

# Global Supplier Quality Manual





Rochester Sensors is the leading designer and manufacturer of liquid level senders and sensors, liquid level gauges, and aircraft engine instruments. Our instruments can be found all over the world in many applications including automotive, aircraft, locomotives, off road construction equipment, recreational vehicles, marine and propane tanks. We have been manufacturing gauges since 1913 and during those years we have continuously improved upon design and developed modern technologies.

As an industry leader, Rochester Sensors constantly strives to create and manage an exceptionally reliable, competitive supply chain. Fundamentally, we envision this as an integrated chain wherein all members work together to eliminate unnecessary activities and align their business strategies to delight the final customer.

To compete in today's demanding marketplace, Rochester Sensors and its suppliers must be the recognized leaders in our chosen markets, providing responsive, quality solutions to improve customer's competitiveness. To measure supplier progress towards this quest, the Rochester Sensors Supplier Quality Requirements and Performance Scorecard was established to communicate measured performance.

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# Supplier Quality Requirements & Supplier Scorecard

## *Purpose and Scope*

The requirements in this manual link the quality standards of Rochester Sensors (RS) with our suppliers' quality standards. As applicable, suppliers must submit RS forms as outlined in Appendix A of this Manual. All other forms (Appendix B) can be in any format and may not require an exact format. The information required may be submitted – in the Supplier's format – to an RS contact for acceptance.

The purpose of the RS Supplier Scorecard is to communicate key supplier performance metrics that align with Rochester's business objectives. The program rewards suppliers based on data, serves as a foundation for continuous improvement, and assists with future sourcing decisions.

These requirements were compiled in conjunction with the ISO 9001 Standard, Rochester Global Procedures, Regulatory and Statutory Requirements, and Customer Specific Requirements, .

It is the policy of Rochester to help our customers compete by delivering products and services of the highest quality and reliability. A critical element to accomplish this is receiving parts / products from Suppliers on time. Therefore, the Supplier is empowered to initiate action to ensure both quality and continuous improvement for every part / product and service using the required procedures in this manual.

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William Ginos  
Global Director of Supply Chain

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Valerie Brown  
Global Director of Quality

## ***Purchase Order Terms & Conditions***

All materials purchased by Rochester Sensors shall comply with all relevant specification drawings unless a signed deviation is granted. These same materials must satisfy current statutory, regulatory, governmental and safety requirements on restricted, toxic, and hazardous materials applicable on the date of shipment. The supplier of materials to Rochester Sensors is also required to notify Rochester Sensors in writing if any items purchased contain “conflict minerals” extracted from “conflict regions” such as the Democratic Republic of the Congo (DRC) or its adjoining countries. As of 2015, conflict minerals include gold, tin, tantalum & tungsten.

Please refer to the Rochester Supplier Quality Manual at the following link:

<https://rochestersensors.com/wp-content/uploads/SQRM.pdf>

## **Order Acknowledgement**

It is the responsibility of every supplier to acknowledge receipt of our purchase orders. Purchase orders should be acknowledged even when there are no changes to the order. When no acknowledgement is received, automatic acceptance of Rochester Sensors pricing and dock dates are adhered to.

## **General Packaging & Label Requirements for All shipments**

The purpose of these instructions is to inform suppliers on how to pack and ship materials to Rochester Sensors. Product specific packing and shipping requirements may also apply. Please refer to the purchase order or drawing for more details regarding a specific part number requirement for special packaging.

Materials must be preserved and packaged to the degree of protection necessary to prevent deterioration or damage during shipment under normal environmental conditions and on commercial modes of transportation.

All materials must be packaged according to the item on the purchase order (notes) or the use of a default method, so that the materials may be handled in a uniformed method. Shipping containers must also be uniform in size, of minimum tar weight, and cube consistent with the protection required. Materials must be packed to secure lowest transportation costs and comply with carrier regulations.

Unless otherwise specified in the purchase order, all materials must be packed and shipped in accordance with best commercial practices.

Unit Package Quantity: Unless otherwise specified on the purchase order or drawing the default unit package quantity must be determined based upon the following:

- 1) Total weight per box not to exceed 26lbs.
- 2) Pack quantity based on using a multiple of 50/100/250/1000.
- 3) Use of bags is acceptable but must be sealed.
- 4) Packaged in quantities that are standard.
- 5) No added charges for packaging.
- 6) Bulk packaging is specifically excluded unless specified in the purchase order.

All shipments will have labels attached to the outer box and to and inner box(s) or/bag(s) contain within. The labels shall have the following information on each:

- 1) Rochester Sensors part number
- 2) Quantity
- 3) Rochester Sensors purchase order number
- 4) Supplier name
- 5) Lot number/date of manufacturing
- 6) Supplier ID number

Any shipment that contains a product(s) that is or has a:

- 1) Limited shelf-life
- 2) Temperature sensitive
- 3) Requires special storage
- 4) Product is hazardous

Must have a label placed on the top side of the package indicating special handling is required.

FAI/PPAP submittal: All shipments for FAI/PPAP inspection must have a label on the shipment to identify it as a submittal. (See example)

Bar Code: All labels shall be barcoded. Code 39 or 128 is acceptable. Please refer to the document Bar Code section VI in the Supplier Quality Requirements Manual. Page (15)

Label Size: 4.0 inches (Min.) (102mm) high by 6.0 inches (Min.) (152mm) or 6.5inches (165mm) wide

Label Color: White label with black printing.

Label Quantity and Placement: Minimum 1 labels per box on the ends.

Material shipped on pallets:

- 1) Gross weight of material including pallet is not to exceed 2500 pounds.
- 2) All unitized loads are to be plastic banded, stretch-wrapped, or shrink-wrapped.
- 3) Overall height of palletized unit including pallet is not to exceed 53".
- 4) All pallets must have a minimum under-clearance of 3 5/8" for fork entry. Pallets must comply with international standards. Pallets must be clean, odor and stain free. Shipments received on substandard pallets will be refused.
- 5) Pallets may be heat treated meeting ISPN 15 standards and in some cases heat treatment maybe required.
- 6) Labels required: Shall be placed in such a manner to be seen from the top or sides of the material.



## ***Section I – Document Control***

### ***A. Certificates (CERTS)***

The parts and services of our suppliers have a direct impact on the quality of our final products. Therefore, Rochester Sensors expects its suppliers to maintain a quality management system based on the current version of ISO 9001 or ISO/TS 16949.

Evidence of a fully functioning quality management system is produced by a 3<sup>rd</sup> party register. Copies of valid certification must be updated. It is the supplier's responsibility to ensure that Rochester Sensors always has valid certificates.

All first article submissions (FAI) will require the supplier to submit all pertinent documentation (example: Certificates of Conformance, PQP (Parts Qualification Plan), Certificates of Test, PSW (Part Submission Warrant), process capability, quality conformance qualification and reliability demonstration, Process Flow diagrams, Control Plans, FMEA, etc.,) which will provide assurance that the supplier has a viable process to meet RS part specifications. Thereafter, certifications and process documentation must be maintained by the supplier and made available to RS upon request. CERTS and COC may be required on the specification or purchase order.

### ***B. Record Retention***

All Program records, i.e., control charts, audit logs, test results, certificates etc., must be maintained by Supplier for a minimum of ten (10) years or life of the product, unless otherwise specified on the purchase order.

### ***C. Drawing and Specification Control***

It is the Supplier's responsibility to ensure that the latest revision engineering specification, including performance and reliability, as defined on drawings, data sheet, or other documents, is used as specified on the purchase order. It is the responsibility of the Rochester Purchasing Department to inform the supplier of drawing, specification, or documentation updates.

