Terminal Quality Management Process

Version 2.0 – June 2017
Notices

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Using this Manual

Scope
This document describes the process for a vendor of an Interface Module (IFM) or a Proximity Coupling Device (PCD) to obtain a Terminal Quality Management Label (TQM Label) from Mastercard. It also describes the rules to be followed under the scheme and the rights of Mastercard and the Vendor concerning the TQM Label.

A TQM Label is granted if a Vendor complies with the TQM requirements. These requirements are defined in TQM/GEN/T02.

Audience
This document is intended to provide guidance to Vendors who wish to obtain a Terminal Quality Management Label.
Related Information
The following reference materials may be of use to the reader of this document.

EMVCo Specifications
The EMVCo specifications relate to two different documents depending on the technology:

EMVCo Specifications
For Contact (IFM) Technology:

EMVCo Specifications
Book 1 - Application Independent ICC to Terminal Interface Requirements

For Contactless (PCD) Technology:

EMVCo Contactless Specifications
Book D: Contactless Communication Protocol

Please check www.emvco.com for current applicable versions of these specifications as well as for any related EMVCo bulletins.

EMVCo Book C-2 Kernel 2 Specification

Note
The component implementing the functionalities required by the Contact EMVCo specifications is called an Interface Module (IFM)
The component implementing the functionalities required by the Contactless EMVCo specifications is called a Proximity Coupling Device (PCD)

Mastercard Specifications:

TQM/GEN/T01 Terminal Quality Management – Process
TQM/GEN/T02 Terminal Quality Management – Requirement
MCL Reader Spec Mastercard Contactless Reader Specification

The following Mastercard documents may be of use to the reader. Although not directly related to TQM, they describe other Mastercard processes for which a TQM Label is a pre-requisite.

Mastercard Terminal Implementation Guide
M-TIP Process Guide
Vendor Testing Guide
Mastercard Contactless Reader Approval Process Guide
**Glossary**

The following abbreviations are used in this document:

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**Terminology**

This section explains the terms used in this document.

**Acquirer:** An individual or organization that procures components. An acquiring bank (or acquirer) is a bank or financial institution that processes credit or debit card payments on behalf of a merchant.

**Assessment Body:** Entity accredited and mandated by Mastercard to assess whether Vendors comply with TQM Label requirements.

**Configuration:** Functional and physical characteristics of a product, as defined in technical documents and achieved in the product.

**Component:** IFM or PCD hardware devices embedding either Contact or Contactless or both payment applications.

**Derived Component:** Component resulting from modifications to a TTA L1-approved or TTA L2-approved component where the modifications (1) have been handled in compliance with the TQM requirements for change control and (2) did result in change to the component specifications.

**Derived Product:** Product (1) embedding a TTA L1 and TTA L2-approved components, but different from the DUT tested during TTA L1 and/or TTA L2, (2) where the modifications impacting the interface to the component have been handled in compliance with the TQM requirements for change control.

**EMVCo Specifications:** Reference Specifications against which the component is tested for TTA L1 or TTA L2. (See section “related information”).

**IFM:** Hardware and software sub-set of the Product responsible for the functionalities required by contact EMVCo specifications (see section “related documentation”).

**Laboratory Test Report:** Report documenting the results of tested representative samples during formal or debug TTA L1 testing session by a Test Laboratory.

**Letter Of Approval for Terminal Type Approval Level 1:** Written acknowledgement by EMVCo that the component embedded in a Sample submitted for TTA L1 is compliant with the related EMVCo specifications (see section “related information”) at the time of testing.

**Letter Of Approval for Terminal Type Approval Level 2:** Written acknowledgement by EMVCo that the component embedded in a Sample submitted for TTA L2 is
compliant with the related EMVCo and/or Mastercard specifications (see section “related information”) at the time of testing.

Level 1 Approval: Type Approval process checking compliance with the electromechanical characteristics, logical interface, and transmission protocol requirements defined in the EMV Specifications.

Level 2 Approval: Type Approval process checking compliance with the debit/credit application requirements as defined in the EMV and/or Mastercard Specifications. In the context of this document Level 2 Approval also relates to other tests part of the Approval Process (Performance, Application, Combination and Integration).

Mastercard Specifications: Reference Specifications against which the component is tested for TTA L2.

New Component Version: Component resulting from modifications to a TTA L1-approved component where the modifications (1) have been handled in compliance with the TQM requirements for change control and (2) did not require a change to the component specifications.

