SCHRADER PACIFIC Advanced Valves

ALTAVISTA, VIRGINIA

SUPPLIER QUALITY ASSURANCE MANUAL

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GENERAL:

Our legal company name is Schrader Bridgeport International, Inc. dba Schrader Pacific Advanced Valves.

1.0 PURPOSE

This purpose of this supplier quality manual (SQM) is to establish general policy and outline the minimum quality requirements, which the supplier shall establish, document and implement, in order to be approved as a Schrader Pacific Advanced Valves supplier. The requirements within this manual are provided as a supplement to, and do not replace or alter the terms or conditions within Schrader Pacific Advanced Valves purchase documentation, engineering drawings and/or specifications.

Schrader Pacific Advanced Valves Quality Policy

Schrader Pacific Advanced Valves is committed to excellence by utilizing the strength of "team" and effectively implementing the tools and philosophy of continuous improvement. This will be achieved by striving to thoroughly understand and fulfill customer expectations, including 100% on-time delivery, shipment of defect-free product and global leadership in product innovation and reliability.

Schrader Pacific Advanced Valves Environmental Policy

Schrader Pacific Advanced Valves, Altavista, Virginia is committed to meet or exceed the requirements of all applicable Environmental, Health and Safety legislation and the prevention of pollution, and the protection of the global environment and community in which it operates.

Schrader Pacific Advanced Valves will continually strive to develop best practices in Environmental, Health and Safety management based on the internationally recognized standard, ISO 14001:2015. We will strive to continually improve the impacts we impart to the environment by: minimizing discharges to the air, water, and land; reducing or eliminating waste; minimizing energy consumption, and; practicing water conservation. Environmental objectives and targets are set each year based on the previous year's results and trends.

It is each associate's responsibility to abide by safe operating procedures, to guard their own and other Associate's health, and to properly maintain and operate production, pollution control, and waste disposal processes that could have significant impact on the environment.

In keeping with this policy, Associates are encouraged to continually improve their awareness to the Environmental, Health, and Safety Requirements and report any conditions that they perceive to be unsafe, unhealthy, or hazardous to the environment.

2.0 SCOPE

This manual applies to suppliers of production parts, materials and/or services (heat treating, painting, plating or other finishing services) to the business units of Schrader Pacific Advanced Valves in accordance with Schrader Pacific Advanced Valves requirements. Suppliers will, as deemed necessary by Schrader Pacific Advanced Valves Purchasing, receive an uncontrolled copy of this document. This manual applies to all production suppliers of Schrader Pacific Advanced Valves – Altavista, VA.

3.0 DEFINITIONS

AIAG – Automotive Industry Action Group. Website http://www.aiag.org/. Telephone: (248) 358-3570; Fax: (248) 358-3253.

BUM – Business Unit Manager

CAR – Corrective Action Request (Attachment 1).

Certificate of Conformance - A written statement, signed by a supplier company manager or designate (i.e. Plant Manager, Quality Manager, or Business Unit Manager), certifying identified items or services comply with specific requirements.

Containers - See Packaging

C-TPAT- Customs Trade Partnership Against Terrorism
Website: http://www.cbp.gov/xp/cgov/trade/cargo_security/ctpat/

End of Life Vehicle Requirements – European Union (EU) directive for suppliers to provide information on hazardous substances to determine dismantling and recycling methods for automobiles sold in Europe. This is often referred to as RoHS.

IMDS – International Materials Data System: There are many legal requirements throughout the world that require automotive manufacturers (OEM) to report on the content of the vehicle. Additionally, there are recyclability and reuse requirements in some parts of the world. Instead of each automotive manufacturer developing their own system and requirements, a group of them decided in the late '90s to develop a common system to be used throughout the automotive supply chain – IMDS. Website: www.mdsystem.com

International Labour Organization (ILO) – International organization responsible for drawing up and overseeing international labor standards.

IATF 16949:2016 Quality Management System Requirements for Automotive Production and Relevant Service Parts Organizations – 1st Edition dated October 1, 2016 – Replaces ISO/TS 16949:2009 – published by the International Automotive Task Force (IATF) with support from ISO/TC 176, Quality Management and quality assurance.

Packaging – For the entirety of this manual, any packaging material (i.e. boxes, tubs, or other containers) will be henceforth known as containers.

PPAP- Production Part Approval Process – AIAG method for the submission of initial samples.

Prop 65 – California Proposition 65, officially known as the Safe Drinking Water and Toxic Enforcement Act of 1986, was enacted as a ballot initiative in November 1986. The proposition protects the state's drinking water sources from being contaminated with chemicals known to cause cancer, birth defects or other reproductive harm, and requires businesses to inform Californians about exposures to such chemicals.

Purchase Order - The contractually binding document that identifies, directly or by reference, the requirements items or services must meet, in order to be acceptable to Schrader Pacific Advanced Valves. Suppliers must formally acknowledge any deviation and receive a formal change order from Schrader Pacific Advanced Valves Purchasing prior to proceeding.

Purchase Price Variance (PPV) – The favorable or unfavorable dollar value of price paid vs. standard cost.

Purchasing Department – The only department of Schrader Pacific Advanced Valves that can make binding commitments to a supplier.

