Remy International, Inc.

Supplier Quality Manual

Preface

Section 1 - Remy International Incorporated General Requirements

This portion of the manual is intended to define Remy International Incorporated's (*hereafter noted as Remy*) supplier general guidelines, contains the Remy Statement of Requirements, and defines requirements necessary to conduct business with Remy.

Section 2 - APQP

The APQP section defines Remy's product quality planning requirements that are necessary to develop and implement and Advanced Product Quality Planning process for a product or service. Remy utilizes AIAG guidelines and requires suppliers to implement the systems within AIAG at a minimum. This section will communicate Remy requirements in addition to AIAG as well.

After reviewing Remy International Inc.'s Supplier Quality Manual please sign and return this page with your quotation package to the appropriate Remy International Inc. Commodity Manager.

Supplier Name: _____

Supplier Manufacturing Location: _____

We have read and comprehend the information contained within this documents.

Reviewed by:

_____	_____	_____
Printed Name	**Signature**	**Date**
_____	_____	_____
Title	**Phone#**	**Fax #**

Table of Contents

Document Procurement

Forms
Remy forms and documents referenced in this manual can be obtained through Remy International, Inc. at www.remyinc.com and be copied for use.

AIAG Documents
All AIAG specific documents referenced can be obtained by contacting AIAG. Suppliers are responsible for ensuring they continuously maintain the latest revisions of the AIAG manuals on site. www.aiag.org

Section 1

General Requirements

1.0 WHO WE ARE

1.1 About Remy

See Remyinc.com/About

1.2 Purpose, Application, and Scope

The purpose of this manual is to describe the Remy Supplier Management procedures and Quality requirements used to help achieve the quality mission at Remy. Remy considers its suppliers as being an integral part of the Remy Quality System.

This manual identifies and outlines Remy's Supplier Management function. It also specifies quality systems and quality performance requirements that current, as well as potential suppliers must meet in order to supply Remy with products and/or services. Additional quality requirements may be specified on Remy drawings, specifications, and/or purchase orders.

This manual is intended for commodity applications in our OE division of passenger car, light and heavy trucking, and hybrid industries of Remy. Pertinent sections of this standard should be applied within the aftermarket sector as well.

2.0 DOING BUSINESS WITH REMY

2.1 Supplier Quality Contact

The Supplier is **REQUIRED** to have, and maintain, access to the comercial grade World Wide Web and email. These will be the sole means of transmitting corrective action documents, APQP updates, PPAP documents, engineering changes, and revised prints.

Remy recognizes English as it's language of business. Therefore, the supplier is REQUIRED to have a business understanding of the English language or access to translation capabilities through its own organization. These documents / systems require English language responses.

- SCAR
- PPAP / Supplier Portal
- IMDS
- Supplier Quality Improvement Process
- APQP

2.2 Remy Department Responsibilities

The Remy Commodity Manager shall be the single-point contact for product development, tooling, procurement, and commercial issues relating to Remy International Inccomponent parts.

The Remy International Inc Supplier Quality function shall be the single point contact from APQP through launch and maintenance including design change management of purchased direct material.

2.3 Early Supplier Involvement

Supplier is encouraged to participate in early product development to create new products faster, at higher quality, with less waste, and at lower cost.

3.0 REMY STATEMENT OF REQUIREMENTS

3.1 Remy Supplier Quality Policy

3.1.1 Supplier Quality Metrics - The Supplier is ultimately responsible for the quality of the products they deliver to Remy. Remy does not recognize Acceptable Quality levels (AQL). Requirements for supplier performance are:

- 100% Conforming parts (Zero (0) PPM)
- 100% Delivery (On-time schedule compliance and quantity)

Funding should be identified in the initial quote and subsequent quotes to reflect error occurrence prevention. Controls implemented at a later date are the financial responsibility of the supplier.

3.1.2 Inspection – Remy International Inc. reserves the right to enter Seller's facility and at reasonable times to inspect the facility, goods, materials and any property of Buyer covered by this order. Buyer's inspection of the goods whether during manufacture, prior to delivery, or within a reasonable time after delivery, shall not constitute acceptance of any work-in-process or finished goods. Additionally, the supplier shall ensure access to any / all sub-contractor facilities used in the manufacture of the product as delivered to Remy.

3.2 Potential Supplier Evaluation Audit

At Remy's discretion and in conjunction with third-party certification (or second-party verification), a technical assessment of the supplier's capabilities may be requested with on-site verification by Remy International Inc personnel as deemed necessary.

If a Supplier Evaluation is requested, supplier selection is then dependent upon the supplier receiving an "Approved" rating in accordance with the process guidelines (see note below). Records of the results of evaluations, and any necessary actions arising from the evaluations will be maintained.

The potential supplier must be able to demonstrate highly stable and capable processes that support exceptional quality and delivery performance of products used in an automotive or equivalent application.

Should a Supplier Evaluation not be requested a 'Quality System' waiver must be issued per requirements outlined on Remy internal procedures.

3.3 Quotation Guidelines

Suppliers shall adhere to the requirements contained in the following documents:

- Current AIAG Editions of APQP, PPAP, SPC, FMEA, MSA, Special Processes (CQI)
- Key Characteristics Designation System (TG-05)
- Sample Part Verification (SPV)
- Remy International Inc Production Trial Run (PTR)
- Early Production Containment (SQ-SP-140)
- Remy Run at Rate (RCP-420)
- IMDS / 10505000
- Packaging / Labeling
- Adherence to all applied specifications

3.4 Quality Management System Requirements

As you may be aware, as an ISO / TS 16949 certified company, Remy International Inc requires their direct-material suppliers to have a quality management system certified to the ISO 9001 standard at a minimum; with a strong preference for ISO/TS 16949 certification. Verification of conformity may be demonstrated by a valid certification by an accredited third-party certification/registration body, or through a qualified second-party audit process.