### ***D. Document Availability***

All documents produced to manufacture and service Rochester Sensors parts will be the Supplier's responsibility to maintain and be available upon request.

## E. Precedence

If the supplier is unable to meet a requirement outline in this Global Supplier Quality Manual, then contact Supplier Quality or Supply Chain to request a deviation. The approved deviation must be documented on RS purchase order and/or engineering drawings/specifications, raw material number request, or other applicable documents.

## Section II – Supplier Part / Product Control

### *A. Part Submission Warrant (PSW)*

The Part Submission Warrant (PSW) (Appendix A) is required for all new part/product submitted to RS for qualification or change approval. An exception to PPAP would be for off-the-shelf parts and approved deviations. Specific guidance can be found in the Part Qualification Plan (PQP) provided with the FAI Purchase Order. The PSW (and any additional PPAP documents requested) must be filled out in its entirety. Incomplete documents will not be accepted, nor will the parts covered by the document be considered.

A Supplier-signed PSW indicates that the Supplier has successfully reviewed all part/product specifications, including performance and reliability, and warrants the part/product submitted. Supporting documents showing compliance to the drawing, specification, or any additional requirements on the Purchase Order must also be submitted with the PSW. For multiple-cavity molds or tools, data and parts from each cavity or tool is required. Refer to the Part Qualification Plan for specific data requirements.

If there is a need for an exception at PSW submission, the Supplier must submit either a Supplier Process Change Notice (PCN – Appendix A), a request for deviation, or a Supplier Corrective Action Report (SCAR – Appendix B).

### *B. Supplier Process/Product Change Notice (PCN)*

RS believes engineering part/product control is essential to continued quality and reliability. Accordingly, RS requires that once a part/product is qualified for production and released, the Supplier cannot change the part/product, process, and/or location of

manufacture without written approval by the appropriate Purchasing AND/OR Supplier Quality contact from RS.

Suppliers can, however, submit a PCN at any time. The intent of this Form is to provide a method for the Supplier to recommend improvements, document process changes, equipment changes or correct non-conformance. The PCN Form is required when changing part design, composition, processing, manufacturing location, reliability, specification description, introducing different equipment or at any time the part/product cannot meet the drawing, specification performance, reliability or any further

requirements, and the Supplier requests change to same. It is the intent of RS to prevent noncompliance issues to avoid part/product deviation.

RS also expects all suppliers to actively pursue continuous improvement activities to improve quality, reliability and reduce cost on each part/product. If a PCN is submitted, it should be completed and sent to the appropriate Purchasing contact along with a Part Submission Warrant (PSW) if sample parts are supplied. RS will make a pre-determination as to the scope of the requested engineering change. If the request is accepted on a preliminary basis, the PCN will be processed, and an implementation plan requested. If the PCN is rejected, the PCN will be returned, along with the reason for rejection. RS may also request a Corrective Action Report as part of the rejection.

### *C. Supplier Corrective Action Report*

It is essential that the supplier ***immediately*** initiates corrective action when any non-conformance of Critical parts, key issues with large quantity, line stoppage issues, stock out and repeat failures is identified at RS or any of its customers. When this occurs, the appropriate Purchasing and/or Supplier Quality contact will inform the Supplier of the non-conformance, Supplier must submit in writing the following items ***within three (3) working days***:

- Description of how containment is to be initiated.
- Communication of initial root cause analysis and/or short-term activity plan.

After initial containment and/or short-term activity plan completion, the Supplier must submit a final SCAR (Supplier Corrective Action Report) using the 8D process or any systematic problem-solving methodology, which includes:

- Full problem description
- Containment action
- Root cause analysis
- Permanent corrective action
- Implementation timing
- Verification with data
- Preventative Actions

### *D. Supplier Production Control*

It is the Supplier's responsibility to properly maintain all required material, parts, tools, and equipment to support production of RS tools or parts/products. RS requires 100% on-time delivery for all production orders, tools, and prototype part orders. Periodic Supplier Quality survey or Audit confirms that satisfactory elements of a Quality Management System are in place, clearly documented, and adhered to.

## *E. Supplier Quality System*

It is the Supplier's responsibility to maintain a Quality System, certified to ISO 9001 through third-party audits, unless otherwise specified by RS. The Supplier Quality System must promote continuous improvement by monitoring PPM, DPM, and Supplier Dissatisfiers (SD) for all RS parts and products.

## *F. Supplier Assessment and Selection*

The intent of supplier evaluation is to review and evaluate the performance of potential and existing suppliers in terms of the four value drivers: quality, cost, technology, and supply. Supplier evaluations supports pre-production, series production and aftersales purchasing processes and provides an early indication of support needs for suppliers in the case of an award.

The On-Site Assessment (OSA) "checklist" is used in specific cases to evaluate NEW and CURRENT suppliers within the scope of a new contract award for product projects and series production. Results of an On-Site Assessment are communicated to the supplier at the end of the assessment with highlights and potentials for improvement.

The supplier must provide due date to share containment and corrective actions as a result of assessment.

## *G. Nonconforming Material*

Rochester Sensors is driven continually improve the performance of its brands through a commitment to a zero-defect target. The following requirements are aimed at the rapid detection and correction of defects in order to achieve the objective.

***Any nonconformance related to a safety issue requires the highest level of attention and prompt containment.***

- Notify Rochester Sensors Supplier Quality immediately regarding all quality spills (no more than 24 hours)
- Support tracking of affected population and drive containment actions
- Actively participate to ensure timely resolution of quality issues
- Submit recalls to Rochester Sensors immediately, as directed
- Promptly direct root cause investigation and corrective actions implementation

To prevent nonconforming parts from being shipped to Rochester Sensors, suppliers are expected to deploy necessary controls in their manufacturing process to identify and address known and potential non-conformances.

### **Inspection / Reject Process**

Materials or products received from suppliers to be used at Rochester Sensors manufacturing plants are verified against the purchase order and Rochester Sensors drawing/ specification. In addition to part features, rejection reasons may include part cleanliness, paint readiness, packaging, part identification and incomplete paperwork. Rejected parts will be documented on a Quality Reject Notification, which will be emailed to the contact identified by the supplier. A Return Goods Authorization response is required within 2 business days (48 hours) of the reject incident. Suspect parts can also be routed to Receiving Inspection by Plant QA. The parts will either be:

- Used as-is.
- Reworked, at the supplier's expense.
- Returned to supplier (if requested by the supplier) or hire 3rd party short company.
- Scrapped with an appropriate Return Goods Authorization

Rochester Sensors highly recommends that suppliers take internal action on QRNs as they will impact the supplier's score.

### **Processing Fee**

Rochester Sensors will charge the supplier a minimum processing fee of \$150 US for each quality reject incident, which will be debited from the supplier in addition to the cost of the rejected / defective material. Please refer to the NC which accompanies each reject incident for supporting details.

- Rejects with values less than \$100 US can be scrapped and debited to the supplier at the time the reject is issued unless prior arrangements are made with Rochester Sensors plants
- Rejects with values greater than or equal to \$100 US will be scrapped and debited to the supplier if a response is not received within two business days.

**It is the supplier's responsibility to provide Rochester Sensors Supplier Quality with valid contact information at all times so Quality Reject Notifications may be properly distributed.**

## Section III – Part / Product Qualification

All parts/products that require special tooling and/or specific requirements, as well as standard purchased items when requested by RS, must be qualified prior to production release. The RS New Product Development Team will bring Suppliers into the parts development stages whenever possible. This will allow early Supplier involvement, reliability prediction, prototype testing, and analysis prior to part/product qualification.