Quality Assurance Manager - Schrader Pacific Advanced Valves, Altavista, VA quality representative or their designate. They along with the Business Unit Manager are the only associates authorized to approve a part for commencement of production.

Request for Quotation – Form used by the Schrader Pacific Advanced Valves Supplier Management Department to define need for products or services and obtain bids. Suppliers are to formally quote using this form. Suppliers may supplement the completed form by attaching their own supporting documents / exhibits.
(Attachment 2).

RGA – Return Goods Authorization

SELF AUDIT FORM – Questionnaire sent to suppliers to perform a **s**elf-assessment of their quality system to a standardized set of questions. Supplements the **Supplier Evaluation Form.**

Schrader Pacific Advanced Valves - Schrader Pacific Advanced Valves, Altavista, VA**.**

8-D Problem Solving Report – Formal eight-step problem solving method that is similar to the 8D developed by Ford Motor Company. The Schrader Pacific Advanced Valves SCAR form is based on an 8D format.

Supplier Evaluation Form – Document sent to new and existing suppliers to obtain current information in specific areas of interest to Schrader Pacific Advanced Valves.

SQE – Supplier Quality Engineer. Reports directly to the Quality Assurance Manager.

Subcontractor - A second tier supplier providing material, components, or other operations to first tier suppliers for the manufacture of Schrader Pacific Advanced Valves products.

Director of Purchasing and Logistics, Buyer, Purchasing Coordinator – Schrader Pacific Advanced Valves purchasing representative(s). These are the only associates authorized to commit Schrader Pacific Advanced Valves to a supplier.

2nd Party Audit – A formal audit by a supplier's customer. Conditions defined similar to a 3rd party audit.

4.0 EXPECTATIONS

- Being a supplier to Schrader Pacific Advanced Valves requires a total and joint dedication to continuous improvement. As a supplier to Schrader Pacific Advanced Valves, you will be part of a team committed to the achievement of zero defects, on-time delivery, ongoing cost reduction, and ongoing process and product improvements, through a mutual exchange of methods, materials, technologies and ideas. Our communication must be open, responsive and focused toward the needs of our organizations, including those of your suppliers, our customers and associates.

- Our expectations are expressed in this manual and have been developed to provide direction and mutual understanding, as we begin or renew relationships with our suppliers. We look forward to you accepting the opportunity to join or continue with us in building a solid and powerful partnership.

- Schrader Pacific Advanced Valves strives to develop a supply base that promotes Corporate Social Responsibility, by implementing and adhering to the following:

Safety, Quality and Cost Reduction

1. *Ensuring safety of products and services* – Produces and provides products and services that meet safety laws for each nation or region.
2. *Guaranteeing the quality of products and services* – Establishes and operates a company-wide system for guaranteeing quality.
3. *Meeting customer needs* – Understands customer needs, and develops and provides products that will be of benefit to them and society, in a timely manner.
4. *Cost reduction* – Works to achieve cost competitiveness through ceaseless cost reduction efforts to provide low-priced products and services.

Human Rights and Labor

1. *Eliminating discrimination* – Prohibits discrimination due to race, ethnic background, nationality, religion or gender in all job opportunities, such as application, recruitment, promotion, wage, education, welfare programs, task assignment, penalty, dismissal, and retirement.
2. *Respecting human rights* – Prohibits harassment of all forms (including sexual and power harassment such as verbal abuse, overbearing attitude, abuse, physical punishment and other inhumane treatment) in the workplace due to race, ethnic background, nationality, religion or gender.
3. *Prohibiting child labor* – Prohibit hiring of individuals that have not reached the legal age at which employment is allowed by international and local law.
4. *Prohibiting forced labor* – Ensures that all the labor is voluntary and that all employees have the right to leave a job whenever they so choose.
5. *Wages* – Observes the national or regional laws and regulations concerning minimum wage, overtime premium pay, wage reductions, piece wage, etc.
6. *Labor hours* – Observes national or regional laws and regulations when determining working hours of employees (including overtime duty) and granting a holiday or annual paid leave.
7. *Dialogue with employees* – Discusses in good faith, questions, concerns, or issues with employees, and/or with representatives of employees, if required.
8. *Safe and healthy work environment* – Places the utmost importance on job safety and health of employees, and works to prevent accidents or injuries.
9. *Human resource development* – Works on competence development and career track formation of employees.

Risk Management

1. *Environmental management* – Promotes a wide range of environmental activities, observes national or regional laws and regulations, and establishes, operates, and continually improves a company-wide management system.
2. *Reduction of greenhouse gas emissions* – Actively contributes to the prevention of global warming, by minimizing greenhouse gas emissions, and promoting efforts to improve energy conservation.
3. *Prevention of environmental pollution of air, water and soil, etc.* – Observes national or regional laws and regulations concerning prevention of environment pollution of air, water, soil, etc. and continually monitors the use and reduction of contaminants.
4. *Resource saving and waste reduction* – Observes the national or regional laws and regulations concerning a proper disposal and recycling of waste, and vigorously strives to reduce the final amount of waste to be disposed by determining the most effective use of resources.
5. *Chemical management*
   - Performs safety management of chemicals that may cause environmental pollution.
   - Avoids inclusion of chemicals whose use is prohibited by a law or regulation of applicable nation or region.
   - Avoids use of chemicals whose use in a manufacturing process are prohibited, and identifies and reports emissions of chemicals designated in, and in accordance with, national or regional laws and regulations to the appropriate agencies.
6. *Export management* – Establishes and manages appropriate export procedures regarding technology and goods regulated by national or regional laws and regulations.
7. *Import management* - If involved in importing goods to the United States of America, follow U.S. Customs security guidelines for C-TPAT.
8. *Protecting intellectual property* – Protects intellectual property owned by, or belonging to, our company and similarly prohibits illegal obtainment and/or use of such property of our business partners that may infringe on their rights.
9. *Establishing and operating a risk management system* – Performs risk analysis on business activities of the company to establish and operate a company-wide management system.
10. *Creating and implementing a business continuity plan* – Creates and implements a Business Continuity Plan (BCP) for early recovery from a disaster or accident.