PCD: Hardware and software sub-set of the Product responsible for the functionalities required by contactless EMVCo specifications (see section “related documentation”)

Product: Device embedding the component. It can be either a terminal or a standalone card reader.

Sample: Product picked out of production for testing.

Statement of Compliance: Document issued by Mastercard Assessment Body, and renewed annually, which lists the Labels issued to the Vendor.

Terminal Type Approval Level 1 (TTA L1). Process used to verify that a Sample is compliant with the relevant EMVCo specifications (see section related information) Successful execution of the TTA L1 formal tests result in a EMVCo Letter Of Approval for Terminal Type Approval Level 1 for the component embedded in this Sample.

Terminal Type Approval Level 2 (TTA L2). Process used to verify that a Sample is compliant with the relevant EMVCo and/or Mastercard specifications (see section related information). Successful execution of the TTA L2 formal tests result in an EMVCo or Mastercard Letter Of Approval for Terminal Type Approval Level 2 for the component embedded in this Sample.

Test: Any activity that aims at verifying the conformity of a selected product or process to a given requirement under a given set of conditions.

Test Report: Report documenting the test results.

Test Laboratory: Facility accredited by EMVCo and/or Mastercard for performing Terminal testing.

TQM Label: Formal recognition from Mastercard that Products (1) which embed a specific component that has been granted an EMVCo Letter Of Approval for Terminal Type Approval Level 1 or any new component version or any derived component, (2) designed by the owner of this Letter Of Approval (3) and produced in specified manufacturing sites, are compliant with TQM requirements [TQM/GEN/T02].
TTA L1-approved Component: Component that has been successfully tested during contact or contactless Terminal Type Approval Level 1 and has received an EMVCo LOA.

Vendor: Entity responsible for the design, development and production of Products. The Vendor is the entity requesting TQM Label for a component. If this request is accepted, the Vendor is the owner of the TQM Label.
Introduction

Background

Mastercard has developed and relies on comprehensive product testing and approval processes in order to promote worldwide interoperability at an acceptable time and cost to all parties.

The objective of these processes is to ensure that each terminal:

- Performs to the required specifications
- Performs everywhere that it is used
- Performs consistently every time it is used

EMVCo Processes

- Terminal Type Approval Level 1 (TTA L1). During TTAL1, the product is tested against EMVCo specifications.
- Terminal Type Approval Level 2 (TTA L2). During TTAL2, the product is tested against EMVCo specifications.

Mastercard Processes

- Terminal Type Approval Level 2 (TTA L2). During TTAL2, the product is tested against Mastercard specifications.
- Terminal Quality Management (TQM), ensures that the performance of the product placed into a L2 LoA device are:
  - Repeatable – ensuring that the delivered product is identical to those being delivered in future production volumes.
  - Reliable – ensuring that progressive developments of the tested product allow it to remain compliant with EMVCo and/or Mastercard specifications.

Requirements Overview

TQM defines a set of requirements, TQM/GEN/T02, which Vendors must meet.

Meeting these requirements results in the granting of a TQM Label. Obtaining a TQM Label is mandatory for Vendors who wish to distribute products which will be accepted by Mastercard for the Acquirer’s Terminal Integration Process (M-TIP).

The TQM requirements mandate Vendors to operate a Configuration Management System to:

- Define and follow the configuration of their products and the impact of changes on their compliance with EMVCo specifications throughout the life cycle
- Continually improve their Configuration Management processes.

The purpose is to obtain confidence that any product used in the field and embedding an IFM or a PCD that has successfully passed Terminal Type Approval Level 1 and Level 2 remains compliant with the EMVCo and/or Mastercard specifications.
**TQM and Compliance with EMVCo Level 1 Approval**

TQM provides Vendors with the means to demonstrate that their devices remain compliant with the EMVCo specifications without repeatedly undergoing formal testing.

During TTA L1, the Device Under Test (DUT) is tested against the requirements of EMVCo specifications. The part of the device subject to EMVCo specifications compliance is the component. The DUT can be a terminal or a standalone card reader.