### *A. Pre-production Run*

A pre-production run will be required for qualification of all new parts/products. The quantities and other aspects of this run shall be specified on the purchase order. Only parts/products produced from normal production level process are to be submitted for qualification by RS. Parts/products cannot be sorted, reworked, or altered in any way and should represent normal manufacturing processes illustrated in the Process Flow Chart.

### *B. Part/Product Submission*

Using the pre-production parts, the Supplier will verify conformance to all RS requirements and submit a Part Submission Warrant (PSW). If there is a need for exception as PSW submission, the Supplier must submit either a Process Change Notice (PCN) or a Supplier Corrective Action Report (SCAR). Exceptions may exist for off-the-shelf parts or special production runs granted from Supplier Quality.

### *C. Process Flow Chart*

All PSWs, submitted to meet IATF 16949 requirements, must include a Process Flow Chart (PFC). This requirement is typically documented on the Part Qualification Plan (PQP). The process flow chart must illustrate the flow of material, identifying all steps necessary to manufacture the part/product. The Supplier should use different symbols to identify material and processes. The chart must:

- Number and name each major process step - this allows reference to each process for the process FMEA and control plan.
- Identify critical processes - which are those that could cause the part to be scrapped, are identified on the FMEA, affect reliability, or are identified as a diamond  $\diamond$  on the print.
- Identify inspection steps to be used.
- Include rework loops and the number of rework iterations allowed.
- Include a symbol key with definitions for the flow chart.



## D. Design and Process FMEA / Risk Assessment

The Failure Mode and Effects Analysis (FMEA)/Risk Assessment is an organized approach for identifying potential failure modes. This procedure will also identify key parts/products and process characteristics.

There are several formats for an FMEA, but all should involve assignment of a Risk Priority Number (RPN) which is essential to identifying and prioritizing critical characteristics of the product and/or process. A sample of RS's form and ranking system is contained in Appendix B.

## E. Significant and Special Characteristics

Significant Characteristics, as identified by RS, is shown on the drawing by a diamond  $\diamond$ . That signifies an important feature that needs to be monitored and controlled. Special Characteristics have higher importance and are further defined as being Critical Safety (CC) identified with the  $\nabla$  symbol or Significant Function (FC) identified with the  $\diamond$  symbol. The following table provides guidance in their application.

#	Guide	CC	FC
1	When to apply a CC/ FC	Affects product and operator safety and/or compliance with regulatory requirements.	Affects product form, fit or function (other than safety and regulatory) or has other valid reasons to classify significant
2	Is a deviation approval possible in case out of spec.?	No	Yes, temporarily
3	Evidence for PPAP approval	Initial capability Ppk >1.67 or Poka-Yoke or 100% detection If the CC applies to material, a material Certificate or lab test is required	Init. capability Ppk >1.67 or Poka-Yoke or 100% detection (If FC applies to material, material certificate or lab test is required)
4	Evidence in serial production	Continuous capability CpK >1.67 if validation indicated by SPC (Statistical Process Control) or Poka-Yoke or 100% detection If the CC applies to material, a material certificate is required.	Continuous capability CpK >1.33 if validation indicated by SPC (Statistical Process Control) <b>or</b> Poka-Yoke <b>or</b> 100% detection (If FC applies to material, material certificate is required on request)

Appendix B contains a sample Process Control Plan (PCP). More comprehensive Forms and Instructions can be found through AIAG.





## *F. Reliability Compliance*

When required by RS, Suppliers must provide and maintain demonstration, qualification or accelerated life test data indicating compliance with required failure rate or Mean-Time-Between-Failures (MTBF), confidence level and environment.

## Section IV – Definitions

### A. Special Characteristics (SC)

There are two (2) types of Special Characteristics.

Characteristics	Definition	Symbol
Critical Safety Characteristics	Is a product characteristic for which reasonably anticipated variation could significantly affect the product's safety or its compliance with government regulations such as: flammability, occupant protection, steering control, braking, etc.), emissions, noise, radio frequency interference, etc.	
Significant Function Characteristics	A product characteristic for which reasonably anticipated variation is likely to significantly affect customer satisfaction with a product such as its fits, function, mounting or appearance, or the ability to process or build the product.	

### B. Process Capability

#### 1. Process Stability

The stability of a process is key to consistent parts / products. Statistical techniques should be used to determine if the process is in control over time. Out-of-control conditions require immediate action.

#### 2. Process Potential (Short term)

This is a short-term study to assess whether a process has the potential of being capable of meeting the specifications. It is also used for processes with non-normal or unstable data. Collecting at least 30 samples or subgroups containing at least 100 individual readings as they are running through the process can do this. Suitable intervals of time between samples should be chosen and the samples' characteristics should be measured and recorded. Mean and standard deviation (sigma) can then be calculated from the data.

**USL** = Upper Specification Limit    **LSL** = Lower Specification Limit

- Ppk = minimum of (USL – mean) / 3 sigma.
- Ppk > 1.67; 1.33 to 1.67 is acceptable with an improvement plan or enough inspection.
- Ppk < 1.33 requires immediate corrective action plan.

#### 3. Process Performance (Long-term)

The performance study defines the producibility of the process as the process factors change over time. Readings should be from a minimum of six work orders over at least 30 days. This will result in 180 readings, representing six individual potential studies, to calculate process performance capability.

- CpK > 1.33 is acceptable.
- CpK < 1.33 requires immediate corrective action plan.

To be clear, CpK is the six-sigma range of a process's inherent variation where Sigma is estimated by R bar (Range Average) / D2 for the Sample Size. Ppk is the six-sigma range of a

process's total variation where Sigma is estimated by the sample's standard deviation. CpK is an on-going activity. Ppk is used as a "snapshot" of the process variation at any given point in time. Ppk is useful to determine if a process will be capable (CpK) if process conditions maintain stability. It is also useful for determining if a continuous improvement activity has influenced the process, when evaluating new or modified tooling, etc.

### *C. Gauge Reliability and Reproducibility (GR&R)*

GR&R is a gauge variation study. It is important to understand how much of the allowable specification tolerance is being used up by gauge variation. GR&R is required for all gauges controlling key part/product characteristics (KPC) or key process control characteristics (KCC). RS GR&R acceptance standards are less than ten percent. Ten to thirty percent GR&R is conditional, based on the characteristic and process capability, and requires a corrective action plan. A GR&R should be completed on an annual basis or as needed if there is a change in the part/product or process. Use of the long form is strongly encouraged.

### *D. Quality and Continuous Improvement Indicators*

1. PPM – Parts per Million (PPM) is defined as defective parts/products found on the factory floor and customer returns – expressed per million parts/product.
2. DPM – Defects per Million (DPM) is defined as defective part/products found at RS Incoming Inspection – expressed per million parts/product.
3. SD – Supplier Dissatisfiers is defined as the actual number of administrative errors that occur, such as shipped to the wrong address or incorrect quantity shipped.

### *E. Reliability Compliance*

1. Mean-Time-Between-Failure – (MTBF) is a measure of reliability, usually in operating hours or cycles. MTBF is the reciprocal of the failure rate. It is the total number of operating hours divided by the number of failures.
2. Failure Rate – is the probability of failure per unit of time of the items still operating. Failure rate is expressed in percent failures per 1,000 hours (or miles, cycles, etc.) or in failures per 109 Hours (FITS). For exponential distribution of failures (constant failure rate), the failure rate is the reciprocal of the MTBF.
3. Confidence Level – is the probability that a given statement is correct or the probability the reliability is equal to or greater than the stated value. Typically, unless otherwise specified by RS, a 90% confidence value base should be used.