Inventory Management

Suppliers are responsible to have inventory control systems that identify and control obsolete material to prevent accidental shipment to Schrader Pacific Advanced Valves. Where possible, suppliers shall maintain First In/First Out (FIFO) Inventory management practices. The FIFO control system must ensure coverage of all manufacturing, repair, rework, and subcontractor locations.

5. 0 COMMITMENTS

- Schrader Pacific Advanced Valves will engage in legal and fair business practices.
- Consideration will be given to current certified and approved suppliers for new requirements of like products and/or services.
- Suppliers on probation or not-approved status may not be considered for new business.
- Agreements will include formal contracts, purchase orders and specifications.
- Schrader Pacific Advanced Valves will administer a supplier assessment program and provide periodic ratings based upon Quality System Registration, Quality Performance (PPM), Delivery Performance, Cost Reductions, CAR Occurrences, CAR Response, and Premium Freight.
- Schrader Pacific Advanced Valves and its customers shall be afforded the right to verify the quality system, manufacturing processes and product quality at the supplier and supplier's subcontractors' premises.
- Suppliers shall use the prescribed problem solving method as outlined in Schrader Pacific Advanced Valves Corrective Action Response Form (8-D) or on acceptable alternative.
- Suppliers are expected to employ materials management methods such as Kan Ban, supplier managed inventory, pull systems, make and hold, frequent delivery and supplier hubs to reduce Schrader Pacific Advanced Valves material handling and inventory costs.
- Suppliers shall develop a contingency plan for potential catastrophes disrupting product flow to Schrader Pacific Advanced Valves. In an actual catastrophe, the supplier shall provide Schrader Pacific Advanced Valves access to all supplier assigned molds/tools.
- Suppliers are expected to pass to Schrader Pacific Advanced Valves cost improvements throughout the product life. Minimum expectations are as follows:
    - 4% in the 2nd year
    - 3% in the 3rd year
    - 3% in the 4th year
    - On going cost downs for life of the product.
- Suppliers are to resist price increases. Only direct material increases deemed to be verifiable and unavoidable will be considered, and the impact subject to formal justification, negotiation and written approval by Schrader Pacific Advanced Valves Supplier Management. A minimum of 90 days' prior formal notification is required for all price increase requests. Such notices are to be hand delivered or sent via registered mail or a traceable courier service to the attention of the Director of Purchasing and Logistics.
- Cost increases resulting from supplier initiated design and process changes will not be accepted.

6.0 QUALITY PLANNING

- Schrader Pacific Advanced Valves requires suppliers to develop a Quality Plan, in accordance with the requirements outlined in the AIAG Advanced Product Quality Planning and Control Plan Manual.

- The Quality Plan shall include goals and objectives with implementation dates and assigned responsibilities. A review and approval of the proposed Quality Plan may be required prior to the award of business.

- Special Characteristics, as determined by Schrader Pacific Advanced Valves and the supplier, shall be denoted in the Control Plan. Statistical Process Control (SPC) for Special Characteristics must be recorded as variable data and retained a minimum of two years. ***Special characteristics are denoted on Schrader Pacific Advanced Valves drawings by placing a box around the dimension or a Note.*** Special characteristics require an on-going Cpk of 1.33 or greater. Records of measurements must be made available to Schrader Pacific Advanced Valves upon request.

7.0 QUALITY SYSTEM

- The supplier shall establish and maintain a Quality System, which will assure components, materials, or services received by Schrader Pacific Advanced Valves conform to the purchase order, print requirements, and specifications.

- The Quality System will be documented in the form of a Quality Manual along with formal written procedures, covering all control points of a supplier's product or service.

- The Quality System shall be compliant with the requirements of ISO 9001:2015, at a minimum, with a goal of system registration.

- The Supplier shall adapt the methodology as described in the AIAG Advanced Product Quality Planning & Control Plan, Failure Mode and Effects Analysis, Measurement Systems Analysis, Statistical Process Control Production Part Approval Process manuals and other Schrader Pacific Advanced Valves customer specified requirements.

- The supplier must be registered to ISO 9001:2015. Suppliers of components to Schrader Pacific Advanced Valves's automotive business units shall strive to develop quality systems which conform to IATF 16949:2016. Any exceptions to this must be evaluated by Purchasing and Quality. 2nd Party Audits may be used to qualify suppliers that are too small to seek certification. Any non-certified automotive supplier must comply with the OEM publication, "Minimum Automotive Quality Management System Requirements for Sub-Tier Suppliers for IATF 16949 – Requirements".