The continuing compliance to EMVCo specifications of DUTs and components following the following categories of changes may be addressed via the TQM process:

- **New Component Version:** Component resulting from modifications to a TTA L1-approved component where the modifications:
  
  1. have been handled in compliance with the TQM requirements for change control
  
      And
  
  2. Have **not** resulted in change to the component specifications.

- **Derived Component:** Component resulting from modifications to a TTA L1-approved component where the modifications:
  
  1. have been handled in compliance with the TQM requirements for change control
  
      And
  
  2. Have resulted in change to the component specifications.

- **Derived Product:**

  1. Product embedding a TTA L1-approved component, but different from the DUT

      And
  
  2. Product where the modifications impacting the interface to the Component have been handled in compliance with the TQM requirements for change control.

The environment in which the component is embedded is relevant for EMVCo specifications' compliance: a component working in a certain device could potentially not work in another device (e.g. due to power supply issues or electro-magnetic interference).
If the DUT passes TTA L1 testing, a Letter of Approval is granted to the component. It demonstrates that the component is compliant with EMVCo specifications when embedded in this DUT.

What would happen to the EMVCo Level 1 compliance of the product if the component is embedded in another device?

It could be considered that as the component is not in the same environment, there is no evidence that it is still compliant with the EMVCo specifications. As a consequence every time a component is embedded in a new device, compliance with Level 1 specifications must be tested again. However, if the device Vendor can demonstrate that the differences between the DUT and the new product do not have an impact on the EMVCo specifications compliance, a new TTA L1 is not required for the new device.

This is one of the benefits of TQM as it defines requirements that provide Vendors the means to verify that changes between devices do not affect compliance to EMVCo specifications, without going through formal TTA L1 testing.

The requirements defined for TQM will give Vendors the means to prove that minor changes to a component do not affect compliance to EMVCo specifications.

**TQM and Compliance with Mastercard or EMVCo Level 2 Approval**

TQM compliance is not a pre-requisite to the Mastercard Contactless Reader LoA. It should, however, be noted that Mastercard Acquirers will be required to provide either a Project Plan Number (PPN) or the TQM labels of the Approved Product going through the Terminal Integration process (M-TIP).

Production devices are expected to be strictly representative of the readers that have received a Mastercard or EMVCo Level 2 approval.

**TQM Label**

A TQM Label confirms that a Vendor, for a particular component and for particular manufacturing sites is compliant with the TQM requirements as defined in TQM/GEN/T02. As a consequence, all devices:

- Designed by this Vendor,
- Embedding the TTAL1-approved version of the component, or any new component version or any derived component,
- Embedding the TTAL2-approved version of the component, or any new component version or any derived component,
- produced by these manufacturing sites,

Are deemed to be EMVCo / Mastercard specifications compliant.

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1 EMVCo Letter Of Approval for Terminal Type Approval Level 1 Mastercard
Applicability

Products Subject to TQM
The figure below identifies the different parts of the Product that are relevant for TQM.

Figure 1 — Product relevant parts

TQM focuses on two parts of the Product:
- The component itself, responsible for the EMVCo and/or Mastercard specifications functionalities
- The component interface, responsible for providing a correct working environment to the component.

Therefore, any product that embeds a component is subject to TQM.
The figure below identifies the different product configurations possible:

Figure 2 – Product Configurations

Remark: Entry Point is optional in Contactless Products. For more information on Entry Point please go to: http://www.emvco.com/specifications.aspx?id=21

Based on these product configurations, the products that are subject to TQM are the following:

- Fully Integrated Terminal,
- Intelligent Card Reader,
- Transparent Card Reader.

Note: Where a product embeds an IFM and a PCD, each of these components need to be submitted to TQM, and the product must be described in each submission.
Vendors Subject to TQM

Any Vendor product designed as one of the configurations listed in 0 Subject to TQM is subject to TQM.

An original equipment manufacturer who re-brands their product for another Vendor will be subject to audit for all components that they design and manufacture.

TQM Label Validity

A TQM Label is valid for a product embedding a component produced in a specific manufacturing site, and when all of the following conditions are fulfilled:

- The Label has not expired
- The label is owned by the Vendor of the product embedding the specific component,
- The component embedded in the product is strictly identical to the one referenced in the TQM Label (or a new component version or a derived component),
- It refers to the specific manufacturing site used to manufacture the product.

Refer to the TQM Label Granting Process section of this document for guidance on how to obtain TQM approval.
TQM Label Granting Process Overview

This section outlines the process Vendors must follow to obtain or renew a TQM Label.

Vendor Registration and Agreement with Assessment Body

A Vendor will contact the Assessment Body to express their interest in the TQM Process.

