明供應商的質量控制體系或關鍵特性控制不符合要求，則視嚴重程度實施 CSL2/CSL3；
- 如果供應商不能解決引起不合格的原因，CSL3 將被運用；
- 由於供應商原因導致某個問題反復出現，視問題嚴重程度定義 CSL 等級。

3.4.3.2 過程開啟 根據受控發運的等級，開啟過程有些不同，受控發運可以面向一個或多個產品族或者一個供應商。

a) 一級受控發運開啟

SQE 向供應商發出：

- 由 SQE 和 SQE 經理簽字的“CSL 開啟單”
- “CSL 關閉申請表”

供應商需就如下事項與 SQE 進行溝通：

- 明確糾正措施，以避免問題再次發生，或採用合適的方式阻止不合格發生；
- 供應商生產工藝流程或物流方式是否修改；
- 明確需要控制的特性；
- 明確受控發運退出標準；
- 定義有效的控制台及接受標準；
- 定義報告內容，至少應該包含糾正措施、糾正措施實施後的效果（8D 報告）和檢查結果；
- 定義供應商方面負責資訊收集和回饋的人員。

b) 二級、三級受控發運開啟

SQE 應向供應商發送：

- 由 SQE 總監簽字的“CSL2/CSL3 受控發運開啟單”；
- 廣汽菲亞特批准的協力廠商服務提供者清單；

- “CSL 關閉申請表”。 供應商必須在收到啟動資訊後 5 個工作日內通知其品質體系認證機構已實施 CSL2/CSL3。供應商也必 須將該資訊抄送至相關 SQE。供應商必須自收到開啟單 24 小時內向 SQE 獲取被批准的協力廠商服務提供 商清單。此外，在 5 個工作日內，供應商必須明確啟動會議的舉辦日期、地點和時間，定義受控發 運的操作細節並開始實施。會議的參與方應包括供應商、SQE、協力廠商服務商。 在啟動會議上將會討論以下方面問題：
- 說明導致 CSL 的不合格項目；
- 確定相關方的工作和責任；
- 填寫相關表格，並由供應商和 SQE 簽字。

CSL2/CSL3 的實施報告由協力廠商服務商負責人發送給 SQE，並由 SQE 管理。

c) 受控發運的關閉 CSL 的最短有效期限為 5 個星期。SQ 可根據不合格項的嚴重性和供應商實施糾正行動的有效性修改該 期限。供應商只有證明在該期限內其生產過程已經符合要求方可終止 CSL，也就是說，在滿足以下標 准的條件下，CSL 的關閉取決於 SQE：

- 客戶工廠沒有拒收任何已經經過檢查的部件
- 供應商（CSL1）或服務商（CSL2/CSL3）按照要求提交了檢查結果
- SQE 對糾正措施的有效性進行過程審核（PA），結果合格（≥ 3 分）。
- 符合啟動會議時確定的關閉標準。 如果在 CSL 期間，客戶工廠收到帶有 CSL 控制特性的不合格產品，或 CSL 控制繼續發現不合格產品，SQE 決定延長 CSL 的實施期限。

  如果在 CSL 期間發現新的不合格專案（不同於 CSL 控制下的不合格項目），則可以將這些新的不合格產 品增至已生效的 CSL 並修改 CSL 的控制和有效期限。 如果在整改後，PA 的確認結果為不合格時，則可考慮以下措施：

- 對於第一次整改後確認結果不合格時：延長 CSL 實施時間；
- 對於涉及 CSL1 的第二次整改不合格：轉到 CSL2 狀態；
- 對於涉及 CSL2 的第二次整改不合格：轉到 CSL3 狀態；
- 對於涉及 CSL3 的第二次整改不合格：將對供應商啟動新業務終止（NBH）。 最後，如果供應商可證明已完成啟動會議確定的事項，則可發送“CSL 關閉申請”，並由以下人員批准：
- CSL1：SQE
- CSL2/3：SQE、SQE 經理和 SQE 總監