It is the responsibility of each supplier to maintain your QMS certification information within this secure online system (Remy SCAR/SPM). You will be required to select the appropriate certification type and enter the current expiry date. Additionally, the system provides you with the option to either upload a copy of your certificate OR create a hyperlink to the URL to access your company's certification.

Your company's information is ONLY accessible / viewable to Remy's authorized personnel, and is contained within our secure server(s).

3.5 Quality Records

The supplier's quality system shall be documented through the use of quality records. The supplier shall use the following

3.5.1 Critical Document Retention - The following records must be retained for the life of the program including service part requirements plus one year:

- PPAP submissions per AIAG requirements
- Analysis of Returns and Corrective Action
- Problem Corrective Action Reports
- Sub-supplier Quality Data
- Material Certifications (Traceable to specific lots of material)
- Part specific traceability back to point of manufacture
- Master sample parts

3.5.2 Process Document Retention - where applicable must be maintained for one calendar year

- Internal audits
- Internal quality communications
- Test results and samples not related to PPAP or special characteristics

Section 2

APQP

4.0 DEVELOPMENT (CONCEPT, DESIGN & PRODUCTION VALIDATION)

4.1 Prototype / Sample Development

The procedure for sample part verification SPV01 is the mechanism Remy utilizes for prototype builds as requested by Remy.

Sample part verification / SPV01 Rqmts

4.2 Award of Business

It is the responsibility of Remy Global Sourcing personnel to provide to the supplier the most current, approved, and released design record(s) for the product or material to be provided upon award of business. Supplier must confirm with their commodity managers the latest design records have been delivered to the supplier.

Upon receipt of the Award of Business Letter, the supplier shall acknowledge receipt and acceptance with a signed and dated copy delivered to Remy Global Sourcing.

NOTE: Award letter should not be signed when:

- Exceptions to the design specifications
- Supplier cannot accommodate PPAP due date
- Exceptions to the Remy International Inc Supplier Quality requirements

4.3 Current Revision

All suppliers are required to keep and maintain an accurate and current file of all the latest applicable Remy drawings and specifications received from Remy for each current production part or raw material supplied to Remy Applicable specification requirements include, but are not limited to, the following:

Part prints

Test specifications

Process specifications

Material specifications

Purchasing specifications

Packaging specifications

Remy may periodically monitor adherence to this requirement during supplier visits and/or audits.

4.4 Statistical Techniques Application

The Supplier shall use the statistical methods outlined in the AIAG Guidelines to assure process control & defect prevention, to assess machine capabilities & levels of quality, and to identify areas for quality improvement.

The use of statistical techniques is required for all print items designated when the Remy symbol diamond (◊) occurs. Using 100% inspection does not relieve the supplier from monitoring and maintaining process control for the item(s) with (◊)

When a pentagon symbol (⏢) occurs beside a feature, specification, or note 100% inspection is required.

Statistical methods shall also be utized for any **process** significant characteristics identified in supplier control plan and in an ongoing manner unless otherwise approved by Remy. Suppliers shall apply their experience and knowledge within the PFMEA to identify significant characteristics within their processes.

The supplier shall enforce these requirements with their sub-tier supply chain.

4.5 Feasibility Study

Feasibility studies shall be conducted and documented by suppliers on Remy's new and/or changed products to assure design, manufacturing, and assembly feasibility. This study shall be conducted upon receipt of a Request for Quotation (RFQ) from the Commodity Manger, and reference the AIAG APQP Manual as a minimum requirement.

A study that achieves a design of high feasibility should be based on the following:

Available technologies that can achieve 5 sigma process capability (Cpk = 1.67).

Enables competitive pricing.

Ensures conformance to all engineering requirements at forecast production schedules.

Conducted utilizing supplier experience and knowledge based on historical data from relevant processes in a cross functional team environment.

The feasibility study is controlled and approved by all pertinent members prior to quotation.

All recommendations from suppliers for improvements shall be submitted to the applicable Remy Commodity Managers to obtain engineering approval.

4.6 Process Failure Mode and Effects Analysis (PFMEA)

The supplier shall request a review of the Remy International Inc DFMEA from their SDE.

The Supplier shall develop a PFMEA from a process flow diagram which lists all of the process steps beginning with the receipt of raw material to packaging and shipment of material to Remy The PFMEA is to be used to determine and identify where potential failures in a product and/or process could occur, the effects of those failures, the actions necessary to eliminate or reduce the probability of the potential failures from occurring, and to provide documentation of the failure identification and failure elimination process. Suppliers shall refer to the AIAG Potential Failure Mode and Effects Analysis Manual for instructions, guidelines, and forms to be used when completing and submitting FMEA's. Suppliers shall develop procedural controls which include the following:

Conducted utilizing a cross functional team environment.

PFMEA is a living document incompasing all corrective actions and changes and RPN numbers are reevaluated displaying effectiveness as applicable.

Critical processes or characteristics are identified and secured by appropriate actions.

PFMEA RPN's of greater than "125" require a corrective action to be initiated.

Supplier should furthermore develop an internal action RPN trigger based on knowledge and experience.

Supplier must review annually at a minimum and continually drive down RPN numbers as a continuous improvement initiative.

4.7 Process Development

Supplier program management cross functional team develops the new process using the preliminary Process Flow and PFMEA.

Pre-Launch Control Plan is developed using the preliminary Process Flow and PFMEA.

Process is refined during trial runs and Flow, PFMEA, GP12 and Control Plan are amended as weaknesses are found and corrected.

If uncorrectable / incapable items are found, submit a request for print change at this time after all avenues to correct the process, fixturing and tooling, etc have been exhausted. Change requests shall be submitted to your SDE.

