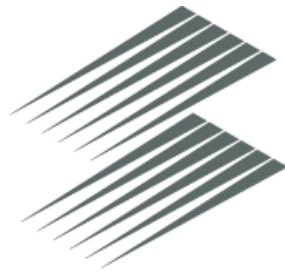


***Supplier***  
***Quality***  
***Manual***



**SCHAFER**

**SCHAFER GEAR WORKS**

**4701 Nimitz Parkway, South Bend IN, 46628**



# SUPPLIER QUALITY MANUAL

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## SCHAFER GEAR WORKS POLICIES

### SUPPLIERS

Schafer Gear Works recognizes the important role our Suppliers have in achieving our strategic objectives. Schafer Gear Works expects total quality and value in the products and/or services it receives. Continual improvement, innovation and reliability in these products and/or services are essential for Schafer Gear Works to maintain and generate new customer business and reach its performance goals.

In order to meet our customers' expectations, Schafer Gear Works has adopted a "Supplier Partnership" position.

### SCHAFER GEAR WORKS QUALITY POLICY

*Schafer Gear Works' most important product is to meet or exceed customer expectations. Our intent is to excel in an atmosphere that encourages continuous improvement and involvement by everyone.*

Our systems are designated to support our business goals and to achieve quality objectives and Customer Expectations through empowered teams, Process controls, and continual improvements.

### SCOPE

This manual applies to all Suppliers who provide products and/or services to Schafer Gear Works. Its intent is to explain Schafer Gear Works expectations, product and shipping requirements, how suppliers will be evaluated and provide a means of communication between our two organizations. The material purchased, by Schafer Gear Works, shall be produced, controlled, inspected and tested in accordance with Schafer Gear Works specifications. If a Supplier is unwilling or unable to carry out the intent of this manual, they will not be considered as a long-term supplier to Schafer Gear Works.

### GENERAL

Schafer Gear Works has established the ISO 9001 or AS9100 Quality System, as the preferred basic quality management system of suppliers who provide goods and services to our manufacturing and assembly facilities. Other requirements may be required for special process suppliers such as NADCAP testing to meet the specific print or customer requirements. Suppliers are expected to demonstrate that they are pursuing and implementing a quality system that conforms to either Standard if they are not already registered. Additional acceptable standards are IATF 16949 and ISO-13485. The requirements of this Standard and this manual supplement the purchase order. Suppliers are responsible for meeting all provisions of the purchase order, drawing, standards and specifications as referenced. Please contact us if any assistance is needed in interpreting our purchase order or its imposed

drawings and specifications. We may also require your assistance in assuring applications of our products. It is only through an atmosphere of mutual assistance and free exchange that our relationship can achieve maximum benefits for each of us.

## **GOOD BUSINESS PRACTICES**

Suppliers are expected to follow good business practices. The value of following these practices makes companies more profitable, lowers risks, and enhances the ability to attract and motivate employees. Suppliers must strive to continuously improve their practices and systems.

The practices should include but are not limited to:

1. FIFO – First In First Out for materials and finished goods.
2. APQP – Advanced Product Quality Planning.
3. Lean Manufacturing.
4. Supplier management CQI-19
5. AIAG PPAP – Automotive Industry Action Group Piece Part Approval Process.
6. ISO 9001 – Quality Management System
7. IATF 16949 – Automotive Quality Management System
8. Business Ethics
9. Conflict Materials reporting
10. Accounting and Financial Planning
11. Forecasting
12. Inventory management
13. Benchmarking
14. Contingency Planning and disaster recovery
15. Employee Management
16. Strategic Business planning and performance monitoring
17. Hedging – Materials and currency
18. Sales and Marketing
19. Carbon emissions reduction

## **RIGHT OF ACCESS**

Schafer reserves the right of access to supplier facilities, processes, documents, and records pertaining to any Schafer purchase order. This also applies to Schafer’s customers and any pertinent regulatory bodies.

## **ETHICAL BEHAVIOR & GOOD BUSINESS PRACTICES**

Suppliers are expected to follow good business practices including ethical behavior with customers, suppliers and employees.

## **OBSOLESCENCE MANAGEMENT**

The supplier shall inform Schafer Gear Works of all items that will become obsolete within the next twelve months. The supplier shall maintain regular communication with sub-suppliers regarding possible raw material or component obsolescence. The supplier shall have a documented obsolescence management plan/process in place to mitigate delivery risk for all items that could become obsolete.