The Assessment Body will provide them with the information relevant to an application. The Vendor will complete a Client Account Application, which will be submitted to the Assessment Body. Once approved by the Assessment Body, the Assessment Body will liaise with the Vendor to begin the assessment process.

Product Registration

The Assessment Body will review the Vendor’s list of components as stated in the application form and identify which of them need to be submitted to the Assessment Body for TQM assessment.

The Assessment Body will identify the fees to be paid by the Vendor for TQM assessment. This is in accordance with the scale of fees set by Mastercard.

The Assessment Body may require payment of some or all of the fees before proceeding further with the TQM process. An Assessment Proposal will be issued to the Vendor.

Project Plan Numbers (PPN) are issued once the Vendor has

- submitted the required documentation to the certification body
- committed to an audit date for R&D and Manufacturing facilities
- placed a formal order.

The Project Plan number will be used as a reference for all information exchanges during the assessment process until the TQM Label granting process is completed.

Project Plan numbers are valid for a limited period of six months. It is expected that audits of the design and manufacturing sites are carried out during the first three months of this timeframe.

TQM Questionnaire Completion

The Vendor will complete & submit the Type Identification Description (TID), defining the Product Configuration, for each component. The Vendor must also complete a Vendor Organization Description (VOD).

The VOD describes the compliance of the Vendor’s product configuration management to the TQM requirements.

- A TID is required to be submitted for every component specified within the TQM application.
- A VOD is required to be submitted for a Vendor’s first application.
- When a Vendor has made a change to the component which affects the TTA L1 they must submit a revised TID.
• When a Vendor has made a change to their quality management system that could adversely affect the compliance of a component they must submit a revised VOD.
**TQM Compliance Assessment**

The TID(s) and VOD are submitted to the Assessment Body for assessment.

The Assessment Body performs the assessment, prepares an assessment report, and as a result may:

- Conclude that TQM documentation requirements are met.
- Specify further information to be supplied. Up to two requests for further information may be made. Should the Vendor be unable to supply the requested information after two requests, the application may be cancelled & the Vendor will need to reapply once they are able to submit the required information. The Vendor will be charged as if for a new application in this instance.
- Mandate an audit

**TQM Audit**

Audits of both the design & manufacturing facilities are required for all new applicants and must be performed within three months after the Project Plan Number issuance.

For all TQM applicants, the Assessment Body will prepare an Audit Mandate for submittal to the Vendor.

If deviations from TQM requirements are found during the audit, the Vendor must commit to a Corrective Action Plan. The Assessment Body will assess the efficiency of the corrective action plan.

The Assessment Body will select the frequency of the next audit from TID and VOD assessments along with the audit recommendations.

**Multisite auditing**

A Vendor with multiple design or manufacturing facilities must have all sites initially audited over a three-year period.

The Assessment Body will generate a three-year audit plan detailing the year of the first audit for all of the design and manufacturing facilities. The Assessment Body will select the frequency of the next audit from TID and VOD assessments along with the audit recommendations.

**Audit duration**

A standard audit for a Vendor who designs and manufactures four or less IFM(s) & PCD(s) is:

- 1.5 Day audit where the design and manufacturing are at the same facility
- Two 1 Day audits where the design and manufacturing are at different facilities.

Each additional design or manufacturing facility will initiate a separate audit in accordance with section 1.9.2 (Multisite auditing).

For Vendors(s) who design and manufacturer more than four IFM(s) & PCD(s), the duration of the audit will be increased depending on the total number of IFM(s) or PCD(s) within the configuration management system.
Recommendation to Mastercard

The Assessment Body will present the TQM project to Mastercard and will make appropriate recommendations to grant, renew or reject the TQM Label(s).

The recommendation submittal will be subject to every TQM requirement fulfilment.

Issuance of Statement of Conformity (SoC)

Mastercard will assess the recommendation issued by the Assessment Body and make the final decision whether to grant, renew or reject the TQM Label.

The Assessment Body will submit the Signed SoC to the Vendor once received from Mastercard.

Compliance Monitoring

Mastercard retains the right to monitor or examine TQM conformity as and when required.

Renewal

Vendors will supply to the Assessment Body a No Change Declaration if there have been no changes to the build state of the product which affects the L1 LoA, the product has entered in end of life cycle (not being manufactured though requiring a SoC) or if the SoC is no longer required.

On-going Compliance

Vendors must maintain good conformity of their products with the L1 LoA, and have a robust and compliant Quality Management System in place.