Preliminary (short run) capability is monitored and processes improved or control plan amended.

Appendix M: Request for Drawing Change Form

4.8 APQP Status Reporting

When the supplier is awarded the project, an APQP tracking mechanism must be initiated and all activity must include personnel from the production location.

Appendix F: APQP Status Report

Regular reporting to Remy is required at intervals as specified by the assigned Supplier Quality Engineer or Supplier Development Engineer. Suppliers must use the Remy Supplier Portal to submit documentation as directed by due dates listed within the portal.

- ***Utilization of the APQP status report tool within the supplier portal***
- ***Continual updates via email to responsible Program Manager and SDE***
- ***Supplier maintains APQP timing chart in line with Remy program milestones***

Section 3

Serial Production

5.0 PRODUCTION

5.1 Remy Specific Requirements for PPAP

- General Requirements
  - PPAP MUST BE SUBMITTED ON OR BEFORE THE COMMITMENT DATE SPECIFIED IN THE REMY AWARD LETTER. SUBMISSION MUST BE WITH INTENT OF FULL APPROVAL AT THAT TIME.
- An IMDS / MDS report is MANDATORY (reference section 5.16)
- Supplier initiated PPAP submissions require a Request for Permit to be submitted and dispositioned prior to submission.

Supplier Request for Permit

5.2 Parts Requiring PPAP

Production part approval from Remy will be required for new and/or changed parts and processes prior to volume production.

PPAP submissions will be required for all OE and Service parts tooled for Remy, or parts tooled by a Remy customer, for use by Remy.

PPAP submission and authorization for shipments must occur prior to the first production shipment of product to the using Remy facility.

PPAP submissions will also be required for any standard part (catalogue item, shelf items, etc.) unless formally waived by Remy

PPAP submissions will be required for parts specifically modified to conform to a Remy part number specification and any part, process, material, or special requirements if specified by a Remy purchase order.

5.3 Supplier Documentation Requirements for PPAP

All PPAP documentation packages are to be submitted in **PDF** format through the Remy Supplier Portal discussed earlier in this manual. ALL submissions will be documented in English using AIAG forms for all items.

All PPAP's to Remy shall be at a level 3 submission.

Level 5 submissions, (on-site verification and approval at the supplier's manufacturing location by Remy personnel must be requested well in advance of the required submission. Inspection, data analysis, and acceptance of the PPAP package must be completed by the supplier's personnel prior to the on-site visit.

The below data must be randomly selected from a minimum production run of at least 300 consecutive cycles. Remy Supplier Quality APQP Manager must agree to any quantity less than 300 pieces and any arrangement that deviates from any of the above requirements and be documented.

- Accurately complete the Production Part Submission Warrant and provide with PPAP package.
- Provide material, performance and durability test results as specified on the design record or provide material lab approval with PPAP package per PPAP level requested.
- Provide scope of laboratory accreditation per PPAP level requested.
- A copy of the latest Remy ballooned print must accompany the PPAP submission documentation.
- Data shall be provided from 3 parts for **every** dimension, specification and note on the Remy print.
  - If more than one cavity, a complete dimensional layout is required on two parts from each cavity. Multiple machines and or die sets must also follow this rule.
- Provide Process Flow Diagram, PFMEA, Process Control Plan and early production containment plan.
  - Use of special operations, rework and / or salvage must be documented on the Process Flow Diagram, PFMEA, & CP and approved during the PPAP process
  - The use of unapproved special operations, processes, rework, or salvage operations is PROHIBITED.

- Process Capability Studies must be submitted for each Remy designated key product characteristic having a (◊) symbol (reference section 5.18)
- Early production containment plan shall be implemented until Remy is satisfied with process capability has been achieved and at a minimum of 90 days after start of production. Supplier may exit GP-12 with requirements met outlined in the Remy procedure.

  Early Production Containment
- Measurement system variation studies (Gage R & R) must also be submitted for each Remy (◊) designated product characteristic (see the AIAG Measurement Systems Analysis reference manual).
- Measurement system attribute studies (Gage R & R) must also be submitted for each Remy (⌂ 100% inspection) designated product characteristic (see the AIAG Measurement Systems Analysis reference manual).
- Provide checking aids upon request.
- Provide Appearance Approval Report (AAR) upon request.
- Provide any supporting documentation upon request.
- Provide two sample parts from **every** cavity or tool to Remy headquarters. Suppliers shall retain one master sample (from each cavity as applicable). Reference Remy award letter.
  - Master samples must be retained in a method to protect them from environmental impact and should be maintained per retention requirements listed in (section 3.5).
  - Each PPAP sample is to be identified (either by tag or PERMANENT marking) so that it may be linked to the specific layout & test report supplied with the PPAP.

  PPAP Document / Sample Labels
- Provide Production Trial Run samples as requested by Remy Production Control and Logistics. Samples are to be identified using the Plant Trial Run PTR Parts Label.

  Plant Trial Run (PTR) Parts Label

5.4 Sample Parts

Two sample parts from **every** cavity or tool shall be submitted to Remy Headquarters. The supplier shall retain one master sample. Supplier should also retain one master from each cavity or tool for reference. All sample parts are to be visibly tagged and identified correctly as being PPAP “SAMPLE PARTS” using a bright orange tag firmly adhered to the container. The supplier name, part number, engineering change level, sample number, and traceable lot number shall be visibly identified on the container label.

Do not send PPAP parts out of your 300 piece run (or otherwise agreed quantity) to Remy manufacturing locations until a PTR / production order is received.

Do not send PTR / Manufacturing Run Parts for PPAP samples to Headquarters.

Bulk material sample size shall be supplied by the foot, weight, etc as requested by the assigned SDE.