Schafer Gear Works requires suppliers to notify the buyer regarding obsolescence with lead time sufficient so as not to disrupt delivery schedules. The supplier shall notify in email or writing providing detail for the appropriate items in the list including the affected part numbers in the notification.

## **COUNTERFEIT RISK MITIGATION**

All suppliers are required to implement and enforce a written Counterfeit Parts Prevention and Control Plan per industry standards. The plan shall flow down requirements of AS6496, AS5553, AS6174, DFARS 252.246-7007, and/or DFARS 252.246-7008 as applicable throughout the supply chain.

Suppliers shall purchase material directly from original equipment manufacturers, original component manufacturers, or their authorized distributors, when the parts are still being manufactured or available in stock directly from such sources. Purchases from independent distributors (i.e., brokers) are not allowed Without prior documented approval from Schafer Gear Works. Suppliers are required to maintain a file of all Schafer Gear Works approvals.

## **FOREIGN MATERIAL**

The contamination of goods by foreign material or objects is not acceptable as it could eventually affect product appearance and performance. The supplier shall document and implement a program for the prevention, detection, and removal of Foreign Object Damage/Foreign Object Debris (FOD) in accordance with SAE AS9146, Foreign Object Damage (FOD) Prevention Program-Requirements for Aviation, Space and Defense Organizations. The program shall include training and the active involvement of employees. In addition, the supplier shall conduct audits and maintain records to demonstrate the program's effectiveness. By delivering items to Schafer Gear Works, the supplier shall be deemed to have certified to Schafer. Aerospace that such items are free from any foreign materials that could result in FOD.

## **RECORD RETENTION**

Records will be retained for the minimum specified times for the type of product being manufactured.

- Aerospace products will have all records retained for a minimum of 30 years except for FAI which is 99 years.
- All other products will have all records retained for a minimum of 7 years except for PPAP which is 30 years after end of production.

## **COST SAVINGS**

Our suppliers are encouraged to submit suggestions to lower costs without affecting product quality and reliability. This could be beneficial to each of us by allowing Schafer Gear Works to lower its customers' costs and possibly gaining new business.

## **RESPONSIBILITIES**

Suppliers are required to resolve all questions relating to the purchase order prior to its acceptance or fulfillment. In addition to the above general responsibilities, we feel the requirements on the following pages are needed to assure shipments of CONSISTENT and ACCEPTABLE quality and our Quality and Purchasing Departments are available to assist you in the interpretation and application if needed.

Suppliers shall maintain an audit system that assures all products and/or services conform to the purchase order whether manufactured/processed by you or your sub-suppliers.

Suppliers shall perform the inspections and tests necessary to substantiate product conformance to the purchase order requirements. Your quality system shall: ensure control to produce a quality product, be documented, and be available for review or audit by a Schafer Gear Works representative, if required, prior to production and throughout the life of the purchase order.

## **REQUEST FOR ENGINEERING EVALUATION**

Schafer Gear Works Engineering Department will assist in resolving manufacturing related issues due to the product design. Suppliers are encouraged to submit a complete description of the situation to our Purchasing Department who will coordinate with Engineering to clarify the issue and/or revise the Schafer Gear Works drawing/specification if needed. Priority for these reviews will be determined by the severity and impact on production operations. Upon its completion, the results will be communicated through our Purchasing Department.

## **MATERIAL CONTROL**

Suppliers shall provide chemical, physical and/or mechanical analysis to verify that specific characteristics of the materials supplied have been met prior or with the shipment.

## **PROCESS CONTROLS**

A quality system shall be implemented to assure that all production, processing, assembly and fabrication operations are accomplished under controlled conditions. Criteria for approval or rejection shall be provided to insure product quality/integrity.

## **QUALITY SYSTEM AUDIT**

Schafer Gear Works Supplier Quality representatives may audit supplier facilities for verification, evaluation and possibly upgrading of their quality system. The audit will examine the quality system's conformance, verifying the use of statistical process control (if applicable), review of the quality system procedures and previous inspection/test records, and, verifying the quality of outgoing shipments. The representatives will review the system to the requirements of ISO 9001 (Latest Registered Revision) Schafer Gear Works plant requirements. Schafer Gear Works will accept third party registration to ISO 9001. The results of second party quality system evaluations (Customer or Schafer Gear Works only) will be reviewed and may be accepted. A Supplier Self Audit will be required during the supplier approval process and then periodically as required.