The following changes must be immediately declared to the TQM Assessment Body:

- Any change on components affecting the build state of the product and consequently has a direct impact on the L1 LoA,
- The product has entered an end-of-life cycle (i.e. will no longer be manufactured and will not require a renewed SoC),
- The current SoC is no longer required.

TQM Termination

TQM Termination defines the circumstances under which either the Vendor or Mastercard can terminate TQM Labels or the Vendor’s involvement in the TQM program.

TQM Label Granting Process

This section details the procedure a Vendor must follow to obtain or renew a TQM Label.

Vendor Registration / Application

Purpose

The objective of this registration is to ensure that all specifications and procedures governing Mastercard TQM are understood and accepted by the Vendor.
The registration also includes legal clauses regarding confidentiality, liability, etc.

Mastercard has determined that the assessment of documentation and any associated audit are undertaken by an Assessment Body.

TÜV SÜD Product Services is the Assessment Body for the TQM scheme.

Procedure

1. The Vendor contacts the Assessment Body for a document pack containing the following documents:
   - Terminal Quality Management Requirements – TQM/GEN/T02.
   - Type Identification Description form – TQM/TEM/T01.
   - Vendor Organization Description form – TQM/TEM/T02.
   - Application Form – AF054.
   - Client Account Application form.

2. The Vendor completes the Application Form.

3. If the Vendor does not have an existing account with the Assessment Body, the Vendor must complete the Client Account Application form.

4. The completed forms are returned to the Assessment Body.

5. The Assessment Body will acknowledge receipt of the submitted forms.

6. The Assessment Body will supply to the Vendor an assessment proposal.

7. The Vendor submits a purchase order in line with the assessment proposal.

8. For New applicants or Vendors where their facilities have not been audited yet or Vendors’ sites audited resulting with some Rank D recommendation, upon receipt of a valid purchase order the Assessment Body will check the status of each component and assign a TQM Project Plan number (PPN) valid for a six months period.

9. For existing Vendors who hold one or more valid TQM labels and who have had at least one R&D and one production site audited resulting in an A, B or C Ranking, upon receipt of a valid purchase order the Assessment Body will check the status of each component and assign a TQM Label.

Note: Should the Vendor company name change, this must be advised to the Assessment Body in writing along with submitting supporting evidence.

Note: It should be noted that the TQM Label will have the exact same Vendor company name as the one listed on the EMVCo website.

Note: Mastercard is not be responsible for the terms and conditions of the contract in place between the Vendor and the Assessment Body. However, Mastercard is involved in setting the assessment fees.
Completion of TQM Documents

Purpose

The completion of TQM Questionnaires has the following objectives:

- To describe the current Vendor organization at the time of the TQM Label request.
- To identify the configuration of components submitted to the TTA L1 process.
- To describe the configuration management applied to the components and products embedding them.
- To identify any changes to the Vendor’s organization (site changes, process changes) or product configuration (derived components, new component versions, derived products) which have occurred since the previous TQM Label assessment.

Procedure

1. The Vendor must complete a “Vendor Organization Description” form (VOD).

   The objective of the VOD is to demonstrate compliance of the Vendor Configuration Management System with the requirements, whatever the component and the related Products.

   Note When a Vendor requests TQM Labels for several components, only one VOD needs to be submitted.

   Note The VOD must be updated for each new TQM project in order to reflect the Vendor’s organization at the time of the submission.

2. The Vendor must complete a “Type Identification Description” form (TID) for each component – both IFM & PCD.

3. The objective of the TID is to demonstrate the compliance of the configuration management of the component and any related products with the TQM requirements.

   Note Where a Vendor is requesting TQM Labels for several components, a TID must be submitted for each component (main or derived).

   Note All documentation supplied to support a TID or VOD must be in either JPEG, PDF or Word format.

   Note All documentation supplied to support a TID or VOD must be in English.
TQM VOD & TID Assessments

Purpose

TQM Compliance Assessments have the following objectives:

- To verify the compliance with the TQM requirements of:
  - The Vendor’s organization
  - The configuration management of the component(s) and related products
- To determine what, if any, further actions are needed to obtain a TQM Label.

Procedure

1. The Vendor must submit the following documents to the Assessment Body at the time of application.
   - The VOD
   - The TID for each product
   - The EMV Co L1 LoA

2. For new Vendors entering the TQM scheme or for existing Vendors that have been granted with a Rank D following audits findings, a Project Plan Number (PPN) is issued by email assuming that:
   - The Assessment Body receives a purchase order
   - The Vendor has agreed audit dates for both their manufacturing and design facilities
   - The Vendor submits valid VOD and TID(s), as appropriate along with the required supporting documents.