3.4.4 新業務終止

在最糟糕情況下，廣汽菲亞特可決定對供應商實施新業務終止（NBH）。在 NBH 期間，供應商將被禁 止參與新專案。

a) NBH 開啟的情形 一旦發生非常糟糕的情況，SQE 可向供應商啟動 NBH，這些情況包括但不限於下列專案：

- 受控發運的持續升級 CSL1-CSL2-CSL3；
- 未經客戶批准，更改供應商產地、二級供應商或材料；
- 零件品質問題引起售後召回（尤其是影響乘客安全的嚴重問題）或整車發運停止；
- 對於開發中的產品：在措施和時間方面，供應商均未能滿足行動計畫；
- 品質狀態持續不穩定（惡化）。這種不穩定性可通過品質指標進行評估（例如 IP/E、PPM 等）；
- 供應商對顧客的錯報和虛報。

b) NBH 的開啟 SQE 經理將完成 NBH 開啟函，並由採購經理、SQE 總監和採購總監簽字後正式發佈給供應商。 NBH 開啟函中應明確供應商的改進措施、實施週期和關閉標準。 NBH 應依據供應商代碼開啟。如果供應商代碼對應一個以上的供應商工廠，則開啟函應明確所有涉 及到的工廠。

自 NBH 開啟函中的定義的日期開始，NBH 活動生效。

c) NBH 的關閉 如果供應商證明已達到開啟函中定義的關閉標準，則供應商可以申請退出 NBH。 在 NBH 關閉申請批准之前，SQE 將實施 PA 以確認改進效果，如果結果大於等於 3 分，則為合格，NBH 關閉申請將由 SQE 總監批准並開始生效。 如果 PA 結果不合格，則將視具體情形延長 NBH，同時，供應商必須提交進一步的改進措施。

第三章　第五節

(對應 ISO/TS 16969:2009 條文 - 7.5.1)

3.5 索賠管理

3.5.1 目的

明確由供應商零件問題導致費用補償的索賠管理流程。

3.5.2 範圍

對所有與廣汽菲亞特簽署零部件採購合同的供應商有效。

3.5.3 定義

缺陷分為兩種類型：

- 工廠缺陷：廣汽菲亞特產品出售給顧客之前（以整車物流交接完成為界）發現的供應商零部件 的品質缺陷；
- 市場缺陷：廣汽菲亞特產品交付經銷商之後，發現供應商零部件的品質缺陷。