- A current copy of a supplier's quality system registration certificate, including registration scope, date and expiration must be supplied to Schrader Pacific Advanced Valves upon request. Whenever a supplier is awarded a new certificate of registration or there is a change in status (including a change in expiration date) a copy of the certificate or documentation must be forwarded immediately to the Schrader Pacific Advanced Valves Purchasing Coordinator or Buyer.

- 2nd party auditing may be used to evaluate poor performance and/or develop suppliers that have not yet achieved certification.

8.0 PACKAGING AND SHIPPING

- The supplier must insure when products are shipped, they are rust and corrosion-free and packaged in such a manner to provide adequate protection from damage or deterioration. Specifications for special packaging preservation or cleanliness requirements will be included on the Schrader Pacific Advanced Valves drawing or

purchase order. **Individual containers of component parts are not to exceed 35 lbs**. Containers exceeding 35 lbs. will be subject to rejection.

- The supplier is responsible for properly controlling packaging in a manner that insures safe transport of material to the delivery point.

- If product requires use of a skid, the skid must conform to our drawing "Skid" (Attachment 3). Shipments received on skids not meeting this requirement may be rejected and/or subjected to a disposal and handling fee.

- Each container must include a barcode label meeting the guidelines expressed in: (Attachment 4)

- Each shipment must include a packing list. Packing lists must display the following:
  - Schrader Pacific Advanced Valves item number
  - Purchase order number
  - Packing list number
  - Description of item
  - Date Shipped
  - Quantity Shipped
  - Quantity of containers
  - Unit of measure
  - Freight carrier
  - Freight terms
  - Manufacturing serial/lot identification number
  - Schrader Pacific Advanced Valves drawing revision level
  - Any other data specified by Schrader Pacific Advanced Valves

  The invoice must display the following:
  - Schrader Pacific Advanced Valves item number
  - Purchase order number
  - Packing list number
  - Description of item
  - Date Shipped
  - Quantity Shipped
  - Quantity of containers
  - Unit of measure
  - Freight carrier
  - Freight terms
  - Invoice number
  - Unit price
  - Extended price
  - Invoice date
  - Payment terms
  - Manufacturing serial/lot identification number
  - Any other data specified by Schrader Pacific Advanced Valves

Barcode labels, packing lists, and invoices not accurately and clearly displaying all of the aforementioned information may be subject to a processing fee of up to $175 for each occurrence.

9.0 PRODUCTION PART APPROVALS

- Suppliers shall comply with the requirements of the AIAG PPAP (latest revision) manual for all new or changed products or processes. A Level III PPAP is required for all initial automotive submissions.

- Prior to any design or process change suppliers are required to formally notify the Schrader Pacific Advanced Valves Director of Purchasing and Logistics as outlined in AIAG Production Part Approval Process (PPAP) manual. When any design or process change occurs, Schrader Pacific Advanced Valves reserves the right to require PPAP for any of the conditions listed. Level III is the default submission level for changes after initial PPAP approval. Schrader Pacific Advanced Valves Quality has defined the PPAP Level requirements per **PPAP Document Requirements** table shown below: The cost to validate supplier initiated design or process changes will be the responsibility of the suppliers.

- All sections of the PPAP must be accounted for, sections which are not applicable should be so noted.

- Annual PPAP submission may be required at the discretion of Schrader Pacific Advanced Valves Quality Assurance.
- All PPAP submissions require material certification from an accredited laboratory (A2LA, SCC, ISO/IEC Guide 25 or national equivalent) unless supplier receives a written waiver from Schrader Pacific Advanced Valves Quality Assurance.
- Physical, chemical and mechanical analysis is to be reported listing both the requirement and the actual test result.
- Certificates of conformance may be acceptable for some after-market products.
- Suppliers shall keep records of material certifications and make them available to Schrader Pacific Advanced Valves upon request. Schrader Pacific Advanced Valves may require the submission of actual test reports with shipment of product.

PPAP Document Requirements

Item #	Requirement	Level 1	Level 2	Level 3	Level 4	Level 5
1	Design Record	S	S	S	S	P
2	Engineering Change Documents, if any	R	S	S	R	P
3	Engineering Approval, if required	R	R	S	R	P
4	Design FMEA	R	R	S	R	P
5	Process Flow Diagram (PFD)	R	R	S	R	P
6	Process FMEA (PFMEA)	R	R	S	R	P
7	Control Plan	R	R	S	S	P
8	Measurement System Analysis Studies (MSA)	R	R	S	R	P
9	Dimensional Results	R	S	S	S	P
10	Material Performance Test Results – (CQI's as required)	S	S	S	S	P
11	Initial Process Studies	R	R	S	R	P
12	Qualified Laboratory Documentation (ISO 9001)	R	S	S	R	P
13	Appearance Approval Report (AAR), if required	R	R	S	R	P
14	Sample Product	R	S	S	S	P
15	Master Sample	R	R	R	R	R
16	Checking Aids	R	R	S	R	P
17	Records of Compliance with Customer Specific Requirements (IMDS, etc) see PPAP checklist for all requirements	R	R	S	R	P
18	Part Submission Warrant (PSW)	S	S	S	S	P

S - The supplier shall submit a copy of the record or documentation and retain a copy at PPAP site

R - The supplier shall retain at the PPAP site and make it available to Schrader Pacific Advanced Valves upon request

P – The supplier shall provide product samples and have complete data available for review at PPAP site.