All PPAP sample parts are to be sent to the attention of the **Remy Headquarters PPAP Coordinator** for verification.

Remy International Inc

600 Corporation Drive

Pendleton, IN 46064 USA

5.5 Remy Verification at Supplier

Remy reserves the right to verify purchased product at the supplier's manufacturing location. When this occurs, Remy will utilize the level 5 PPAP for on-site PPAP approval. Documents will be submitted in the Remy International Inc supplier portal after review.

5.6 Customer Verification of Subcontracted Product

When required by customer contract, Remy will permit its customers to participate in verification of product from suppliers to Remy. Again Remy may utilize the level 5 PPAP for on-site PPAP approval.

5.7 First Piece Buy Off and Set-Up Parts

Remy requires suppliers to do first piece buy off samples from each operation (ie manufacturing process step); ensuring all production issues are corrected prior to release. Product must be quarantined from the next process until checks can be performed.

All checks and documentation required to assure part conformance must be completed prior to release. In the event of unplanned interruptions of processes (power loss, maintenance, abnormal stop of a process); first piece buy off must be completed again.

Set up and first piece samples must be quarantined and not mixed with actual production parts. At such time as the production parts are approved for shipment to Remy, the set up samples are then to be scrapped. First piece samples may be retained or scrapped, but shall not be shipped to Remy.

First piece samples may be exempted from this requirement if reviewed and approved in writing by Remy Headquarters APQP or SQI Manager.

5.8 Submission Requirements

The Commodity Managers will determine the date of PPAP submission and its associated level in consultation with the supplier, Remy Engineering, Remy Supplier Quality Assurance Engineer, and Remy Sales representative. These dates are to be planned in accordance with Remy new model development cycles, customer requirements, and supplier quoted lead times.

5.9 PPAP Expectations

The supplier shall be trained and understand the scope, definition, and purpose of the Production Part Approval Process, according to Remy requirements.

The supplier shall understand and deliver to the requirements for labeling, shipping and packaging. Suppliers shall deliver the complete PPAP package on or before the due date specified and accepted on the Award Letter.

Suppliers with two (2) or more rejected PPAP's within a six month time period will be subject to Supplier Quality New Business Hold status. Exit criteria from New Business Hold will consist of the following:

- Correction of all rejected PPAP's **<u>within the designated resubmission time</u>** specified by the SDE.
- Submission and approval of a corrective action report.

5.10 Change Request

5.10.1 Remy Directed Changes

Remy suppliers will receive a formal notification of all Remy requested changes. Requests will be in the form of an official Remy documented request for quote, engineering change notice, and/or a revised Remy drawing.

Responses from suppliers must include impact on delivery, tooling, quality (PPM), as well as any other items of importance. All responses will be evaluated to ensure that an acceptable plan for implementation is negotiated. Suppliers shall not to implement changes into production until formal written authorization has been obtained by Remy and, if required, PPAP approval has been granted.

5.10.2 Supplier Requested Changes

Suppliers are not to incorporate any changes into production without prior written authorization by Remy Supplier Quality. Suppliers contemplating changes to design, manufacturing processes, manufacturing

location, materials, subcontractors, methods, procedures, and/or control methods are required to notify Remy Supplier Quality in sufficient time prior to implementation so that a plan can be developed and implemented for requalification.

Suppliers found implementing changes that have not been authorized by Remy Supplier Quality are subject to disqualification as a supplier and product rejection. Costs incurred by Remy as a result of an unauthorized change will be charged back to the supplier.

5.10.3 Drawing Change Requests

Requested changes to Remy drawings must be submitted to the responsible Remy SDE using the "Supplier Request for Remy drawing Change". This form may be submitted in the event that it has been determined, with adequate supporting data, that the required process capability can not be achieved under the specified dimension(s), tolerance(s), or performance requirement(s). The supplier is responsible for completing the form, attaching the supporting data, and obtaining the necessary signatures for approval, i.e., the Remy Global Sourcing, Product Design Responsible Engineering, and Quality Engineering representatives. The form must be completed well in advance of the PPAP sample submission. Once the supplier's request for change has been approved, the form must be attached to the PPAP sample submission package at the time of submission to avoid rejection.

Request for Drawing Change form

5.11 Requests for Permit

Suppliers requesting temporary relief from Remy drawings, specifications, and/or procedures must submit to the responsible Remy SDE using a "Supplier Request for Permit". The supplier is responsible for completing the form, attaching the supporting data, and obtaining the necessary signatures for approval. Suppliers shall submit request for permit through the Remy Supplier Portal.

Supplier Request for Permit

Remy Supplier Portal Login Page

5.11.2 Procedure Permit Requests

Prior to PPAP submission, if a supplier deems it necessary to deviate from any of the PPAP procedures, a "Request for Permit" form must be submitted for approval.

Suppliers will receive a copy of the original procedural "Supplier Request for Permit" form with Remy signatures as evidence of approval and authorization to proceed. The form shall be attached to the PPAP submission package at the time of submission to avoid rejection.

5.11.3 Part Permit Requests

If prior to PPAP submission, the supplier detects a minor discrepancy with the part or material, relative to full compliance with a Remy drawing or specification, and the discrepancy does not affect part integrity (form, fit, function, appearance, or reliability), a "Request for Permit" form must be submitted to the responsible Remy SDE for approval.

The "Request for permit" form, in this case, is to be used to permit the supplier to obtain "Provisional Approval, Permit Required for Use", when it has been determined, with adequate supporting data, that the required process cannot achieve Remy requirement(s) in the time required to obtain PPAP approval prior to start of production.