3. For existing Vendors that got their R&D and production sites audited already and have been granted with some Rank A, B or C, some TQM Labels (and therefore an updated SoC) are issued to the Vendor by email assuming that:
   - The certification body receives a purchase order
   - The Vendor has agreed on next audit dates for both their manufacturing and R&D design facilities
   - The Vendor submits valid TID(s)

4. In case of PPN issuance the PPN notification will advise of the following:
   - The product name & it’s associated L1 LoA
   - The Date of expiry of the issued PPN
   - The Project Plan Number (PPN)

5. The Assessment Body performs the assessment of the documents submitted by the Vendor, and prepares the assessment reports.
6. The assessment reports will state a conclusion based upon the documented evidence of the Vendor’s compliance with TQM requirements for each component.

   a. The Assessment Body will decide whether the information provided is sufficient to verify that the Vendor complies with TQM requirements.
      i. If the information provided is insufficient, further information will be requested from the Vendor.

   b. The Assessment Body will determine whether the information provided is sufficient to decide for an audit to be conducted on both manufacturing and design facilities.
      ii. If the information provided is insufficient, further information will be requested from the Vendor.

Note Only three (3) document submittals may be made to the Assessment Body. If the information is still insufficient, the application will be terminated and the PPN / TQM Label revoked. The Vendor will need to re-apply once they have the required information.

Note In the case of a terminated application the Assessment Body will charge the Vendor for work completed to date.

Note In case of new applicant in TQM, the Vendor must commit on audits timing held in his design and manufacturing sites with the certification body so that the corrective action plan is closed before the PPN expiry date.

The period between audits will be determined on the outcomes of the initial or subsequent audit.
**TQM Audit**

**Purpose**

TQM audits are conducted to meet the following objectives:

- Verify the information submitted in the VOD and TIDs are those which are being adhered to at both design & manufacturing facilities.
- Resolve any issue found during the TID & VOD assessments
- Form part of the recommendation to Mastercard for issuance of a SoC.
- Determines frequency and timing of the next audit

**Procedure**

1. The Vendor and the Assessment Body agree on a date for the audit to be conducted in the design (R&D) and production facilities of the Vendor.

2. The Assessment Body will send the following documentation to the Vendor:
   - Audit proposal
   - Audit schedule(s)

3. Upon receipt of a valid purchase order covering the audit proposal, value, the Assessment Body will finalize the audit details and advise the Vendor accordingly.

   **Note** Failure to facilitate an audit will result in withdrawal of all TQM Labels.

4. The Assessment Body conducts the audits.

5. Upon completion of the audit, the auditor will, (within 30 days of the audit), generate a report that will be submitted to the Assessment Body along with an agreed corrective action plan (if required). Should a corrective action(s) be required, a timescale for completion will need to be agreed with the Vendor. The timescale must not exceed three months.

6. The Assessment Body will make a decision as to the Vendor’s audit ranking to determine the next audit date. This is based upon the number and severity of non-conformities found during the audit. Details of the audit ranking can be found in Table 2.

   If the ranking from the previous audit was Category D, the Vendor must re-submit both a VOD and TID(s) in their entirety to be evaluated. These must be submitted within one month of the previous audit taking place. The Assessment Body will arrange for an unscheduled audit to be performed at a selected date (i.e. between three and six months from the previous audit).

   **Note** Acquiring a post-audit ranking of D (as per Table 2) from two consecutive audits will be referred to Mastercard, who will determine what appropriate action should be taken.
7. Once the Vendor has completed and submitted the corrective actions to the Assessment Body, the Assessment Body will liaise with the auditor to determine whether the corrective action plan is acceptable.