NOTE: *A Level 3 PPAP is the default unless specified differently on the purchase order.*
Level 4 will apply for annual updates unless requested differently.

AIAG CQI Requirements

As required by Schrader Pacific Valves PPAP requirements, suppliers are required to submit their applicable CQI assessments annually. Examples: CQI-9 Heat Treating for springs, CQI-23 Injection Molding, and CQI-30 Rubber Molding. See PPAP Checklist for complete list. Schrader will supply the required templates if requested.

IMDS Submission

End of Life Vehicle (ELV) - All suppliers to Schrader Pacific Advanced Valves are required to support the European Union (EU) directive for reporting the material composition of all parts and systems used for vehicles sold in the European Union. Therefore, all suppliers must enter the composition of all components supplied to Schrader-Bridgeport Inc/Schrader Pacific Advanced Valves in the International Materials Data System (IMDS) concurrent with PPAP submission. Information on joining the IMDS, and making the entries into this web based system, can be found at www.mdsystem.com. The location code for Schrader Pacific Advanced Valves is **196513**, this location code should be used for all entries. ***IMDS submission is required with all automotive part PPAPs.***

Schrader Owned Tooling

Schrader Pacific Advanced Valves owned tools, manufacturing/assembly fixtures, test equipment/fixtures, inspection tooling and equipment shall be permanently marked so that the ownership of each item is clearly visible, recognizable, and determined. Where applicable, a photograph of Schrader owned tooling and its identification should be included in the PPAP package.

10.0 RESTRICTED SUBSTANCES

- Materials supplied shall satisfy current government and safety regulations on restricted, toxic and hazardous materials as well as environmental, electrical and electromagnetic requirements applicable to the country of manufacture and sale. A copy of the Material Safety Data Sheet (MSDS) shall be provided when such an item is purchased for the first time or any information on the MSDS changes or the product itself changes.
- Suppliers must comply with the requirements of the End of Life Vehicle (ELV) directive of the European Union (EU).
- Suppliers must comply with the requirements of RoHS as applicable to product requirements.
- Suppliers must comply with REACH as required by Schrader Pacific Advanced Valves
- Suppliers must comply with Conflict Materials Reporting as required by Schrader Pacific Advanced Valves
- Suppliers must comply with California Prop 65 as required

11.0 NON-CONFORMING MATERIALS AND SERVICES

The supplier shall establish and maintain a system for the control of non-conforming material within their facility. Non-conforming material must be clearly identified and segregated to prevent its shipment with conforming material. The supplier is responsible for notifying Schrader Pacific Advanced Valves if it has, or suspects it has shipped non-conforming material to Schrader Pacific Advanced Valves.
When non-conforming material is discovered at Schrader Pacific Advanced Valves the Quality Assurance Department will notify the supplier of the non-conformance. The rejection criteria for non-conforming material are zero defects. Any material that does not meet the requirements of the design record or is unsuitable for use will be considered a defect.
Suppliers are responsible for the costs incurred by Schrader Pacific Advanced Valves and its customers resulting from defective material. This includes but is not limited to:

- Additional operations (i.e. special marking, labeling, etc.)
- Down time charges
- Premium labor charges
- Additional freight charges
- sort/Rework/scrap charges
- An administrative fee of up to $175 per occurrence

The following dispositions may be allowable for non-conforming material at the discretion of the SQE and the QC Manager in conjunction with formal agreement of the supplier.

- Return the product to the supplier for replacement or credit.
- Supplier performs sort/rework at Schrader Pacific Advanced Valves or supplier has sort or rework performed by a subcontractor.
- The supplier shall issue a purchase order to the sorting/rework firm and pay them on a direct basis. The supplier shall make all arrangements concerning the sorting/rework of the material. Schrader Pacific Advanced Valves may choose to oversee and or require someone from the supplier to oversee the sorting/rework process at Schrader Pacific Advanced Valves or the subcontracted firm. Should Schrader Pacific Advanced Valves oversee the process, all related expenses (i.e. travel, labor, etc.) will be charged back to the supplier.
- Schrader Pacific Advanced Valves Purchasing conditionally accepts the material with the formal agreement of Schrader Pacific Advanced Valves Engineering, Manufacturing and Quality. Additional costs incurred due to the use of non-conforming material will be the responsibility of the supplier.

Schrader Pacific Advanced Valves Quality Assurance will document the non-conformance on a Supplier CAR form and provide that information to the supplier. Once a supplier receives a CAR, no further shipments are to be made by the supplier until a containment action is provided to and approved by Schrader Pacific Advanced Valve's Quality Department. This will allow Schrader Pacific Advanced Valves ample time to determine the necessity of further actions to protect our customers. Shipments arriving prior to Schrader Pacific Advanced Valves receiving an acceptable response will either be sent back to the supplier or sorted. In either case, it will be the responsibility of the supplier to bear the costs of these actions. The supplier is required to formally respond, with containment actions, to the Schrader Pacific Advanced Valves SQE within **one working day**. A completed corrective action or corrective action plan (including a timeline) must be delivered to the SQE within **15 business days** after the issuance of the CAR. Schrader Pacific Advanced Valves reserves the right, and extends to its customers, verification of corrective actions at the supplier's facility.