A "Request for Permit" form shall only be used when there is high confidence that the required process capability can be obtained in a short time thereafter, and must be accompanied by a written corrective action plan. Permits will not be allowed until the supplier has exhausted all other means to correct and become compliant to the Remy print.

The "Request for Permit" form may also be used to avoid lot rejections for parts already PPAP sample approved and in production if a minor discrepancy to a Remy drawing or specification is detected during its manufacture by the supplier. As described above, a minor discrepancy is defined as a discrepancy that does not affect form, fit, function, appearance, or reliability of the part.

Effective August 08, 2012 the use of the Remy Supplier Portal will be mandatory for all suppliers to submit Permit and Change Request.

5.11.4 Process Permit Requests

If the need arises to incorporate a change in a manufacturing process prior to PPAP submission / approval for this change, a formal request must be submitted to Remy SDE using the "Supplier Request for Permit". The form is to be submitted with the box "Process" checked off. These types of changes are as follows:

- Materials
- Subcontractors
- Methods
- Procedures for cleaning, washing, de-burring, or other types of processing
- Control methods
- Use of new equipment
- Process design
- Tooling including relocation, refurbishments, etc.

Suppliers will receive a copy of the electronic "Request for Permit" form with Remy Permit number and approval date as evidence of approval and authorization to proceed. A new or revised PPAP submission will be required to obtain full approval of the requested change in the event that the change will be permanent. The form must be attached to the PPAP submission package at the time of submission for future reference.

Requests for permits are by exception only and must be followed up with a written corrective action plan. The supplier must specify lot, quantity, and/or time duration. Requests for permits that expire, i.e., exceed lot, quantity, and/or time duration limits will be cause for product rejection.

5.12 Design Failure Mode and Effects Analysis (DFMEA)

DFMEA's are only required for Remy PPAP Submissions, when the supplier is design responsible.

5.13 Process Capability Study and KPC Requirements

Process Capability data must be taken from a significant production run of minimum of 300 consecutive pieces (PTR run)

Any delay in the capability study, the explanation must be included on the request for interim recovery worksheet.

If the study reflects that the part is not capable, the interim recovery worksheet must also be included with the PPAP

Acceptance criteria is Cpk greater than 1.67 or Ppk greater than 2.00

Ppk = Short term capability index (standard deviation is calculated using the individual values)

Cpk = Long term. Process performance index (standard deviation is given one degree of freedom (n-1))

Refer to the AIAG Statistical Process Control – SPC Manual for more information on evaluating stability

The diamond symbol (◊) and pentagon symbol (⏢) are used by Remy on Remy drawings to indicate key product or process characteristics. Key product and process characteristics are defined as attributes of a component, material, manufacturing, and/or assembly operation which have been designated by Remy Engineering as being significant to part function relative to quality, reliability, and durability performance. Items identified or called out by key characteristics must be proven stable, capable, and with a short term process capability index (Ppk) of 2.00 or better. Proven process capability requires statistical evidence of a long term process capability index (CpK) of 1.67, unless otherwise specified. See drawing notes for additional gaging and control methods.

Short term process capability studies (process potential studies) must be conducted prior to the start of production. These characteristics will be measured for Production Part Approval (PPAP) per AIAG guidelines. Special attention must be placed on these items in the Process Failure Modes and Effects Analysis (PFMEA), process control plan, and process instructions to ensure compliance to specifications and process controls. Quality records relating to these items with these symbols must be retained for a period of life of the program and service requirements plus one (1) year for all original equipment and original equipment service orders.

Key product and process characteristics are to be monitored. The method for monitoring these characteristics must be described and specified in the supplier's control plan. Variable characteristics will be measured by the supplier with both Cpk and attribute data being tracked on an ongoing basis. This data is to be available for review by a Remy representative upon request.

The use of key product and process characteristics is in no way intended to minimize the importance of other requirements. The supplier is expected to develop a complete quality system for all parts and characteristics, regardless of significance.

Simultaneously to KPC's on the Remy International Print or absence thereof, the supplier shall determine internal critical dimensions and / or processes to assure features are controlled. These items shall be identified in the PFMEA and control plans at PPAP submission and must be controlled with the same above mentioned methods. Suppliers shall draw on knowledge and experience when identifying critical characteristics.

5.14 Control Plans (Production)

The product control plan is developed using information obtained from the PFMEA, feasibility studies, Remy drawings and/or specifications, etc. It is a written description of the systems and processes that have been developed and implemented to prevent the production of nonconforming material. Suppliers are required to identify the methods and controls used to monitor all Remy designated key product and/or process characteristics (◊)(⏢) in their control plans. Suppliers are also required to identify internal critical process and identify them as such within the control plan.

- The Production Control Plan is a living document & should be updated to reflect the addition / deletion of controls based on experience gained by producing parts
- All Remy KPC items (◊)(⏢) and supplier identified critical control characteristics must be statistically monitored in a continual basis unless otherwise agreed by Remy
- A yearly 100% dimensional layout is required to be performed and documented on the control plan. The results are to be available at anytime to Remy personnel.
    - Any non-conformances found (other than those previously permitted) shall be reported immediately to Remy Supplier Quality.
- A single control plan may be developed for a family of parts produced by the same process provided that all unique characteristics are identified.

5.15 Special Processes

Any special operation, process, salvage or rework processes must be shown, controls listed and documented within the process flow, PFMEA and control plans.

5.16 Record of Compliance

An IMDS / MDS report is MANDATORY for every part; and is to be done via the International Material Data System (IMDS), at http://www.mdsystem.com/index.jsp, which is a repository for this information. A hard-copy of the data input is to be included with each PPAP submission

Ref: 10505000, MDS's to be submitted to Acct. I.D. #48550

The General Motors specification GM1000M **or** GMW3059, and used by Remy, also sanctions the GADSL specification; however, also incorporates a customer-specific table for a limited number of substances. Within the IMDS application it is possible to specify the specification to which the material is to be evaluated against.