## *F. First Article Inspection (FAI)*

A **First Article Inspection (FAI)** is a formal method of providing a measurement report for a given manufacturing process. The method consists of measuring the properties and geometry of an initial sample item against given specifications. Typically, the supplier's inspection data is compared to the customer's data, so that correlation of inspection methods and results can be evaluated, and discrepancies resolved. Requests for FAIs may be due to a new supplier's submission, a new part, revised drawing specifications, revised tooling, new process, new material, new artwork, new sub-contractor, part inactivity, etc. Additional information may be requested, such as: Capability Studies, Gauge R&R, Process Change details, Process Flow Diagrams, FMEAs, Control Plans, Material composition, Material Mechanical properties, Specified test results. COC, Material Certification and PQP must be present with FAI. When information requested goes beyond just dimensional results, typically a PPAP will be requested.

## *G. Production Part Approval Process (PPAP)*

1. The Production Part Approval Process (PPAP) is used in the automotive supply chain, though not exclusively, for establishing confidence in component suppliers and their production processes. The purpose of the Production Part Approval Process (PPAP) is:

- a) to ensure that supplier can meet the manufacturability and quality requirements for the purchased parts.
- b) to provide evidence that the customer engineering design record and specification requirements are clearly understood and fulfilled by the supplier.
- c) to demonstrate that the established manufacturing process has the potential to produce the part that consistently meets all requirements during the actual production run at the quoted production rate.

2. The Automotive Industry Action Group (AIAG) has developed a common PPAP standard as part of the Advanced Product Quality Planning (APQP). The Part Submission Warrant (PSW) is the cover page and summarizes the content and submission level of the report. An example of this document can be found in Appendix A. For more information refer to the AIAG PPAP Manual.

## *H. Appearance Approval Criteria*

To maintain consistency of visual inspection we prepare golden samples of appearance criteria like GO/NOGO visual standards. These visual standards are communicated and distributed to all parties to have consistency. It is the responsibility of Quality Engineering to communicate this requirement during the APQP phase. Example: for printed dials, golden GO/NOGO samples created with collaborative efforts. All parties must use the GO/NOGO samples that are available and are maintained by their quality departments.

## Section V – Supplier Performance Scorecard (SPS)

### A. Purpose

The purpose of the RS Supplier Performance Scorecard is to communicate key supplier performance metrics that align with RS's business objectives. The program rewards suppliers based on data, serves as a foundation for continuous improvement, and assists with future sourcing decisions. Data is tracked monthly and reported quarterly. Our supplier scorecard consists of the following focus areas:

**Delivery:** On Time to Promise performance compared to the confirmed date received from the supplier (OTTP)

**Quality:**

1. As measured in Parts Per Million Defective (PPM)
2. Premium Freight Number of Occurrences Expedite Shipments
4. Customer Disruptions (Spill, hold, stock-out, stop ship)
5. Field Failures, Returns, Warranty, and recalls
6. Supplier Dissatisfier (PPM) and
7. Customer Satisfaction Survey

**Scope:**

The RS Supplier Performance Scorecard applies to a select group of RS Suppliers we believe to be critical links in our supply chain. Generally, this will include the Critical Suppliers listed and identified each year as determined by spend (\$) and quality risk.

### B. Benefits

The RS Supplier Performance Scorecard will benefit both RS and our Suppliers. To achieve the benefits, members in the supply chain must willingly share information by establishing open communication and fostering trust.

Supplier Benefits:

- Clearly stated performance expectations
- Improved communication
- The ability to Earn, Keep and Grow our business relationship.
- Objective data to measure your performance.
- Improved overall competitiveness in the market.

Rochester Benefits:

- Clearly communicated performance expectations to our supply base
- Closer relationships with our suppliers
- Better understanding of our supply base’s overall performance
- Closer alignment between our customers’ needs and our suppliers’ capabilities.

### C. *Scorecard Point System*

Each month, Suppliers will receive a **Monthly** and **Year-to-Date** performance score based on the six focus areas:

- |                                 |                  |
|---------------------------------|------------------|
| 1. Delivery                     | (0 to 30 points) |
| 2. Quality                      | (0 to 30 points) |
| 3. Premium Freight              | (0 to 5 points)  |
| 4. Customer Disruption          | (0 to 5 points)  |
| 5. Field Returns                | (0 to 5 points)  |
| 6. Supplier Dissatisfier        | (0 to 5 points)  |
| 7. Customer Satisfaction Survey | (0 to 20 points) |

The maximum possible score for the Month, Quarter, or Year-to-Date is 100 **points**.

### D. *Scoring Details*

#### **1. Delivery Scoring (On Time to Promise)**

OTTP is the percentage of parts that are delivered on time to the Promise date on the Purchase Order. A shipment received on the Promise date, or no more than ten working days early, is “ON TIME.”

<b>Points</b>	<b>On Time to Promise Record (OTTP)</b>
30	OTTP is 100% to 96%
25	OTTP is 95% to 89%
20	OTTP is 89% to 85%
15	OTTP is 84% to 80%
10	OTTP is 79% to 70%
0	OTTP is 69% or below.



## 2. Quality Scoring (Parts Per Million)

Parts Per Million measures product quality through the number of defective parts (non-conformance) per million units.

Points	Parts Per Million (PPM)
30	PPM is 0 to 100
25	PPM is 101 to 500
20	PPM is 501 to 1000
15	PPM is 1001 to 5000
10	PPM is 5001 to 10000
0	PPM is greater than 10000
<b>Definition:</b>	<b># of Units Rejected X 1,000,000</b> <b>Total # of Units Received</b>

## 3. Premium Freight (Expedite Delivery)

Premium Freight measures product delivery through the number of occurrences of expedite deliveries (non-conformance).

Points	Premium Freight
10	0 expedite deliveries
8	1 expedite deliveries
6	2 expedite deliveries
4	3 expedite deliveries
2	4 expedite deliveries
0	5 expedite deliveries

## 4. Customer Disruption (Hold, Stop Ship, Quality Spill, and Delivery Failure)

**Customer Disruption** measures product disruption through a notification from customer for hold, stop ship, quality spill, and delivery failures through the number of occurrences (non-conformance).

Points	Customer Disruption
10	0 Complaints
8	1 Complaint
6	2 Complaints
4	3 Complaints
2	4 Complaints
0	5 Complaints



## **5. Field Returns (RMA)**

**Field Return** measures product return that failed in the field is a notification from customer for a return through the number of defective units (non-conformance).

<b>Points</b>	<b>Customer Disruption</b>
10	0 Defective units return
8	10 Defective units return
6	25 Defective units return
4	100 Defective units return
2	200 Defective units return
0	500 or more Defective units return

## **6. Supplier Dissatisfier (SD in PPM)**

**Parts Per Million** measures product quality through the number of defective issues (example; mislabeling, incorrect parts shipped, wrong packaging, mixed parts etc., (non-conformance) per each million units.

<b>Points</b>	<b>Parts Per Million (PPM)</b>
10	PPM is 0 to 100
8	PPM is 1,01 to 5,00
6	PPM is 5,01 to 10,00
4	PPM is 1001 to 5000
2	PPM is 5001 to 10000
1.	PPM is greater than 10000

## **7. Customer Satisfaction Survey**

Cooperation/Support/Customer Service/Responsiveness/Proactiveness a subjective measurement of a supplier's interaction with Purchasing and SQA. For each quarter, it measures their perceived levels of cooperation, support, customer service, responsiveness, and proactiveness (see scoring details). Survey participants include: SQEs, SSMs, Buyers, & Director of GSC.