8. Once the corrective action plan is accepted, the Assessment Body will submit its recommendation to Mastercard.

Table 2 – Audit Frequency

<table>
<thead>
<tr>
<th>Audit Ranking</th>
<th>Next Audit Frequency</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>&lt; 3 years</td>
<td>PASS with zero non-conformity. Action plan is not required.</td>
</tr>
<tr>
<td>B</td>
<td>&lt; 2 years</td>
<td>Minor non-conformity(s). Corrective action plan required. Time frame for delivery of action plan 30 days</td>
</tr>
<tr>
<td>C</td>
<td>&lt; 1 year</td>
<td>Major non-conformity(s). Corrective action plan required. Time frame for delivery of action plan 30 days. Verification of effectiveness of implemented actions to prevent reoccurrence to be submitted within 90 days.</td>
</tr>
<tr>
<td>D</td>
<td>Between 3 to 6 months</td>
<td>If a finding is found that raises significant doubt that control of manufactured products is in place. TQM Label will be postponed / suspended until next audit, Corrective actions plan required within 30 days. The next audit will be planned for the earliest convenient date to validate the resolution of actions taken to prevent re-occurrence.</td>
</tr>
</tbody>
</table>

TQM Label(s) Recommendation

Purpose

The TQM Label(s) Recommendation is designed to advise Mastercard that the Assessment Body has assessed all documents submitted in relation to the TQM application.

The TQM Label(s) recommendation confirms that the Vendor meets the TQM requirements & that the Assessment Body has no objection to a SoC being granted.

Procedure

The Assessment body constructs a recommendation pack and supplies it to Mastercard. The recommendation pack includes:

- A list of components included in the TQM project
- A management summary of the TQM project
- A recommendation made by the Assessment Body to Mastercard
- The assessed TID & VOD
- Audit reports, where applicable
- Audit corrective actions, where applicable
- Draft SoC
Issuance of the Statement of Compliance (SoC)

Purpose

The issuance of a SoC assigns a valid TQM Label to a Vendor’s product enabling it to be used with an EMVCo approved payment terminal.

Procedure

Once Mastercard receives the recommendation pack from the Assessment Body, Mastercard will:

1. Review the Assessment Body’s recommendation and assess the documents submitted with the recommendation
2. Issue the SoC to the Assessment Body

Upon reception of Mastercard’s feedback, the Assessment Body will:

1. Send the SoC to the Vendor
2. Grant TQM Label(s) for the submitted products

Note Should Mastercard disagree with the recommendation submitted by the Assessment Body, the Vendor would be required to re-apply for TQM Label(s) & restart the assessment process.

Renewal Process

Purpose

A Statement of Compliance has a validity of twelve months. If a Vendor requires their SoC to be renewed after the 12 months period, the Renewal Process must be followed.

Procedure

1. Three months before a SoC expires the Assessment Body will contact the Vendor to ascertain whether they wish to maintain the validity of the SoC(s), whether a component is end of life or whether a component no longer requires a SoC(s).
2. If the Vendor informs the Assessment Body by means of an e-mail that there have been no changes to the product since the last SoC issuance and that they wish to apply for a further year’s validity, and if all audits have been completed according to the schedule agreed with the Assessment Body and all corrective actions plans closed, the following simplified process will apply:
   a. The Assessment Body will send the vendor a “no change” declaration and assessment proposal
b. The vendor will agree to the next audit date for their design & manufacturing facilities, based on the audit frequency determined by the audit ranking specified in Table 2 of Section 2.4.

c. Upon receipt of a signed “No Change” Declaration and a valid purchase order the SoC will be re-issued to the vendor for a further twelve month period.

3. If the vendor advises that there have been significant changes to either a component or to the Quality Management System since the issuance of the SoC, then the SoC will not be renewed until the Assessment Body has re-assessed the vendor’s TQM Documentation to verify that the L1 LoA validity has not been compromised.

a. The Assessment Body will issue an assessment proposal to the Vendor.

b. The vendor will submit an updated TID(s) and VOD documenting the changes.

c. Upon receipt of a valid purchase order, the Assessment Body will verify the changes by means of the submitted documentation.

d. If the Assessment Body cannot verify the changes by means of documentation then an audit may be mandated.

Changes, including changes planned up to the time of the SoC expiry date, are to be submitted to the Assessment Body no later than 3 months prior to the SoC expiry date. Failure to do so may cause delays to SoC issuance.

The SoC will only be renewed after:

a. The Assessment Body has verified the declared changes.

b. All audits have been completed according to the schedule agreed with the Assessment Body and all corrective actions plans have been closed.

c. The Vendor has agreed to the next audit date for their design & manufacturing facilities, based on the audit frequency determined by the audit ranking specified in Table 2 of Section 2.4.

Note The Assessment Body must be notified immediately of any significant change to the product that affects the L1 LoA, or any significant change to the Quality Management System that will adversely affect the validity of the product in terms of meeting the L1 EMVCo requirements. The Vendor must then comply with the Ongoing Compliance Procedure. Please refer to Section 3.8.1.