Failure to initiate a report and/or declare a restricted and/or reportable substance via IMDS will lead to immediate PPAP rejection.

Section 4

Continuous Improvement

6.0 REPLENISHMENT

6.1 Packaging Plan

A packaging plan describing the method and type of packaging to be used to assure products can be handled, shipped, and arrive undamaged for production use at the intended destination must be submitted to Remy packaging engineering. Packaging plans must be submitted to the Remy Commodity Managers for review and approval by the Remy packaging engineer. Packaging plan submittal shall be done prior to PPAP submittal. Approval and / or photos of packaging shall be submitted with PPAP as requested.

6.2 Engineering Change(s)

It is the responsibility of the Remy Supplier Quality organization to distribute the latest released revision of products and / or materials, for direct-materials purchased externally to the organization. The supplier will receive formal notification of engineering changes from Remy; which will include PPAP resubmission requirements (submission level and date submission is required).

The supplier is required to acknowledge receipt of the change notification and communicate their PPAP submission commitment date back to the responsible Supplier Development Engineer (SDE) shown on the notification. A copy of the Engineering Change Notification shall be included in the PPAP submission documentation.

It is the supplier responsibility within two weeks to evaluate the requested change for impact to timing, communicate this evaluation to the Remy Commodity Manager, and establish a new PPAP submission date if needed. Changes are to be communicated to Remy Supplier Quality (SDE) and communication on progress shall be timely.

6.3 Industry Standards

It is the supplier's responsibility to obtain and maintain the current revision of any and all standard industry specifications (e.g.: ASTM, SAE, AISI, IEC, NEMA, JIS, ISO, etc.). Customer-specific (Remy) specifications will be provided by Remy

6.4 Supplier Performance Measurement (SPM) & Rating Model

Our Supplier Quality Goal is Zero (0) PPM (complete conformance to Remy print requirements) and perfect on-time delivery. All suppliers are expected to achieve this goal.

Continued failure to meet these goals could result in the supplier being added to the Remy "Top Focus Suppliers" list; resulting in Remy product / process auditing and continuous improvement activity. Failure to demonstrate improvement could lead to:

- New Business Hold
- Controlled Shipping Level 2
- Discontinuation of Business.

The supplier is required to utilize the Remy SCAR/ SPM web system to document corrective actions and obtain and monitor their SPM Monthly Score.

Suppliers are required to maintain passwords to Remy supplier accessible websites (SCAR and Supplier Portal):

- **User ID's and Passwords are given to the appropriate personnel**
- **In the event of organizational changes, suppliers are required to notify Remy Commodity Manager and Supplier Development of any changes and request new ID and PSW.**
- **Update and maintenance of quality management system certificates.**
- **Key contact names and information (e.g. email, addresses, telephone numbers, mobile numbers.)**

Reference:

- SCAR System
- Supplier Portal

Remy will apply a common approach to monitor supplier performance for all suppliers related to Remy internal or external customers. Supplier Performance Measurement monthly results will be available on the web beginning in third quarter. The supplier is responsible for obtaining these reports and taking corrective actions. SPM monthly data will be available for examination by the supplier on the 10th day of the next month.

At the plant level, we will measure, track, & report supplier performance in the following terms:

6.4.1 SPM Calculation

(PPM SCORE + DOWNTIME + DELIVERY + SORT/REWORK + # SCARs) x RESPONSE RATING x DISCOVERY LOCATION = SPM

6.4.2 Definitions

Delivery	- Number of occurrences for late, over, under, or early shipments
Downtime	- Actual downtime labor/man hours
PPM	- Parts Per Million (Number of non-conforming parts ÷ Number of parts delivered) x one million
PPM Score	- Parts Per Million (PPM) X 0.10
Response Rating	- Allow SQE to input their perspective on Suppliers responsiveness
S.C.A.R.	- Supplier Corrective Action Requests (SCAR) issued by Supplier Quality for multiple performance and / or delivery concerns including PPAP's.
Sort/Rework	- Labor man/hours for sort/rework
Discovery Location	- The location within the Remy manufacturing process at which the defect was discovered (e.g.: before point of use, during manufacturing, final test, at customer, warranty)

6.5 Supplier Performance Measurement (SPM) & Rating Model (Continued)

6.5.1 Response Rating Explanation

RESPONSE RATING

0.5	• Pro-active in following Remy procedures • Communicates non-conformities prior to problem arriving • at Remy internal and/or external customer facility • Meets timing requirements on or before target dates
1.0	• Meets Remy procedures when requested • Initiates containment once discrepancy is discovered • Meet timing commitments • Provides on-site support when required
1.5	• Fails to meet Remy procedures • Slow to acknowledge non-conformities & requires • excessive communication to initiate actions • Fails to meet timing commitments • Supplier is placed in Controlled Shipment Level 2
2.0	• Supplier continuously fails to assume containment of non-conforming materials within 24 (local)/48 (international) hours • Supplier is on New Business Hold

6.5.2 Discovery Location Explanation

DISCOVERY LOCATION

1.5	Before point of use
2.0	During manufacturing
3.0	Final test
4.0	At customer
5.0	Warranty claim

7.0 VENDOR OWNED MATERIAL PROGRAM

Remy is also providing a Vendor Owned Material (VOM) program for handling material with certain key vendors at our Mexico operations. (Note: This process will be expanded to other locations over time). For this process, we have provided a warehouse near to our Mexico manufacturing plants. Suppliers store their material in this warehouse per terms negotiated with our Global Sourcing department. A third party logistics provider manages this warehouse and is responsible for inventory and transactional accuracy. Material in this warehouse remains the property of the Vendor until it is pulled into the manufacturing plants.