**Objective:** To collect important non-OTTP & DPPM assessment info from primary RS

supplier interface personnel

**Scope:** This quarterly subjective assessment will cover the top 20 suppliers by previous year spend dollars

## Points & Definitions:

- 1) **Cooperation** (4 Points): How well the supplier respects RS policies, new initiatives, pull-in requests, etc.
- 2) **Support** (4 Points): How often the supplier provides suggestions and assistance on important RS topics such as NPD, reliability improvements & cost reductions
- 3) **Customer Service** (4 points): The positive and professional manner the supplier uses to interact with RS personnel and deliver favorable results.
- 4) **Responsiveness** (4 points): How quickly and accurately the supplier responds to RFQ's, inquiries, SCARS, PO acknowledgements, etc.
- 5) **Proactiveness**(4 points): How well the supplier anticipates RS needs and keeps RS personnel informed of important information.

## E. *Supplier Performance Levels and Assessment*

Each supplier is ranked based upon their on-going performance.

**Level 1** - A supplier achieving an ongoing level of **90 points or above** is a preferred supplier that we will be rewarded with New Product Development involvement and additional business.

**Level 2** - A supplier that has achieved an ongoing level of **75 to 89 points** is performing at an acceptable level. However, if level 2 is achieved twice in a year, then the Strategic Sourcing Manager shall work with these suppliers to help them get to level 1 performance within a specified period.

**Level 3** - A supplier that has achieved an ongoing level of **50 to 74 points** has a conditional level of performance. However, if the level 3 is achieved then the Strategic Sourcing Manager communicates with the Supplier by opening a NC with the help of SQE and demand corrective actions. [If level 3 is attained consecutively on two occasions, the supplier will be asked to provide an explanation on how they plan to enhance their metrics.](#)

**Level 4** - A supplier that has achieved an ongoing level of **49 points or below** is a restricted supplier. If level 4 is achieved, then Strategic Sourcing Manager will open a NC with the help of SQE and demand corrective actions. If level 4 is achieved twice in a row, then SSM's will avoid using these suppliers in any new designs and will seek to exit these suppliers in favor of alternate sources.

## **Section VI – Barcode Implementation and Usage**

### **A. Introduction**

These specifications provide guidelines for printing and applying a Shipping/Parts Identification Label. The label is designed to improve the productivity and controls for suppliers and Rochester Sensors, LLC, by allowing effective and efficient capture of data for production counts, forwarding, freight transfer control, receiving, and other inventory controls. Strict adherence to these specifications for Shipping/Parts Identification Label will reduce implementation costs and increase benefits for Rochester Sensors, LLC, and its suppliers.

### **B. Barcode Specifications**

#### **1. Symbology Specifications**

- 1.1 Barcode** – All bar codes must be code 39 or 128 with a leading and trailing quiet zone of 0.25-inch minimum width. The barcode must conform to the barcode Symbology standard for Code 39, published by the Automotive Industry Action group (AIAG B-3 03.00 7/93).
- 1.2 Code Density and Dimensions** – For each barcode symbol, the average width of the narrow elements must be within the range of 0.013 to 0.017 inches. The ratio of the nominal width of the wide elements to the nominal width of the narrow elements must be 3:1, with an allowable range of 2.8:1 to 3.2:1.
  - 1.2.1** Box and Master labels, the bar heights must be a minimum of 0.5 inches.
- 1.3 Reflectivity and Contrast** – The printed barcode symbol must meet the reflectivity and contrast requirements, specified in section 4.1 of AIAG-B-1 at all electromagnetic wave lengths from B633 to B900 nanometers.
- 1.4 Check Digits** – Check Digits must not be used in the barcodes
  - 5. Quality Assurance Requirements** – It is the responsibility of the supplier to provide barcode labels that meet these specifications. Waivers may be granted on a case-by-case basis.

#### **2. Size and Materials**

##### **2.1 Label Sizes**

- 2.1.1 Single Labels** – The standard Rochester Sensors, LLC label must be 4.0 inches high and 6.5 inches in length

**2.1.2 Master Labels** – The standard Rochester Sensors, LLC label must be 4.0 inches high and 6.5 inches in length

**2.1.3 Label Stock** – The label paper must be white in color with black printing, unless approved in advance.

## 2.2 Special Circumstances

If the specified label cannot be affixed to the package/container because of container size or design, special arrangements will be required, contact the Rochester buyer.

## 3. Data Area Characteristics/Size – Box and Master Label Only

### 1. Data Areas and Titles

There are nine areas for each label: Supplier Name, Part Number, Purchase Order Number, Line Item, Supplier Number, Rev. Level, Quantity, Part Description, and Date Mfg./Shipped. Each data area must be separated by thin lines and must contain its title in the upper left-hand corner. The barcode symbol must be directly below the readable characters in all data.

**3.1.1** The supplier's name must be located at the top of single label and master label.

## 4. Placement of Labels

### 4.1 Single Use Label

To be used on all shipments. Each box, bag, container, pallet shall have a single use label. It should be applied in a place where visible and accessible.

**4.1.1** One-part number per single use label. Where there is more than one box, bag, container, pallet, of the same part number, a "master label" will be used in conjunction with the single use label.

### C. Sample Labels

Supplier Name <b>Sample Supplier</b>		Supplier Name <b>Sample Supplier</b>	
Part Number <b>8681S00037</b> 		Part Number <b>8681S00037</b> 	
Order Number <b>0112611-1</b> 	Line Item  <b>3</b>	Order Number <b>0112611-1</b> 	Line Item  <b>3</b>
Supplier Number <b>098765</b> 	Revision  <b>G</b>	Supplier Number <b>098765</b> 	Revision  <b>G</b>
Quantity  <b>2000</b>		Quantity  <b>2000</b>	
Date Mfg.  <b>06/04/12</b>	Description <b>SPIRAL GAUGE</b>	Date Mfg.  <b>06/04/12</b>	Description <b>SPIRAL GAUGE</b>

*Bar Code 128 example*

*Bar Code 39 Example*

### D. Documents

The supplier will provide the necessary paperwork needed for efficient receipt of material. This will include:

- Packing list (2 copies)
- Material Certs (as required)
- Inspection data (as required)

### E. Contacts

For any further questions contact the supply chain group at Rochester Sensors, LLC.

## REVISION HISTORY

Date: 4/27/20	Revision: 2.4	Section: Var	By: RG/MK
Description: Director of Quality was Quality Manager; Director of Global Supply Chain was Global Supply Chain Manager. Records retention updated 10 years was 3 years. Updated drawing specification control. Updated document availability. Added exception to PSW and PQP information. Added clarification to PCN. Updated, added supplier corrective action. Added requirement for PFC for any IATF requirements. Added Significant and Special Characteristics section. At Reliability Compliance, added when required by RG. Added Special Characteristics definitions. Updated appendix and forms. LLC was Inc. Added waiver may be granted for barcode labels. Updated Table of Contents. Added revision history starting with this revision 2.4.			
Date: 9/17/20	Revision: 3.0	Section: Score card	By: MK
Description: Added Appearance Criteria section. Updates to scorecard to include disruptions, number of occurrences of premium freight and customer issues. Critical suppliers were top 10. Point system updated also to include the same. Updates to levels and Assessments			
Date: 04/12/2022	Revision: 4.0	Section: Score card and Appendix update	By: MK
Description: Updated Rochester Sensor from Gauges. Updates to scorecard by removing the Customer Survey. Critical suppliers were in the top 10. The Point system updated also. Updated the Appendix with new forms with new Logo.			
Date: 07/12/202	Revision: 5.0	Section: Certificates and Appendix update	By: JT, YM
Description: Updated update section Certificates by adding PQP, add sections Supplier Assessment and Selection, Nonconforming Material. Updated the Appendix with new forms, updated format.			
Date: 5/12/2023	Revision: 6.0	Section: Supplier Performance Levels and Assessment	By: JT, YM
Description: Updated update section Supplier Performance Levels and Assessment, minor format updates			