- The attached supplier corrective action response form (SCAR), 8-D, or Schrader Pacific Advanced Valves approved alternative is the required method for corrective action response to Schrader Pacific Advanced Valves.

12.0 SUPPLIER EVALUATION, RATING AND SELECTION

- A major responsibility of the Schrader Pacific Advanced Valves Purchasing Department is to identify, recommend and select potential sources of supply. The Supplier Performance Evaluation Rating systemetrically rates supplier performance in seven specific areas: (Reference 13.0 Key Metrics for more specific detail).

  - Quality System Registration
  - Quality Performance (PPM)
  - On Time Delivery Performance
  - CAR Occurrence

  Purchasing will use this rating in the supplier selection process. Other elements * considered during supplier selection may include:

  - **Safety –** Consumer, Associate, Environmental; Child Labor Prohibition/Regulation Act; Reputation; Low Risk
  - **Quality –** Zero Defects; No Variation; Process Control; Formal Quality System; Subcontractor Compliance
  - **Service –** On Time Delivery; Rapid Reaction; Direct, Effective Interaction between Disciplines and Associates
  - **Inventory Management –** Strive Toward Point of Use; Lead Time Compression; Efficient; Consistent Logistics
  - **Third Party Quality Registration –** IATF 16949:2016 or, ISO-9001:2015
  - **Financial Stability –** Long Term Partner; Low Risk
  - **Low Cost of Acquisition –** Price; Terms; Transportation and all Associated Costs
  - **Breadth of Product Offering –** Contraction of Supply Base to Simplify, Consolidate and build relationships and leverage
  - **Added Value Over Time –** Ongoing Cost Reduction; Continuous Value Improvement
  - **Technology –** Reinvestment and Evolving of Products and Processes; Technical, Research, and design support; Technical collaboration and interaction between customer and supply base
  - **Minority Business Classification –** Registration by the Minority Supplier Development Council as a Minority Business Enterprise

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13.0 KEY METRICS

Supplier status is based upon performance in four key areas: 1) Quality System Registration, 2) Quality Performance (PPM), 3) On Time Delivery, and 4) CAR Occurrences. Point values have been assigned to each range within a category as shown below in the Key Metrics Tables.

QUALITY SYSTEM REGISTRATION METRIC (25 points)	
Point Value	Quality System Registration
25	IATF 16949:2016 registration
20	ISO 9001:2015 or equivalent registration
0	None

PPM METRIC (annual) (25 points)	
Point Value	PPM
25	0
20	1-30
10	31-60
0	➢ 60

ON TIME DELIVERY METRIC (annual) (25 points)	
Point Value	On Time Delivery
25	100
20	96-99
10	91-95
0	< 90

CAR OCCURRENCES METRIC (annual) (25 points)	
Point Value	Occurrences
25	0
20	1-2
10	3
0	➢ 3

- A supplier status will be developed by adding the point value earned from each key metrics category. The sum of these 4 point values will define the supplier status as follows:

Status	**Total Points Earned**
Certified	86 - 100
Approved	71 - 85
Probation	60 - 70
Not Approved	< 60

- **A point value of zero in either the PPM or On Time Delivery metrics will result in a supplier status of no higher than Probation, regardless of total points earned.**

- Status will be published on a semiannual basis. Schrader Pacific Advanced Valves reserves the right to modify the supplier rating system at any time. It also reserves the right to change an individual supplier's rating as Schrader Pacific Advanced Valves deems necessary.

14.0 CRITERIA SCORING

- Quality System Registration. A supplier's quality system registration will be awarded points as shown in the Key Metrics Table (100-point scale).

- PPM - A supplier's PPM performance will be determined by dividing the number of parts defective by the total number of parts shipped, then multiplying this quotient by one million. PPM is also governed by the following rules:

  a. All parts in a shipment will be labeled as defective when a defect is found in an incoming inspection sample. A percentage of defects found during sampling will be recorded.

  b. When a defect is located in a production area, all remaining product may be labeled as defective.

  c. Defect numbers will be adjusted when the Schrader quality department has either received the sorting results or the material has been scrapped. Upon receiving sorting results, the number defective will be adjusted to actual pieces found defective. If the material is scrapped, the % defective found during sampling will be used to calculate the number of defective product.

  d. Defect numbers <u>will not</u> be adjusted if Schrader Pacific Advanced Valves is not able to reclaim all costs associated with the reject.

  e. **Suppliers are responsible for all costs related to the rejection including but not limited to:**
     - Sorting cost
     - Administrative cost
     - Premium Time
     - Lost manufacturing time
     - Premium freight
     - Rework expense

- Delivery Performance- A supplier's delivery performance is based upon the percentage of shipments delivered on time. A shipment is counted as on time if it arrives 0 (zero) days late and no more than 1 (one) day early.

- CAR Occurrences – A supplier's performance is based upon the actual number of times Schrader Pacific Advanced Valves Quality Assurance issues a formal corrective action report (CAR).

- Results of all key metrics will be compiled and reported semi-annually of Schrader Pacific Advanced Valves fiscal year (presently April. 1 – March. 31) and will be cumulative. All values will return to zero as of April. 1.