3.5.4 工廠缺陷索賠 a) 定義 工廠缺陷包括：

- 重大工廠缺陷：由供應商零件品質缺陷造成廣汽菲亞特生產線停線的缺陷；
- 一般工廠缺陷：除重大缺陷外的缺陷。

b) 索賠項目 對於一般工廠缺陷，廣汽菲亞特將向供應商索取進行選別、修理、更換作業而發生的以下各項費用：

a. 人工費：指廣汽菲亞特人員直接參與選別、修理、更換作業有關的費用，人工費 = 工時 X 人數 X 單 個工時費；

b. 差旅費：是指廣汽菲亞特人員因需要而產生的交通費、差旅費補貼、住宿費等費用；

c. 作業物料費：使用工具、備件、作業用消耗品、輔助材料所需的費用；

d. 零件費用：使用的零件所發生的費用；

e. 其他費用（如實際發生時）。

對於重大工廠缺陷，廣汽菲亞特將向供應商索取以下費用：

a. 誤工費：生產線停線時間內產生的人員誤工費；

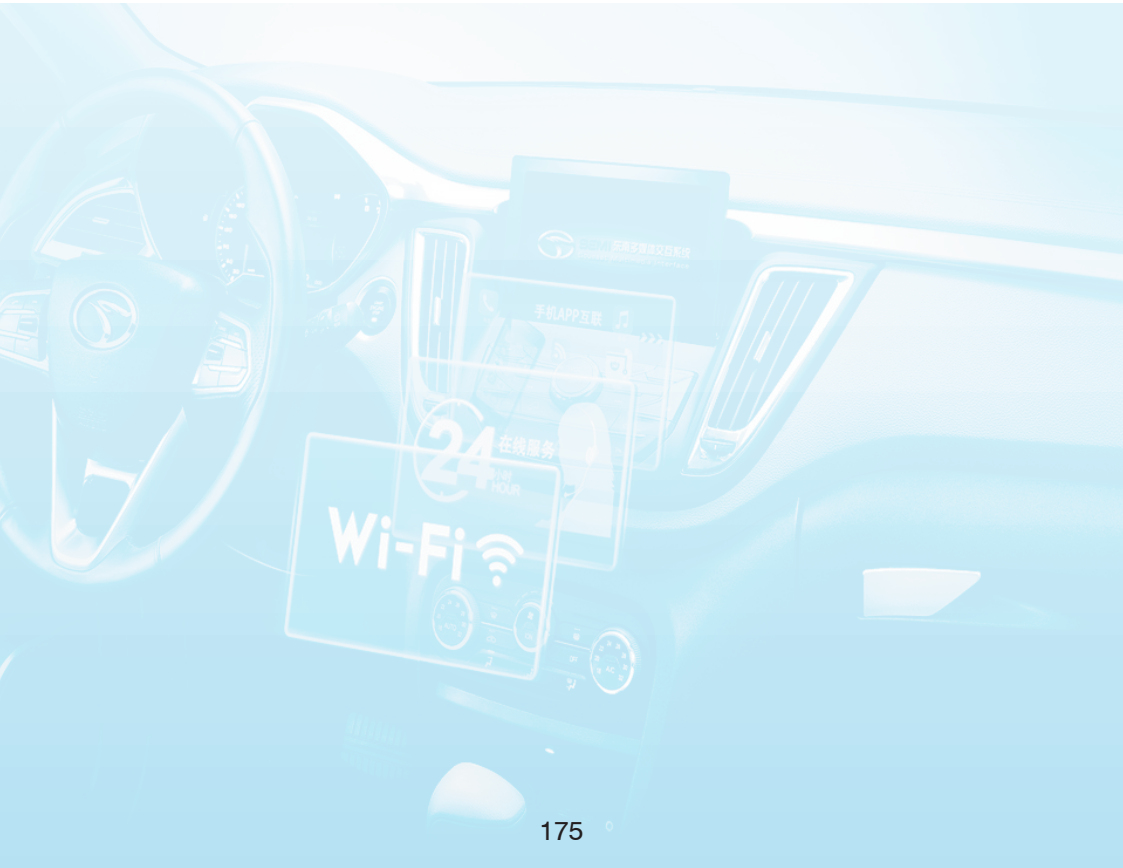
b. 損失利潤：生產線停線時間內按正常節拍生產所損失的利潤。

c) 索賠操作 發生工廠缺陷後，索賠參照以下流程操作：

a. 廣汽菲亞品質部根據供應商提供的問題解決報告（8D 報告）與供應商協議技術責任參數，並制訂《工廠缺陷索賠通知單》（如下表 3-2）；

b. 供應商負責人確認《工廠缺陷索賠通知單》，並明確支付方式後（貨款抵消或直接支付），簽字回 傳給廣汽菲亞特；

c. 按照簽字確認後的支付方式完成索賠處理。



2.12 Key Plastics L.L.C

Key Plastics 在 TS 16949 : 2009 條文的基礎上額外的客戶特殊要求 (CSR) 明細 (以下資料節錄自 SQA Manual - Guide For Supplier Development) :

第二章 第一節

(對應 ISO/TS 16969:2009 條文 - 4.2.2)

2.1 QUALITY MANUAL

Suppliers must have a prevention based quality system that emphasizes the on-going use of statistical methods for continuing process improvement. The quality policy and system shall be documented in an accessible form, such as a quality manual or series of manuals. Key elements shall include, but not be limited to:

- A quality policy that reflects both the philosophy and goals of the supplier and the commitment of management to attain these goals
- A current organizational chart indicating the reporting relationship of the quality assurance personnel, including the management level employee designated to have the responsibility and authority for ensuring that the quality policy is implemented, effectively documented and carried out.
- A description of the quality system procedures and documents used to monitor and evaluate the process.
- A revision section documenting amendments to the quality system and manual.
- A table of contents indicating page numbers of the manual on which specific areas are discussed.