# Appendix A

<u>Title</u>	<u>Pages</u>
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Process Change Notice (PCN) .....	33
Certificate of Compliance .....	34
Supplier Performance Scorecard (SPS).....	35
Certificate of Conformance .....	36 - 38



### Part Submission Warrant

Part Name _____	Cust Part Number _____
Shown on Drawing No. _____	Org. Part Number _____
Engineering Change Level _____	Dated _____
Additional Engineering Changes _____	Dated _____
Safety and/or Government Regulation <input type="checkbox"/> Yes <input type="checkbox"/> No	Purchase Order No. _____ Weight kg _____
Checking Aid No. _____	Checking and Engineering Change Level _____ Dated _____
<b>SUPPLIER MANUFACTURING INFORMATION</b>	<b>CUSTOMER SUBMITTAL INFORMATION</b>
Rochester Sensors Supplier Name & Supplier/Vendor Code _____	Customer Name/Division _____
Customer Name/Division 11616 Harry Hines Blvd. _____	Buyer/Buyer Code _____
Street Address Dallas Texas 75229 USA City Region Postal Code Country	Application _____
<b>MATERIALS REPORTING</b>	
Has customer-required Substances of Concern information been reported	Yes No n/a
Submitted by IMDS or other customer format _____	
Are polymeric parts identified with appropriate ISO marking codes	Yes No n/a
<b>REASON FOR SUBMISSION (Check if at least one)</b>	
<input type="checkbox"/> Initial Submission	<input type="checkbox"/> Change to Optional Construction or Material
<input type="checkbox"/> Engineering Change(s)	<input type="checkbox"/> Sub-Supplier or Material Source Change
<input type="checkbox"/> Tooling; Transfer, Replacement, Refurbishment, or additional	<input type="checkbox"/> Change in Part Processing
<input type="checkbox"/> Correction of Discrepancy	<input type="checkbox"/> Parts Produced at Additional Location
<input type="checkbox"/> Tooling Inactive > than 1 year	<input type="checkbox"/> Other - please specify _____
<b>REQUESTED SUBMISSION LEVEL (Check one)</b>	
<input type="checkbox"/> Level 1 - Warrant only (and for designated appearance items, an Appearance Approval Report) submitted to customer.	
<input type="checkbox"/> Level 2 - Warrant with product samples and limited supporting data submitted to customer.	
<input type="checkbox"/> Level 3 - Warrant with product samples and complete supporting data submitted to customer.	
<input type="checkbox"/> Level 4 - Warrant and other requirements as defined by customer.	
<input type="checkbox"/> Level 5 - Warrant with product samples and complete supporting data reviewed at supplier's manufacturing location.	
<b>SUBMISSION RESULTS</b>	
The results for <input type="checkbox"/> dimensional measurements <input type="checkbox"/> material and functional tests <input type="checkbox"/> appearance criteria <input type="checkbox"/> statistical process package	
These results meet all drawing and specification requirements; <input type="checkbox"/> Yes <input type="checkbox"/> NO (If "NO" - Explanation Required)	
Mold / Cavity/ Production Process _____	
<b>DECLARATION</b>	
I hereby affirm that the samples represented by this warrant are representative of our parts, which were made by a process that meets all Production Part Approval Process Manual 4th Edition Requirements. I further affirm that these samples were produced at the production rate of <input type="checkbox"/> / <input type="checkbox"/> hours.	
I also certify that documented evidence of such compliance is on file and available for review. I have noted any deviations from this declaration below.	
<b>EXPLANATION/COMMENTS:</b>	_____
Is each Customer Tool properly tagged and numbered? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Organization Authorized Signature _____	Date: _____
Print Name _____	Phone No. 972-241-2161 FAX No. 972-620-4153
Title _____	Email _____
<b>FOR CUSTOMER USE ONLY (IF APPLICABLE)</b>	
Part Warrant Disposition: <input type="checkbox"/> Approved <input type="checkbox"/> Rejected <input type="checkbox"/> Other _____	
Customer Signature _____	Date _____
Print Name _____	Customer tracking Number (optional) _____



### Product / Process Change Notification

Complete this form and email to your customer organization whenever customer notification is required by the PPAP Manual in Table 3.1. Your customer will respond back with an acknowledgement and may request additional change clarification or PPAP submission requirements.

To: \_\_\_\_\_ s \_\_\_\_\_

Customer: \_\_\_\_\_

Organization Part Number: \_\_\_\_\_

Engineering Revision Level \_\_\_\_\_ Dated: \_\_\_\_\_

Customer Part Number: \_\_\_\_\_

Engineering Revision Level \_\_\_\_\_ Dated: \_\_\_\_\_

Purchase Order Number: \_\_\_\_\_

Safety and/or government regulation: \_\_\_\_\_

Application: \_\_\_\_\_

**ORGANIZATION MANUFACTURING INFORMATION**

Name: \_\_\_\_\_

Street Address \_\_\_\_\_

City, State & Zip: \_\_\_\_\_

Customer Plants Affected: \_\_\_\_\_

- Engineering Change(s)
- Tooling; Transfer, Replacement, Refurbishment, or additional
- Correction of Discrepancy

**Change Type (check all that apply)**

- Dimensional
- Materials
- Functional
- Appearance

**Design Responsibility:**       Customer       Organization

**Organization Change That May Affect End Item:**

- Product Change     Engineering Drawing Change       New or Revised Subcomponent

**Expected PPAP Completion/Submission Date:** \_\_\_\_\_

**DETAILED DESCRIPTION OF PRODUCT/PROCESS CHANGE:**

---



---

**Planned Date of Implementation** \_\_\_\_\_

**DECLARATION**

I hereby certify that representative samples will be manufactured using the revised product and/or process and verified, where appropriate, for dimensional change, appearance change, physical property change, functionally for performance and durability. I also certify that documented evidence of such compliance is on file and available for customer review

EXPLANATION/COMMENTS: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Business Phone No: \_\_\_\_\_

Fax No: \_\_\_\_\_

E-Mail: \_\_\_\_\_

Date: \_\_\_\_\_

*Note: Please submit this notification at least 6 weeks prior to the planned change implementation!*

Contact your customer to determine if this form is available in an electronic format or if this form should be faxed.

## CERTIFICATE OF COMPLIANCE

PURCHASE ORDER & ITEM NUMBER \_\_\_\_\_  
ROCHESTER SENSOR'S PART NUMBER \_\_\_\_\_ QUANTITY \_\_\_\_\_

DRAWING(S) / SPECIFICATION(S): \_\_\_\_\_  
(INCLUDE ALL SPECIFICATIONS AND REVISION DATE(S))

THIS IS TO CERTIFY THAT ALL ITEMS REFERENCED HEREIN ARE IN COMPLETE CONFORMANCE WITH ALL REQUIREMENTS OF THE REFERENCED PURCHASE ORDER. ALL MATERIALS USED AND APPLICABLE REQUIREMENTS HAVE BEEN VERIFIED AND PERFORMED.

RECORDS AND DOCUMENTS OF THIS CERTIFICATE IS VERIFYING COMPLIANCE TO APPLICABLE CHARACTERISTICS THAT ARE PREPARED, REVIEWED, AND FOUND TO MEET ALL APPLICABLE REQUIREMENTS AND ARE ON FILE AND AVAILABLE FOR REVIEW BY THE PURCHASER. THESE DOCUMENTS WILL BE RETAINED FOR A PERIOD OF 10 YEARS OR LIFE OF THE PRODUCT.  
AFTER THE COMPLETION OF THE REFERENCED PURCHASE ORDER.