Note In the event that a component is being assessed by the Assessment Body for on-going compliance and the SoC renewal date occurs, the Assessment Body will proceed with the renewal of the issuance of the SoC.

Note Only three (3) document submittals may be made to the Assessment Body. If the information is still insufficient, the application will be terminated, the PPN revoked and the vendor will need to re-apply once they have the required information.

Note In the case of a terminated application, the Assessment Body will charge the vendor for work completed to date.
4. If the Vendor advises that a component is no longer being manufactured, but still requires a valid SoC, an End of Life declaration is to be submitted to the Assessment Body.
   a. The Assessment Body will send the vendor an End of Life Declaration along with an Assessment Proposal.
   b. Upon receipt of a signed End of Life Declaration and a valid purchase order, the SoC will be re-issued to the vendor for a further twelve-month period.
   c. The Assessment Body will set the product status as End of Life and will not contact the vendor regarding subsequent renewals.

5. If the vendor advises that a component no longer requires a SoC, the Assessment Body will reference the product as "SoC not required"

**Ongoing Compliance**

**Purpose**

Vendors must maintain the conformity of component(s) throughout the component(s) lifecycle and must immediately notify the Assessment Body of any changes to a component.

The Assessment Body must ensure that the composition of all products referenced within a SoC is accurately recorded throughout the component(s) lifecycle.

The Assessment Body must be notified of all L2 LoA numbers granted to a product which embeds component(s) that have been issued a TQM Label.

**Procedure**

1. Once a PCD or IFM has been integrated into a Level 2 device and a L2 LoA granted, the Vendor must submit this to the Assessment Body.

2. The Assessment Body must be notified immediately of any change to the product that affects the L1 LoA or any change to the Quality Management System that adversely affects compliance.

3. The following documentation must be submitted to the Assessment Body following any change
   - A revised TID detailing the change to the build standard of the component.
   - A revised VOD detailing the change to the Quality Management System.
   - The new L1 LoA associated with the changes

4. Upon receipt of a valid purchase order and of assessment documentation, the Assessment Body will verify the changes by reviewing the submitted documentation.

5. If the Assessment Body is unable to verify the changes by reviewing the documentation, an audit may be mandated.
TQM Termination

Both Mastercard & the Vendor reserve the right to terminate a TQM Label application at any time.

Should the Vendor terminate the application, an assessment as to the level of work completed will be estimated and appropriate charges will be passed on to the Vendor.

Termination of TQM Labels by Mastercard

Mastercard retains the right to terminate with immediate effect a specific TQM Label or all TQM Labels granted to the Vendor.

This termination may occur under certain conditions, including, but not limited to:

- L1 LoA no longer being valid.
- Non-compliance to the Mastercard TQM program.
- Non-adherence to TEM_GEN_T01 and TEM_GEN_T02 (among which could be listed field interoperability issues based on suspected discrepancies between approved products and deployed products).
- Failure to perform acceptable corrective actions.

If Mastercard is considering termination, the Vendor will be notified by letter. The letter may specify corrective action(s) with timescales, and potentially a probation period. Should Mastercard remain dissatisfied with the Vendor’s performance, the TQM Label(s) will be terminated.

Mastercard will notify the Vendor that the TQM Label has been terminated.

Should a non-conformity or misrepresented information be discovered, Mastercard will judge the seriousness of the non-conformity, or non-conformities, and may decide not to grant / renew TQM Label(s) or to revoke the current Label(s).

In this case Mastercard will inform the Vendor within four weeks and give the reasons for its decision.

Termination of TQM Labels by the Vendor

Should the Vendor decide to be no longer associated with the TQM program, the Vendor must immediately inform the Assessment Body.

The Assessment Body will notify Mastercard and the validity of the Vendor’s TQM Labels will be terminated immediately.

Any advertisements regarding the component(s) previously issued TQM Label will be stopped with immediate effect.
TQM Management

Improvement Proposals

Mastercard welcomes any proposals to improve the TQM process.

Improvement proposals should be sent to Mastercard directly at the email address below. TQM_SUPPORT@Mastercard.com

Mastercard will review all proposals for improvement and respond to them within one month.

Resolution of Conflicts

All conflicts concerning the application of the procedures of Mastercard TQM should be directed to:

TQM_SUPPORT@Mastercard.com

Mastercard will take all necessary steps to resolve any conflicts.