第二章 第二節

(對應 ISO/TS 16969:2009 條文 - 5.6)

2.2 QUALITY COSTS

Suppliers are required to establish and maintain a documented system of tracking cost of quality. Periodic management reviews of quality costs and goals for improvement must be held and documented at appropriate intervals.

第二章　第三節

(對應 ISO/TS 16969:2009 條文 - 7.1)

2.3 QUALITY PLANNING

The supplier must define and document how the requirements for quality will be met. Quality planning must be consistent with all other requirements of the supplier's quality system and must be documented in a format to suit the supplier's method of operation. Suppliers must establish and implement an advanced product quality planning process that utilizes internal cross-functional teams. These teams should use appropriate techniques identified in the Advanced Product Quality Planning and Control Plan reference manual and the Potential Failure Mode and Effects reference manual. Similar techniques that accomplish the intent are acceptable. Cross-functional teams should typically include the supplier's design, engineering, quality, production and other personnel as appropriate, and may include Key Plastics purchasing, quality, engineering and plant personnel as well as subcontractors as required.

The supplier must give consideration to the following activities, as appropriate, in meeting the specified requirements for products, projects or contracts:

- The preparation of Control Plans.
- The identification and acquisition of any controls, processes, equipment, fixtures, resources and skills that may be needed to achieve the required quality.
- Ensuring the compatibility of the design, production process, inspection and test procedures and the applicable documentation.
- The updating, as necessary, of quality control, inspection and testing techniques or equipment.
- The identification of any measurement requirement that exceeds the supplier's current capability, in sufficient time for the capability to be developed.
- The identification of suitable verification at appropriate stages in the manufacture of the product.
- The clarification of standards of acceptability for all features and requirements, including those, which contain a subjective element.
- The identification and preparation of appropriate quality records.

- The development and review of FMEA's
- The development or finalization of special characteristics.
- The establishment of actions to reduce the potential failure modes with high-risk priority numbers.

第二章　第四節

(對應 ISO/TS 16969:2009 條文 - 7.2.1; 7.2.2; 7.2.3)

2.4 Contract Review

The supplier must establish and maintain documented procedures for the review of contracts and/or contract amendments. The supplier is further required to establish channels for communication and interfaces with Key Plastics, LLC for the coordination of these activities. Before the submission of a tender, or the acceptance of a contract or order, the tender, contract or order must be reviewed by the supplier to ensure that:

- The requirements are adequately defined and documented.
- Any differences between the contract or order requirements and the tender are resolved.
- The supplier has the capability to meet all contract or order requirements.

第二章　第五節

(對應 ISO/TS 16969:2009 條文 - 7.3)

2.5 Design Control

(Applicable only where design responsibility is a requirement of the contract)

The supplier must establish and maintain documented procedures to control and verify the design of the product to ensure that the specified requirements are met. The supplier must prepare plans for each design and development activity. The plans must describe or reference these activities, and define the responsibilities for their implementation. The design and development activities must be assigned to qualified personnel equipped with adequate resources. Plans must be updated as the design evolves and matures. The supplier's design

activity must be qualified in the following skills as appropriate:

- Geometric Dimensioning and Tolerancing (GD&T)
- Quality Function Deployment (QFD)
- Design for Manufacturing (DFM) and Design for Assembly (DFA)
- Value Engineering (VE)
- Design of Experiments (DOE)
- Failure Mode and Effects Analysis (FMEA)
- Finite Element Analysis (FEA)
- Solid Modeling
- Simulation techniques
- Computer Aided Design (CAD) and Computer Aided Engineering (CAE)
- Reliability Engineering Plans

Organizational and technical interfaces between different groups with input to the design process must be defined and the necessary information documented, transmitted and regularly reviewed. Design reviews must be documented.

2.5.1 Design Input Requirements

Design input requirements relating to the product, including applicable statutory and regulatory requirements, must be identified, documented and their selection reviewed by the supplier for adequacy. Incomplete, ambiguous or conflicting requirements must be resolved with those responsible for imposing those requirements. Design input must take into consideration the results of contract review activities. Where any design input activities are subcontracted, the supplier is responsible for those activities and must provide technical leadership for them.