THE FOLLOWING MATERIAL (S) WERE USED: \_\_\_\_\_  
\_\_\_\_\_

TRACEABLE LOT IDENTIFICATION USED: \_\_\_\_\_  
\_\_\_\_\_

THE ABOVE STATEMENTS ARE TRUE, COMPLETE AND CORRECT.

\_\_\_\_\_  
AUTHORIZED SIGNATURE

COMPANY NAME AND ADDRESS:

\_\_\_\_\_  
TITLE

\_\_\_\_\_

\_\_\_\_\_  
DATE

# SUPPLIER PERFORMANCE SCORECARD (SPS)



TO: \_\_\_\_\_  
 TITLE: \_\_\_\_\_  
 COMPANY: \_\_\_\_\_  
 SUPPLIER TYPE: \_\_\_\_\_  
 SUPPLIER #: \_\_\_\_\_  
 PHONE: \_\_\_\_\_  
 EMAIL: \_\_\_\_\_  
 FAX: \_\_\_\_\_

FROM: Jeff Matzek  
 TITLE: Director of Global Supply Chain  
 COMPANY: ROCHESTER GAUGES, LLC  
 PHONE: (972) 845-4227  
 FAX: (972) 280-8406  
 EMAIL: [jmatzek@rochestergauges.com](mailto:jmatzek@rochestergauges.com)

Current Period: Qtr 1  
 Total SPS Rating Possible: 100  
 Current Period SPS Rating Earned: 100  
 Current Supplier Performance Level: 1  
 YTD SPS Rating Average: 100.0  
 YTD Supplier Performance Level: 1

Shown below is your SPS report for the current period and year-to-date.

Category	100 Max Pts/Qtr	2017												YTD Ave	YTD RATING				
		Qtr 1			Qtr 2			Qtr 3			Qtr 4								
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			Pts	Ave	Pts	
OTTP	30																30	>=95%	30
PPM	30																30	<=100	30
Premium Freight	5																5	=0	5
Customer Disruptions	5																5	=0	5
Field Returns	5																5	=0	5
Dissatisfiers	5																5	=0	5
Satisfaction Survey	20																20	>15	20
<b>Total Points</b>																	<b>100.0</b>		<b>100.0</b>
<b>Level</b>																	<b>1</b>		<b>1</b>

**Performance Levels**

- LEVEL 1:** A supplier that has achieved an ongoing level of 90 points or above is a preferred supplier. We will reward with New product development and additional business.
- LEVEL 2:** A supplier that has achieved an ongoing level of 75 to 89 points is performing at an acceptable level. However, if level 2 is achieved twice in a year then the Strategic Sourcing Manager shall work with these suppliers to help them get to level 1 performance within a specified period.
- LEVEL 3:** A supplier that has achieved an ongoing level of 50 to 74 points has a conditional level of performance. However, if the level 3 is achieved then the Strategic Sourcing Manager communicates with the Supplier by opening a NC with the help of SQE and demand corrective actions. If level 3 is achieved twice in a row then Supplier is invited to explain to improve their metrics
- LEVEL 4:** A supplier that has achieved an ongoing level of 49 points or below is a restricted supplier. If level 4 is achieved, then Strategic Sourcing Manager will open a NC with the help of SQE and demand corrective actions. If level 4 is achieved twice in a row then SSM's will avoid using these suppliers in any new designs and will seek to exit these suppliers in favor of alternate sources.

**NOTES:** PPM is calculated as average number of rejects divided by average number of receipts for the entire time period.

**Actions:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_





**ROCHESTER SENSORS, LLC.**  
1025 S. BELT LINE Rd. PO BOX 2368, COPPELL, TX 75019  
(972) 241-2161 FAX 972) 620-1403

ISO 9001:2015

**CERTIFICATE OF CONFORMANCE**

Part Number: \_\_\_\_\_ Supplier Name: \_\_\_\_\_

**Environmental Reporting - Required**  
**Restricted Chemical Substance Certifications For Rochester Sensors FAI**

**6A. EPA TSCA**

Rochester requires notification if the part contains 1% or more by weight of the following restricted persistent, bioaccumulative and toxic chemicals. We cannot manufacture or sell products in the US if they contain these chemicals. Supplier will be asked to not provide products containing these chemicals:

Final regulations can be found here for the Restricted Chemicals:

- [Final rule for phenol, isopropylated phosphate \(3:1\) \(PIP \(3:1\)\)](#)
- [Final rule for decabromodiphenyl ether \(DecaBDE\)](#)
- [Final rule for 2,4,6-Tris\(tert-butyl\)phenol \(2,4,6-TTBP\)](#)
- [Final rule for hexachlorobutadiene \(HCBD\)](#)
- [Final rule for pentachlorothiophenol \(PCTP\)](#)

EPA TSCA Compliant? Yes \_\_\_\_\_ No \_\_\_\_\_

If restricted substance is present:

CAS #

**6B. REACH**

Rochester requires notification of all restricted substances contained in this part, both the ppm/percentage by weight as well as the total weight of the part containing the restricted substance. Compliance is considered a maximum content of 0.1%(1,000ppm)  
Click the following link to obtain a complete list of restricted chemicals on the European Chemicals Agency (ECHA) site: <https://echa.europa.eu/substances-restricted-under-reach>

REACH Compliant? Yes \_\_\_\_\_ No \_\_\_\_\_

If no or if restricted substance is present:

CAS #	PPM	Total Weight

## CERTIFICATE OF CONFORMANCE - Cont'd

### 6C. RoHS

Rochester requires notification of all restricted substances contained in this part, both the ppm/percentage by weight as well as the total weight of the part containing the restricted substance.

Click the following links for more information about the [RoHS Directive 2011/65/EU](#) and the [RoHS Amendment \(EU\) 2015/863](#).

Restricted substances referred to in Article 4(1) and maximum concentration values tolerated by weight in homogeneous materials:

- Lead (0.1 %)
- Mercury (0.1 %)
- Cadmium (0.01 %)
- Hexavalent chromium (0.1 %)
- Polybrominated biphenyls (PBB) (0.1 %)
- Polybrominated diphenyl ethers (PBDE) (0.1 %)
- Bis(2-ethylhexyl) phthalate (DEHP) (0.1 %)
- Butyl benzyl phthalate (BBP) (0.1 %)
- Dibutyl phthalate (DBP) (0.1 %)
- Diisobutyl phthalate (DIBP) (0.1 %)

**RoHS Compliant?** Yes \_\_\_\_\_ No \_\_\_\_\_

If no or if restricted substance is present:

CAS #	PPM	Exemption?	Total Weight

### 6D. Prop65

Rochester requires notification only about these substances, we do not require special labeling or restriction on them. We do not need to know how much of a restricted substance is in the part, just that it contains it and approximately where, if not throughout the component.

Further information can be found at <http://oehha.ca.gov/proposition-65> and a complete list at <http://oehha.ca.gov/proposition-65/proposition-65-list>

**Prop65 Compliant?** Yes \_\_\_\_\_ No \_\_\_\_\_

If restricted substance is present:

CAS #	Throughout or What Location

**CERTIFICATE OF CONFORMANCE - Cont'd****7. Conflict Material**

The definition of "conflict minerals" refers to gold, as well as tin, tantalum, and tungsten, the derivatives of cassiterite, columbite-tantalite, and wolframite, regardless of where they are sourced, processed or sold. The U.S. Secretary of State may designate other minerals in the future. We support these requirements to further the humanitarian goal of ending violent conflict in the Democratic Republic of the Congo (DRC) and in surrounding countries, which has been partially financed by the exploitation and trade of "conflict minerals".