For scheduling information within this program, the following information is provided:

- **Long Term Forecast:** Generally, the expected annual requirements. This serves the purpose of providing information for long-range resource and capacity planning.
- **Release / Forecast:** Not provided directly. Instead, we provide suppliers with a web site, where they have the ability to view, at any time, our expected requirements for their part number. In some cases, this will provide more visibility than in the standard process, as suppliers will be able to see all of the orders that are in our system, regardless of timing. This serves the purpose of providing information necessary for shorter term, immediate manufacturing and resource planning.
- **Pull Signal:** Not provided directly. Instead, suppliers will also be able to see their inventory at the warehouse on the same web site, available at any time. The expectation is that the supplier will manage their inventory levels, within pre-determined ranges, using the information that is available on the web site. Supplier will also have visibility to the daily pulls of material to the plant, from the warehouse.

In addition, the supplier will have available contacts at Remy to discuss any issues that may arise.

Forecast Example

Pull Example

8.0 CONTAINMENT AND CORRECTIVE ACTIONS

We **require** from our supplier base, **increased responsiveness to nonconformance situations**:

1. That the Supplier arranges to have an authorized representative (either a direct employee or contract persons) at our location within 24 hours to examine, help understand the nonconforming issue, and help develop a containment plan for our suspect stock locations. International suppliers (suppliers outside of the country where our plant resides) will have 48 hours to arrange to have a representative at our location if a local one is not assigned or available. During the time it takes for a representative to arrive at our facility, we will screen materials 100% (if necessary) to maintain production and deliver to our customer. *These costs will be charged back to the supplier if the supplier is determined to be at fault.*
2. After the 24/48-hour period, the supplier is responsible for setting up screening activities to maintain our production and delivery to our customers. Based on input from the SQA Team, Remy Materials Team and Remy Plant Management, the supplier may need to utilize any or all of the following options so that Remy maintains production and delivery to our customers.
   a. Express shipment of 100% screened parts from the supplier's facilities.
   b. Issue a purchase order to a local screening company to continue screening parts. It is highly recommended the supplier supervise this activity with at least one of their own personnel so that defect items and rates may be directly communicated back to the plant of origin (Remy PERSONNEL WILL NOT ADMINISTER THIS SORTING FOR THE SUPPLIER). The supplier may wish to utilize the company we have contracted. The same rate can be extended to suppliers screening parts for Remy facilities. The supplier is responsible for issuing a PO to this company to continue the screening operations.
   c. Screen parts utilizing their own manpower.
3. That the Supplier help us to immediately identify and contain all suspect stock at Remy locations by identifying batch, serial or lot numbers affected so that we may quarantine and return the suspect material for 100% inspection by the supplier.
4. That the Supplier immediately identifies and contains all in-transit suspect stock BEFORE delivery to Remy locations. Screen this stock 100% for conformance and mark conforming parts and containers.
5. That the supplier immediately identifies and contains all stock on hand at the supplier location and screen this stock 100% for conformance marking conforming parts and containers.
6. That the Supplier will as soon as possible, deliver to Remy plants, 100% screened material to locations as directed by Remy Materials and Logistics personnel so that screenings operations at our facilities may be discontinued and non-conforming stock returned.
7. That the Supplier will within 24 hours provide initial Corrective Action Report with containment actions.
8. That the Supplier will within 15 days provide the final Corrective Action Report with irreversible corrective action and within 5 business days provide a Return Material Authorization (RMA) with shipping instructions to Remy SQA. The RMA will be utilized to return all non-conforming or suspect material. Suppliers failing to provide the necessary RMA authorization after repeated calls and elevation to your plant management (we will elevate the issue to plant management (or owner) and our Global Sourcing Team in Pendleton) will have materials returned via the Non-Conforming Material Notification and Corrective Action Request Number.
9. That the Supplier will remain in containment for 90 days following accepted proof of 7D irreversible corrective action.
10. Failure to effectively contain a quality issue will result in the escalation process laid out in this manual up to and including CSL2 and/or new business hold.
11. If the determination is made by both Remy and the supplier that the parts are conforming; Remy will not charge for any sorting or transportation costs.

Our Plant Supplier Quality Engineers will be directly contacting each supplier by telephone to inform you of the non-conforming issue and it's relevance to our production quality. The SCAR will then be emailed (or faxed if the supplier's email is temporarily not working)

12. The supplier will be held responsible for any costs associated with poor quality, including but not limited to:

- Sorting fee's to keep our production lines running
- Containment and teardown of already built products
- Scrap of productive parts as a result of teardown
- Return of product from our customer
- Customer charge-backs
- Field campaigns to retrieve product already in use

Supplier Corrective Action Request (SCAR) Instructions

The supplier is required to have a business grade email system and access to the web. Further the supplier is required to utilize the Remy SCAR/ SPM web system to document corrective actions and obtain and monitor their SPM Monthly Score.

https://www.remyinc.com/SupplierQuality/

8.1 Preventative Maintenance

The supplier shall develop a robust preventative maintenance program in an effort to minimalize process downtime which may impact the supply of product.

- The supplier must develop a plan for periodic maintenance based of knowledge and experience as well as machine vendor recommendations.
- Critical machines and parts shall be identified and proper inventory levels kept and maintained to ensure minimal impact of downtime.
- Necessary training shall be assessed, provided to key personnel, and effectiveness tracked to facilitate the preventative maintenance program as required.

9.0 CONTINUOUS IMPROVEMENT

9.1 Remy Product and Process Audit

Remy International Inc provides a wide variety of high quality rotating electrical products to the Heavy Duty Truck and Passenger Car industry. Efforts and commitment from our suppliers have aided us in maintaining world class manufacturing at all of our global manufacturing locations. In order to continue to provide high quality to our customers, we need to have our supply base maintain high levels of quality to support our production.