2.5.2 Design Output Requirements

Design output must be documented and expressed in terms that can be verified and validated against design input requirements. The design output must:

- Meet the design input requirements.
- Contain or reference acceptance criteria.
- Identify those characteristics of the design that are crucial to the safe and proper functioning of the product (e.g., operating, storage, handling, maintenance and disposal requirements)

Design output documents must be reviewed prior to design release.

第二章　第六節

(對應 ISO/TS 16969:2009 條文 - 4.2.3)

2.6 Document Control

The supplier must establish and maintain documented procedures to control all documents and data that relate to his processes, including where applicable those externally generated documents such as Key Plastics supplied standards and drawings. If externally generated documents reference other documents, it is required of the supplier to have currently released issues of these documents included in his control procedures and available at the point of use.

2.6.1 Document and Data Approval and Issue

The supplier must include in his document control procedure the requirement that all documents and procedures must be reviewed and approved prior to use. A master list or equivalent document control procedure identifying the current revision status of documents must be established and be readily available to preclude the use of invalid or obsolete documents. The control procedures must also ensure that invalid or obsolete documents are promptly removed from all points of use and any obsolete documents that are retained for legal or data preservation purposes are suitably identified.

2.6.2 Document and Data Changes

Changes to documents and data must be reviewed and approved by the same functions or organizations that performed the original review and approval, unless specifically designated otherwise. The designated functions or organizations must have access to pertinent background information upon which to base their review and approval. Where practicable the nature of the change must be identified in the document or appropriate attachments.

第二章　第七節

(對應 ISO/TS 16969:2009 條文 - 7.4.2)

2.7.1 Purchasing Data

- Purchasing documents must contain data clearly describing the product ordered, including: The type, class, grade, or other precise identification including IMDS data as required.

- The title or other positive identification, and applicable issues of specifications, drawings, process requirements, inspection instructions and other relevant technical data including requirements for approval or qualification of product, procedures, process equipment and personnel.
- The title, number and issue of the quality system standard to be applied

第二章　第七節

(對應 ISO/TS 16969:2009 條文 - 7.4.1)

2.7.2 Subcontractor Evaluation

The supplier is required to evaluate and select subcontractors based on their ability to meet the product requirements including the quality system and any specific quality assurance requirements. It is left to the discretion of the supplier to define the type and extent of control exercised over subcontractors, depending on the type of product, the impact of the subcontracted product on the quality of the final product and, where applicable, on the quality audit reports and/or quality records of the previously demonstrated capability and performance of sub-contractors. Suppliers are further required to establish and maintain quality records of acceptable subcontractors.

2.7.3 Subcontractor Development

Suppliers are required to perform subcontractor quality system development using sections I and II of QS 9000 as the fundamental quality system requirement. Assessments of subcontractors should occur at an appropriate supplier-specified frequency. The supplier will recognize sub-contractor assessments to QS 9000, ISO 9001 or TS 16949 by Key Plastics, an approved OEM second party, or an accredited third party registrar in lieu of audits.

第二章　第七節

(對應 ISO/TS 16969:2009 條文 - 7.4.3)

2.7.4 Verification of Purchased Product

Where the supplier proposes to verify purchased product at the subcontractor's premises, the supplier must specify verification arrangements and the method of product release in the purchasing documents. Where specified in the contract, Key Plastics or their representative shall be afforded the right to verify at the subcontractors premises that the subcontracted product conforms to specified requirements.

第二章　第八節

(對應 ISO/TS 16969:2009 條文 - 7.5.3)

2.8 Product Identification and Traceability

The supplier must establish and maintain documented procedures to provide for the identification of Key Plastics parts and assemblies from receipt of raw material to delivery to Key Plastics. The supplier must establish and maintain documented procedures for unique identification of batches or lots of Key Plastics product. This identification must include the identification of all materials and products, which make up the finished products.

第二章　第九節

(對應 ISO/TS 16969:2009 條文 - 7.5.4)

2.9 Control of Key Plastics Supplied Product

The supplier must establish and maintain documented procedures for the control of verification, storage and maintenance of Key Plastics supplied product provided for incorporation into the product or for related activities. Any such product that is lost, damaged or is otherwise unusable must be recorded and reported to Key Plastics.