15.0 SEMIANNUAL EVALUATION

- Schrader Pacific Advanced Valves will group all of its key suppliers into one of the following four categories: Certified, Approved, Probation, and Not-Approved.

- Certified – is given an opportunity to quote on all new or resourced parts and materials encompassing their field of expertise. Considering all other supplier selection factors are congruent suppliers with Certified Supplier status will be given the first consideration for new business. It is the responsibility of the supplier to keep Schrader Pacific Advanced Valves informed of their current capabilities.

- Approved – is given an opportunity to quote on all new or resourcing opportunities for parts and materials encompassing their field of expertise. It is the responsibility of the supplier to keep Schrader Pacific Advanced Valves informed of their current capabilities.

- Probation - will normally preclude a supplier from being given an opportunity to quote on new or resourcing opportunities. All new suppliers may be categorized as Probation until their performance can be evaluated. New suppliers are not required to provide corrective action plans during an initial probationary period.

- A status of probation for more than two consecutive scoring periods may cause a supplier's status to be downgraded to Not Approved. Suppliers rated Probation run an increased risk of having their existing business resourced.

- Not Approved - the supplier is not permitted to bid on new or potential resourced parts or materials. In addition, suppliers rated Not Approved run an increased risk of having their existing business resourced.

16.0 SUPPLIER DEVELOPMENT

Schrader Pacific Advance Valve's strategy for supplier development of its active suppliers shall include a documented process for required suppliers who are unable or unwilling to fully develop/certify a quality management system to IATF 16949:2016 or ISO 9001:2015. Supplier development prioritization shall be documented and subject to periodic review. This documentation shall be retained as an organization-controlled record.

An automotive supplier certified only to ISO9001:2015 must show compliance to OEM publication, "Minimum Automotive Quality Management System Requirements for Sub-Tier Suppliers for IATF 16949 – Requirements".

Schrader uses 2nd Party Auditing as a tool for evaluating potential suppliers and follow up on existing suppliers when needed. A supplier with poor quality and delivery performance may be subject to a 2nd party audit with notification. The 2nd Party Audit will be graded similar to a 3rd party audit and Corrective Actions issued as appropriate.

17.0 REFERENCES

AIAG	**Automotive Industry Action Group.**
AIAG PPAP Manual	**Production Part Approval Process (PPAP)**
IATF 16949:2016	**Quality Management System Requirements for Automotive Production and Relevant Service Parts Organizations**
ISO9001:2015	**Quality Management System Requirements**
AIAG MSA Manual	**Measurement System Analysis (MSA)**
AIAG SPC Manual	**Statistical Process Control (SPC)**
AIAG APQP Manual	**Advanced Production Quality Planning**
AIAG Control Plan	**Control Plan Manual**
AIAG FMEA Manual	**Failure Mode Effects Analysis Manual**
CQI-9	**Special Process: Heat Treat System Assessment**
CQI-11	**Special Process: Plating System Assessment**
CQI-12	**Special Process: Coating System Assessment**
CQI-15	**Special Process - Welding System Assessment**
CQI-23	**Special Process: Molding Assessment**
CQI-30	**Special Process: Rubber Molding Assessment**

18.0 ATTACHMENTS

Attachment 1: SCAR 8D Form
Attachment 2: Request for Quotation (RFQ)
Attachment 3: Skid Specification
Attachment 4: Barcode Labels
Attachment 5: PPAP Checklist
Attachment 6: Supplier Evaluation Form
Attachment 7: Supplier Self-Audit Form

19.0 REVISIONS

9/10/87: Rev 0
Manual Initial release

10/15/98: Rev 1
Update for QS-9000

1/28/03: Rev 2
Section 3.0: Added End of Life definition
Section 6.0: Paragraph 3
Section 7.0: Paragraph 5
Section 8.0: Added drawing revision level to bar code label and packing list.
Section 9.0: Added End of Life Vehicle requirements
Section 10.0: Added End of Life Vehicle requirements.
Attachment 1: Revised area code & email address
Attachment 2: New form REV 09-25-02
Attachment 3: Revised area code
Attachment 4: Added drawing revision level to bar code label

1/16/04: Rev 3
Section 3.0: Added ISO/TS 16949 definition
Section 5.0: Added requirement of SBII Corrective Action Response; cost improvements required throughout product life; and supplier initiated changes will not result in cost increases to SBII.
Section 7.0: Change requirement from QS9000 to ISO/TS 16949:2002 (E); added customer specified requirements to quality requirements.
Section 9.0: Added annual PPAP submission request; customer owned tooling requirement; and modified ELV requirements.