Suppliers continually failing to meet Remy quality standards will result in the supplier being added to the Remy International Inc "Top Focus Supplier" program.

9.2 Idea Submission

Suppliers are encouraged to frequently submit ideas that will reduce the total cost of their supplied product(s). All Cost Reduction Proposal ideas should be submitted to the Supplier's Remy Commodity Manager/Buyer for evaluation and distribution to the applicable commodity team. Suppliers should strive to involve all levels of the organization in the process of continual improvement and idea submission.

9.3 Material Control

Remy operates in a "PULL" environment. Our practice is to provide the following information to our suppliers:

- **Long Term Forecast:** Generally, this is the expected annual requirements. This serves the purpose of providing information for long-range resource and capacity planning.

- **Release (Forecast):** This information normally covers a four-month window, considering the first month as "firm" (defined as authorization to manufacture product), and the following three months as "forecast" (defined as authorization to procure raw material necessary for production). This serves the purpose of providing information necessary for shorter term, immediate manufacturing and resource planning. Some Remy locations provide this in monthly increments, and some provide it in weekly increments.

- **Pull Signal:** The pull signal is the only authorization to ship material. This pull signal is sent on a daily, multi-daily, or weekly basis. The pull signal serves the purpose of providing immediate shipment instructions, including any shipment routing and/or special instructions.

9.4 Layered Product and Process Audits

Layered audits must be conducted at various levels within the organization. This process ensures representatives at pertinent levels within the organization are involved and confirming quality and process systems are producing defect free product as designed. Layered audit systems shall consider the following.

- Product and process audits are scheduled and carried out by pertinent levels throughout the organization.
- Deviation reports must be issued to those responsible and improvement actions must be tracked. If quality requirements are not met (internal/external), additional audits referring to the specific events must be carried out.
- Product audits are carried out and documented in production after production operations have been completed. They are carried out periodically with examination of the finished product. Account is also taken of customer requirements and relevant functions, including ease and security of assembly.

9.5 Annual RPN Review

The supplier shall review all pertinent PFMEA's on an annual basis and reduce the highest RPN numbers where applicable.

9.6 Warranty Reduction

Warranty reduction is the coordinated responsibility of all areas including design, manufacturing, assembly, service, etc. To meet this responsibility, it is mandatory that Remy and its suppliers jointly contribute to the design, production, and delivery of defect free parts that will perform beyond the expected life of the final product.

If supplier created problems do occur, as determined jointly by Remy and supplier analysis of field data, the supplier must determine the root cause of the problem and implement corrective action in an expeditious manner. In addition, Remy Internaltional Inc. reserves the right to execute a charge-back for all supplier responsible warranty expenses.

10.0 APPENDICES / FILES

Appendix A: ***Supplier Quality / Statement of Requirements OBSOLETE***

Appendix B: ***Supplier Evaluation (QVR)***

Appendix C: ***Supplier Self-Assessment Survey***

Appendix D: ***Supplier Request for Permit***

Appendix E: ***Purchase Order Terms & Conditions***

Appendix F: ***APQP Status Report Form***

Appendix G: ***PPAP Checklist***

Appendix H: ***PPAP Document /Sample Labels***

Appendix I: ***Plant Trial Run (PTR) Parts Label***

Appendix J: ***Supplier Notification of Part Status***

Appendix K: ***Corrective and Preventive Action Request Instructions***

Appendix L: ***Interim Recovery Worksheet***

Appendix M: ***Request for Drawing Change Form***

Appendix N: ***Forecast Example***

Appendix O: ***Pull Example***

Appendix P: ***Engineering Validation Disposition request***

Appendix Q: ***Early Production Containment (GP-12)***

Appendix R: ***Run at Rate***

Appendix S: ***Engineering Change Notification & Request for PPAP***

Appendix T: ***ISO14001 Requirement for Plating, Heat-treat, and Coating***

Appendix U: ***Declarable Substances (10505000) specification***

Appendix V: ***Remy Packaging & Containerization***

Appendix W: ***Remy Container Label formats***

Appendix X: ***Remy IMDS Guidelines for Suppliers***

CHANGE HISTORY

DATE	REVISION	DESCRIPTION	APPROVER
08/01/1997	0	Supplier Handbook (Revised Initial Release)	
05/23/2005	1	General re-formatting and miscellaneous updates	J. Kingston
03/28/2006	2	General update and miscellaneous revisions	J. Kingston
10/14/2009	3	Renamed (formerly Supplier Handbook), revised and reformatted from 2005 edition	J. Kingston
12/21/2009	4	Revised to reflect requirement for sub-tier suppliers to be conforming to ISO/TS 16949 (ref. Sec. 5.1)	J. Kingston
04/21/2010	5	Revised to reflect requirement for all applicable issues identified during Supplier Evaluation to be resolved prior to Sourcing (ref. Sec. 4.1)	J. Kingston
06/08/2010	6	Revised to reflect current threshold for RPN corrective action values (from 40 to 125)	J. Kingston
07/31/2012	7	Updated to remove various redundancies contained within other industry standards and reflect current Remy requirements	J. Kingston
10/10/12	8	Updated to add supplier evaluation waiver statement, page breaks, and PPAP requirements	J. Kingston
4/01/13	9	Signature page added to eliminate "Statement of Requirements as all requirements are now captured in this document.	A Smith
6/6/14	10	Added clarification for timing of RMA delivery in section 8 number 8 as "within 5 business days provide a" RMA	J. Kingston
7/7/14	11	Various minor typographical corrections relating cross-references *(clauses, pagination, editor comments removed)*	J. Kingston