第二章　第十節

(對應 ISO/TS 16969:2009 條文 - 7.1)

2.10 Preliminary Process Capability Requirements

Preliminary process capability studies are required for each supplier or Key Plastics designated special characteristic for new processes. This data must meet Key Plastics requirements. If no requirements have been specified, a Ppk target of 1.67 is to be used for preliminary results and for chronically unstable processes. This information is to be reviewed with Key Plastics SQA through the various stages of quality planning. Unacceptable preliminary capability results require re-evaluation of mistake proofing activities. Inherent limitations of attributes data prevent their use for preliminary statistical studies. Attributes data from early production runs should be used to prioritize process improvements and to begin control charts.

第二章　第十一節

(對應 ISO/TS 16969:2009 條文 - 7.5.1)

2.11 Process Monitoring and Operator Instructions

The supplier must prepare documented process monitoring and operator instructions for all employees having responsibilities for operation of processes. These instructions should be derived from the sources listed in the Advanced Product Quality Planning and Control Plan reference manual. Process monitoring and operator instructions may take the form of process sheets, inspection and laboratory test instructions, shop travelers, test procedures, standard operation sheets, the part number Control Plan, or other documents normally used by the supplier to provide the necessary information. Process monitoring and operator instructions must include or reference:

- Operation name & number keyed to the process flow chart.
- Part name and part number.
- Current engineering level and date.
- Required tools, gages and other equipment.
- Material identification and disposition instructions.

- Key Plastics or supplier designated special characteristics.
- Statistical process control requirements.
- Relevant engineering and manufacturing standards.
- Inspection and test instructions.
- Corrective action instructions.
- Revision date and approvals.
- Visual aids.
- Tool change intervals and set up instructions.

第二章　第十二節

(對應 ISO/TS 16969:2009 條文 - 8.2.3)

2.12 Ongoing Process Performance Requirements

Ongoing process performance requirements are defined by Key Plastics. If no such requirements are established, the following default values apply: For stable processes and normally distributed data, the target is Cpk > 1.33 for chronically unstable processes with output meeting specifications and a predictable pattern, the target is Ppk > 1.67. For non-normal data, methods other than Cpk such as parts per million (PPM) will be required to determine performance based on Key Plastics requirements. When data from control charts and functional tests indicate a high degree of capability, the supplier may revise the Control Plan with the concurrence of Key Plastics SQA. Characteristics identified on the Control Plan that are either unstable or non capable require initiation of the appropriate reaction plan. Reaction plans must include containment of the process output and 100% inspection. A supplier’s corrective action plan must then be completed indicating specific timing and assigned responsibilities to assure that the process becomes stable and capable. The plans require review and concurrence with Key Plastics SQA. Regardless of the capability requirement or the demonstrated process capability, continuous improvement is required, with the highest priority on special characteristics.

第二章　第十三節

(對應 ISO/TS 16969:2009 條文 - 8.2.3)

2.13　Modified Preliminary Capability Requirements

In some cases, Key Plastics may require either higher or lower capability requirements than the previously stated default requirements, in these cases, the Control Plan must be annotated accordingly.

第二章　第十五節

(對應 ISO/TS 16969:2009 條文 - 7.3)

2.15　Government Safety and Environmental Regulations

A supplier must have a process to ensure compliance with all applicable government safety and environmental regulations, including those concerning handling, recycling, eliminating or disposing of hazardous materials.

第二章　第十七節

(對應 ISO/TS 16969:2009 條文 - 7.6.3)

2.17　Inspection and Testing

The supplier must establish and maintain documented procedures for inspection and testing activities in order to verify that the specified requirements for the product are met. The required inspection and testing, and the records to be established, must be detailed in the control plan or documented procedures. Acceptance criteria for attribute data sampling plans must be zero defects. Appropriate acceptance criteria for all other situations (e.g., visual standards must be documented by the supplier and approved by Key Plastics.) Suppliers must use laboratory facilities accredited to ISO/IEC 17025 or national equivalent for all materials testing or certification. (Third party registration may eliminate the requirement for the use of accredited laboratories).