Section 11.0: Added requirement for costs due to non-conforming material
Section 12.0: Changed title of section and added CAR. Occurrence. Added financial stability.
Section 13.0: Added CAR. Occurrence to metrics; changed point distributions
Section 14.0: Modified Corrective Action to specify evaluation on quarterly basis and added requirement for onsite visits for unacceptable performance.
Attachment1: new form added.
Attachment 2: new form added

3/25/05: Rev 4
Section 3.0: Revised definitions and Plant Manager removed
Section 8.0: Revised and updated bar code label guidelines
Section 14.0: Added CAR Occurrence to the criteria; Revised Delivery Performance
Attachment 1: Revised paragraph and signatures
Attachment 2: Revised contact information
Attachment 3: Revised contact information
Attachment 4: Added skid specification and requirements (new attachment)
Attachment 5: Revised bar code label and required fields

7/31/06: Rev 5
Section 3.0: Revised definitions
Section 5.0: Added Purchase Price Variance (PPV)
Section 8.0: Processing Fee changed to $150
Section 11.0: Administrative Fee changed to $150
Section 12.0: PPV Metric Added
Section 13.0: PPV Metric added; Cost Down Metric Revised
Section 14.0: PPV Metric added; Transportation Processing Fee changed to $150
Section 15.0: Paragraph 5 Added Materials Manager

9/1/11: Rev 6

Title Page – Company name from Schrader-Bridgeport International to Schrader International.
Section 3.0: Added to IMDS – There are many legal requirements throughout the world that require automotive manufacturers (OEM) to report on the content of the vehicle. Additionally, there are recyclability and reuse requirements in some parts of the world. Instead of each automotive manufacturer developing their own system and requirements, a group of them decided in the late '90s to develop a common system to be used throughout the automotive supply chain – IMDS. Website: www.mdsystem.com
Section 5.0: Fifth bullet – added CAR Response
Section 12.0: Changed Valve Improvement to Value Improvement
Section 13.0: Changed order of the seven key areas; updated tables for CAR occurrences and CAR responsiveness.
Section 13.0: Added Suppliers having point totals of 86-100 that do not meet Schrader's minimum payment terms will receive an Approved status.
Section 14.0 – Changed Corrective Action to Corrective Action Response
Section 15.0 – Deleted "unless a joint agreement is made to extend the probationary period, by the Vice President of Purchasing, Materials Manager, and the Quality Manager."
Misc other updates to ISO/TS revisions, etc

01/01/2018 Rev 7

A. Definitions – add IMDS website; add IATF 16949 and remove ISO/TS 16949; add Self-Audit form
B. Section 3 add definition of 2nd party audit
C. Section 4 add 2nd party audit uses
D. Section 5 – change 7D to 8D, add contingency plan note
E. Move paragraph on terms acceptance from Section 6 to Section 5
F. Section 6 add note specifying minimum Cpk for special characteristics
G. Section 7 – replace ISO 9001:2008 and ISO/TS 16949 with ISO9001:2015 and IATF 16949:2016
   Add note on old ISO 9001 AND ISO/TS 16949 standard certification recognition until they expire.
   Add 2nd Party Audit notes and Minimum Automotive Requirements.
H. Section 9 – add statement that Level III PPAP is required for all initial automotive submissions.
   Add statement: IMDS submission is required with all automotive part PPAPs.
I. Section 10 – add statements regarding RoHS, REACH, and Conflict Materials compliance
J. Section 11 – change 7D to 8D
K. Section 12 – replace ISO 9001:2008 and ISO/TS 16949 with ISO9001:2015 and IATF 16949:2016
L. Section 13 – replace ISO 9001:2008 and ISO/TS 16949 with ISO9001:2015 and IATF 16949:2016
M. Section 14 – change 7D to 8D
N. Section 16 – replace ISO 9001:2008 and ISO/TS 16949 with ISO9001:2015 and IATF 16949:2016
O. Section 17 – revise CAR to SCAR 8D Form, add Supplier Evaluation Form, and add Supplier Self-Audit Form
P. Insert new section 16 Supplier development

08/15/18 Rev 8

A. Edit section 13 (page 11) to highlight point values per scoring metric and add note **"IATF 16949:2016 certification receives 5 bonus points."**

07/01/19 Rev 9

A. Add Quality and Environmental Policies to Section 1.
B. Add Prop 65 to definitions
C. Add Purchasing Department to definitions
D. Change VP of Purchasing to Director of Purchasing and Logistics
E. Change company name to Schrader Pacific Advanced Valves and remove all references to Sensata
F. Change IMDS number to reflect 196513 Schrader Pacific Advanced Valves Altavista, VA
G. Remove the use of SII and replace with Schrader Pacific Advanced Valves
H. Edit Section 7 to remove recognition of ISO9001:2008 and TS16949until 09-15-2018
I. Edit Section 13 to show the IATF16949 registration Bonus Points in the total potential score.

01/01/2021 Rev 10

A. Change all company name references to Schrader Pacific Advanced Valves
B. Add additional items to Section 4 Expectations
C. Expand Quality requirements – PPAP etc
D. Revised attachments
E. Expanded PPAP Documentation
F. Added FIFO
G. Added note on changing to fiscal year

03/15/2025 Rev 11

A. Removed PO Box from cover page
B. Add cost Increase = 0 points to cost down category table in section 13
C. Add PPAP checklist to attachments
D. Expand section 9 to include CQI assessment requirements
E. Add applicable CQIs to section 17 REFERENCES
F. Change to semiannual reporting in Section 13, 14 and 15
G. Add photo of Schrader owned tooling to Section 9

07/01/2025 Rev 12

A. Table of Contents - added page numbers
B. Section 5 adjust cost down expectations schedule
C. Section 12 remove metric categories of CAR response, premium freight, and cost down
D. Section 13 remove above metrics and requirement to meet Schrader payment terms
E. Section 13 removed bonus points for IATF registration
F. Section 14 remove references to CAR response, premium freight, and cost down
G. Section 15 changed description of Probation and Not Approved.