Ensure compliance and perform reasonable due diligence with your supply chains to assure that specified metals are being sourced only from:

- Mines and smelters outside the "Conflict Region" or
- Mines and smelters which have been certified by an independent third party as "conflict free" if sourced within the "Conflict Region".

**Conflict Material Compliant?**

Yes \_\_\_\_\_

No \_\_\_\_\_

Quality Manager  
or Designee : \_\_\_\_\_

Date: \_\_\_\_\_

## *Appendix B*

<u>Title</u>	<u>Pages</u>
Process Failure Mode Effects Analysis (PFMEA).....	40
Supplier Corrective Action Report (SCAR).....	41 & 42
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Gauge Repeatability / Reproducibility Study (Long Method).....	46

PFMEA

CUSTOMER:		PROCESS FAILURE MODES AND EFFECTS ANALYSIS (PFMEA)																	
PART NAME:		ROCHESTER GAUGES, LLC																	
MODEL NUMBER:		Location																	
CORE TEAM:		PREPARED BY:																	
PFMEA Type		DATE REVISED																	
REV DATE:																			
#	PROCESS FUNCTION	POTENTIAL FAILURE MODE	POTENTIAL EFFECTS OF FAILURE	SEVERITY	C L A S S	POTENTIAL CAUSES OF FAILURE	Process Controls		D R P N	RECOMMENDED ACTIONS	RESPONSIBLE FOR ACTION	ACTION TAKEN	ACTION RESULTS						
							Prevention	Detection					S	O	D	R			
																			0
																			0
																			0
																			0
																			0
																			0
																			0
																			0



## Supplier Corrective Action Report (SCAR)



If possible, send this form and any supporting documentation in electronic format through email. Do not *write protect* this form upon return. The results of this request will be sent through an e-mail notification whenever possible

RochesterSensors Part Number: _____	Last Updated: _____
Drawing Revision Level: _____	Supplier PO #: _____
Description: _____	SCAR #: _____
Supplier: _____	RMA #: _____
Origination Date: _____	

Supplier to acknowledge receipt of this SCAR and report Containment Action by the following date:  
*Note: The Containment Action is required within 3 working days of the origination date.*

**1) Establish the Team:**

RS Team Member	Title	Email Address	Phone #
<input type="checkbox"/>			
<input type="checkbox"/>			

Supplier	Title	Email Address	Phone #

**2) Define the Problem** (Use photos & diagrams, as needed)

	# of Units Inspected: # of Units Rejected: Total Suspect Units: PPM Defective:
--	---

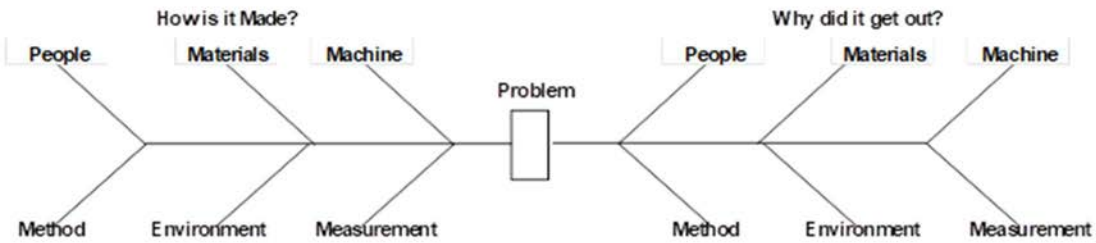
**3) Containment Action taken to prevent defective product from being used in product**

Rochester Sensors:	Implementation Date:  Results if 100% sorted # of Units Bad: # of Units Good: Total Units Sorted:
Supplier:	Implementation Date:  Results if 100% sorted # of Units Bad: # of Units Good: Total Units Sorted:

Return Material Authorization # if parts are to be returned to Supplier:  
Authorized by: \_\_\_\_\_

## Supplier Corrective Action Report (SCAR)

4) Root Cause(s) for the problem described in Step 2) above. Verify and validate root causes and test the escape point(s). Use fishbone diagram or other QC Tool to help describe root cause(s).



Circle the most likely contributors (a maximum of three) from each side

5) Permanent Corrective Action(s) taken to eliminate the Root Cause(s) in step 4. Implementation Date:

6) Verification of Permanent Corrective Action Effectiveness:

Percent Effect?

7) Action(s) Taken To Prevent Recurrence:



# Potential Study Data Sheet



If possible, send this form and any supporting documentation in electronic format through email. Do not write *protect* this form upon return.

Supplier								
Prepared By:								
Email:								
Phone:								
Date:	4/12/2022							
Part Number:								
Revision Level:								
Characteristic	Characteristic 1	Characteristic 2	Characteristic 3	Characteristic 4	Characteristic 5	Characteristic 6	Characteristic 7	Characteristic 8
Target								
+ Tol								
- Tol								
USL								
LSL								
AVE								
MAX	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
USL-LSL								
$\sigma$								
est								
Cp								
Cpk								
CpU								
CpL								
Pp								
Ppk								
PpU								
PpL								

**Process Potential Study** A measurement of the inherent precision of a manufacturing process. It is a statistical analysis of production quantities to determine if the process is capable of meeting the quality target as defined by the print tolerances.

**X-Bar** The average value of all 30 measurements on a characteristic.

**Standard Deviation** A measurement of variation of a set of values about their average value.

**Cp** Process Potential Index – A measure of the process potential; consisting of the tolerance spread (upper spec limit – lower spec limit) divided by the normal process spread (6 standard deviations).

**Cpk** Process Centering Capability Index – A measure of how well the process is centered within the tolerance limits. It consists of the smaller of (upper spec limit – X-Bar), or (X-Bar – lower spec limit), divided by half of the normal process spread (3 standard deviations).



# Gage Repeatability / Reproducibility Data Study (Short Method)



Part Number & Name \_\_\_\_\_  
 Characteristic \_\_\_\_\_  
 Specification \_\_\_\_\_

Gage Name: \_\_\_\_\_  
 Gage Number: \_\_\_\_\_  
 Gage Type: \_\_\_\_\_

Date: \_\_\_\_\_  
 Performed By: \_\_\_\_\_  
 Email: \_\_\_\_\_  
 Phone: \_\_\_\_\_

Measurement: \_\_\_\_\_

Operator 1	Operator 2	Operator 3	Operator 4	Operator 5	Range
0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000
Sum of Ranges:					0.000
Average Range:					0.0000

Number of Parts	Range Multiplication Constants (d2* table)				
	2	3	4	5	
1	3.65	2.70	2.30	2.08	2.08
2	4.02	2.85	2.40	2.15	2.15
3	4.19	2.91	2.43	2.16	2.16
4	4.26	2.94	2.44	2.17	2.17
5	4.33	2.96	2.45	2.18	2.18
6	4.36	2.98	2.46	2.19	2.19
7	4.40	2.98	2.46	2.19	2.19
8	4.40	2.99	2.48	2.19	2.19
9	4.44	2.99	2.48	2.20	2.20
10	4.44	2.99	2.48	2.20	2.20

# oper	2
# parts (n)	5
d2*	4.33
LSL	2
USL	4
Tolerance	2.000

**GAGE R&R**

Sm (Est.) 0.00000  
 Gage Error (GRR=5.15\*Sm) 0.00000

$\%R\&R = 100*(R\&R/\text{tolerance})$

**$\%R\&R = 0\%$**

Examples:  
 For two operators and 5 parts, the constant is 4.33.  
 For 5 operators and 10 parts the constant is 2.20.

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