第二章　第十七節

(對應 ISO/TS 16969:2009 條文 - 8.2.4)

2.17.2 In-process Inspection and Testing

The supplier must:

- Inspect and test the product as required by the control plan and/or documented procedures
- Hold product until the required inspection and tests have been completed or necessary reports have been received and verified, except when product is released under positive recall procedures. Release under positive recall procedures must not preclude the activities outlined above.

All process activities must be directed towards defect prevention methods, such as statistical process control, error proofing and visual controls, rather than defect detection.

第二章　第十七節

(對應 ISO/TS 16969:2009 條文 - 8.2.4)

2.17.3 Final Inspection and Testing

The supplier must carry out all final inspection and testing in accordance with the control plan and/or documented procedures to complete the evidence of the finished product to the specified requirements. The control plan and/or documented procedures for final inspection and testing must require that all specified inspections and tests, including receiving and in-process, have been carried out and that the results meet specified requirements. No product may be dispatched until all the activities specified in the control plan and/or documented procedures have been satisfactorily completed and the associated data and documentation are available and authorized.

第二章　第十七節

(對應 ISO/TS 16969:2009 條文 - 8.2.4)

2.17.4 Layout Inspection and Functional Testing

A layout inspection, material testing and functional verification to applicable standards are required on an annual basis. Results must be available to Key Plastics SQA for verification upon request.

第二章　第十七節

(對應 ISO/TS 16969:2009 條文 - 8.2.4)

2.17.5 Inspection and Test Records

The supplier must establish and maintain records, which provide evidence that the product has been inspected and/or tested. These records must show clearly whether the product passed or failed the inspections and/or tests according to defined acceptance criteria. Where the product fails to pass any requirement, the procedures for the control of nonconforming product must apply. Records must identify the inspection authority responsible for the release of the product.

第二章　第十八節

(對應 ISO/TS 16969:2009 條文 - 7.6.2)

2.18.2 Inspection, Measuring and Test Equipment Records

Records of the calibration/verification activity on all gages, measuring and test equipment, including employee owned gages must include:

- Revisions following engineering changes as appropriate.
- Gage condition and actual readings as received for calibration.

第二章　第十九節

(對應 ISO/TS 16969:2009 條文 - 7.6.1)

2.19 Measurement System Analysis

Evidence is required that appropriate statistical studies have been conducted to analyze the variation present in the results of each type of measuring and test equipment system. This requirement applies to all measurement systems referenced in the Key Plastics approved Control Plan. The analytical methods and acceptance criteria used must conform to those in the Measurement Systems Analysis reference manual. Other analytical methods and acceptance criteria may be used if approved by Key Plastics SQA.

第二章　第二十一節

(對應 ISO/TS 16969:2009 條文 - 8.3)

2.21 Control of Nonconforming Product

The supplier must establish and maintain documented procedures to ensure that product that is either suspect or does not conform to specified requirements is prevented from unintended use. This control must provide for identification, documentation, evaluation, segregation, disposition and for notification to the functions concerned. The responsibility for review and authority for the disposition of non-conforming product must be defined. Disposition may include:

- Reworked to meet the specification.
- Accepted with or without repair by concession.
- Scrapped.

The proposed use or repair of product, which does not conform to specified requirements, must be reported to Key Plastics for concession. The description of nonconformity that has been accepted, and of repairs (if any), must be recorded to denote the actual condition. The supplier must also maintain a record of the quantities authorized or the expiration date of the concession. The supplier must also ensure compliance with the original or superseding specifications and requirements when the authorization expires.

Material shipped on an authorization must be properly identified on each shipping container. Repaired and /or reworked product must be re-inspected in accordance with the control plan.

Suppliers who have more than 2 instances of shipping non-conforming or suspect material of the same type or defect may be subject to the requirement of entering into a third party sorting agreement (CS2) and may also be included in Key Plastic's Top Focus program.

第二章　第二十二節

(對應 ISO/TS 16969:2009 條文 - 8.5.2; 8.5.3)

2.22 Corrective and Preventative Action

The supplier must establish and maintain documented procedures for implementing corrective and preventative action. Actions taken to eliminate the causes of actual or potential nonconformity's must be to a degree appropriate to the magnitude of the problems and commensurate with the risks encountered. The supplier must implement and record any changes to the documented procedures resulting from corrective and preventative action.

2.22.1 Corrective Action Procedures

The supplier must use a multi-disciplined approach to problem solving and corrective action. The procedures must include:

- The effective handling of customer complaints and reports of product nonconformities.
- Investigation of the cause of nonconformity's relating to product, process and quality systems, and recording the results of the investigation.
- Determination of the corrective action needed to eliminate the cause of the Non-conformities.
- The application of controls to insure that corrective action is taken and that it is effective.

2.22.2 Preventative Action Procedures

The procedures for preventative action must include:

- he use of appropriate sources of information such as processes and

work instructions which affect product quality, audit results, quality records, service reports and customer complaints to detect, analyze and eliminate potential causes of nonconformity's.

- Determination of the steps needed to deal with any problems requiring preventative action.
- Initiation of preventative action and application of controls to ensure that it is effective.
- Ensuring that relevant information on actions taken is submitted to management for review and approval.

第二章　第二十四節

(對應 ISO/TS 16969:2009 條文 - 4.2.4)

2.24 Control of Quality Records

The supplier must establish and maintain documented procedures for identification, collection, filing, storage, maintenance, retrieval and disposition of quality records to demonstrate conformance to specified requirements and the effective operation of the quality system. Pertinent records of subcontractors' performance must be an element of these records. All quality records must be legible and stored in a manor, which protect them from damage, deterioration and loss. Retention periods for all records must be established and recorded. Quality records must be made available to Key Plastics or their representative for evaluation for an agreed upon period.

2.24.1 Minimum Retention Periods

Production part approvals, tooling records, purchase orders and their amendments are to be retained for the length of time that the part (or family of parts) is active for production and service, plus one calendar year. Quality performance records (e.g., control charts, inspection and test results, etc.) Must be retained for one calendar year after the year in which they were created. Records of quality system audits and management reviews must be retained for three calendar years unless otherwise specified by Key Plastics. Copies of documents from superseded parts required for new part qualification must be retained in the new part file.

第二章　第二十五節

(對應 ISO/TS 16969:2009 條文 - 8.2.2)

2.25 Internal Quality Audits

The supplier must establish and maintain documented procedures for planning and implementing internal quality audits to verify whether quality activities and related results comply with planned arrangements and to determine the effectiveness of the quality system. Internal quality audits must be scheduled on the basis of the status and importance of the activity being audited and must be carried out by personnel independent of those having direct responsibility for the activity being audited. The results of audits must be recorded and brought to the attention of the personnel having responsibility in the area audited. The management personnel responsible for the area must take timely corrective action on the deficiencies noted during the audit. Follow-up audit activities must verify and record the implementation and effectiveness of the corrective action taken and be submitted for senior management review and concurrence. Suitable working environment including housekeeping and appropriate handling and protection from hazardous materials must be considered as a part of the internal audit process.

第二章　第二十六節

(對應 ISO/TS 16969:2009 條文 - 6.2.2)

2.26 Training and Education

The supplier must establish and maintain documented procedures for identifying training needs and provide for the training of all employees performing activities affecting quality. Personnel performing specific tasks must be qualified on the basis of appropriate education, training, or experience. Records of training must be maintained and periodic management reviews of training effectiveness and additional training needs must be completed and documented.

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(對應 ISO/TS 16969:2009 條文 - 8.1.1)

2.28　Statistical Techniques

The supplier must identify the need for statistical techniques required for establishing, controlling and verifying process capability and product characteristics. The supplier must establish and maintain documented procedures to implement and control the application of statistical controls as identified. The selection of appropriate statistical tools for each process should be determined during advanced quality planning and must be included in the control plan as outlined in the SPC reference manual. Basic concepts such as variation, control, capability, and over adjustment should be understood throughout the supplier's organization, as appropriate.