## **NOTICE OF NONCONFORMING MATERIAL**

The Supplier is responsible to notify a Schafer Gear Works buyer when a nonconformity or reliability issue is discovered in the supplier's processes, components, or assemblies for any product already delivered. The notice shall contain the following information:

1. Lot/batch information/date of manufacturer, as applicable
2. Part numbers impacted including vendor part numbers and Schafer part numbers
3. Recovery plan
4. Containment plan including nonconforming quantity
5. Purchase order numbers affected
6. Nonconformance description or problem summary and requirement violated

## **SUPPLIER EMPLOYEE REQUIREMENTS**

The supplier shall ensure that all personnel working for or on behalf of the supplier in activities relevant to the realization of product or services provided to or for Schafer Gear Works, are aware of:

- their contribution to product or service conformity;
- their contribution to product safety;
- the importance of ethical behavior.

## **SUB-SUPPLIER MANAGEMENT**

The Supplier is responsible for the quality of all materials and/or services contracted to fulfill the Schafer Gear Works purchase order. Schafer Gear Works reserves the right to perform audits on sub-suppliers as needed.



## REQUIREMENTS FLOWDOWN

The Supplier shall flow down applicable specifications, descriptions, requirements, and all requirements in this document to sub-suppliers. For items unique to Schafer Gear Works, supplier shall indicate that Schafer Gear Works is the customer and has design authority, as part of the text of the purchase contract to any sub-supplier.

## PRODUCTION PART APPROVAL PROCESS (PPAP)

The Supplier shall submit all PPAP documentation and samples from production tooling or processes prior to the shipment of regular production material. The PPAP requirement shall be Level 3 with a two-piece minimum unless otherwise specified. A PPAP Checklist will be provided only if Level 3 documentation is NOT required. Documentation shall include:

- Part Submission Warrant (PSW)
- Process Flow Diagram
- Process Control Plan
- Process Failure Mode Effect Analysis (PFMEA)
- Measurement System Analysis Studies (Gage R&R and Cp/Cpk)
- Dimensional Results (ISIR)
- Material Test Results (material certs, heat treat certs, painting certs, plating certs, etc.)
- Ballooned Drawing

Prior to shipments of the samples, notice shall be given to the Purchasing and/or Quality Departments. PPAP documentation and samples shall be sent to the attention of the Schafer Gear Works Quality Department. Packages containing PPAP material shall be clearly labeled as PPAP Material and to the attention of the Quality Department. Each initial sample is to be positively identified. Any scribed layout lines or reference marks used to perform the layout inspection should be visible on the submitted samples.

Regular production shipments may be made only after the PPAP has been approved and the supplier has received the approved PSW from the Schafer Gear Works Quality Department.

Notification to determine if a new PPAP is required to be submitted in advance whenever:

- The Supplier implements/changes to the manufacturing/assembly process (changing machine, machine relocation, process sequencing, etc.)
- More than two years lapse in the production cycle,
- Transfers production to another plant,
- Uses new/repaired/modified tooling, dies or patterns,
- Has an initial sample rejected or
- Measurement system changes
- Schafer Gear Works drawing and/or specification changes.
- Any request to change material shall first go to Schafer Gear Works Engineering (Engineering Change Request), and approval be granted before the intent to submit PPAP.

## **FIRST ARTICLE INSPECTION REPORT (FAIR)**

The Supplier shall submit First Article Inspection Report documentation per AS9102 aerospace standard when required by Schafer Gear Works and submit identified samples from production tooling or processes prior to the shipment of regular production material.

The FAIR requirement shall be in accordance with AS9102 standard unless otherwise specified. Documentation shall include:

- AS9102 FAI Report
- Material Certifications
- Special Process Certifications including but not limited to Heat Treating, Plating, Welding, Anodizing, Passivation, etc.
- Ballooned Drawing
- AS9145 APQP documents

Prior to shipments of the samples, notice shall be given to the Purchasing and/or Quality Departments. FAIR documentation and samples shall be sent to the attention of the Schafer Gear Works Quality Department. Packages containing FAIR material shall be clearly labeled as FAIR Material and to the attention of the Quality Department. Each initial sample is to be positively identified. Any scribed layout lines or reference marks used to perform the layout inspection should be visible on the submitted samples.

Regular production shipments may be made only after the FAIR has been approved and the supplier has received the approved notification from the Schafer Gear Works Quality Department.

Notification to determine if a new FAIR is required to be submitted in advance whenever:

- The Supplier implements/changes to the manufacturing/assembly process (changing machine, machine relocation, process sequencing, etc.)
- More than two years lapse in the production cycle,
- Transfers production to another plant,
- Uses new/repaired/modified tooling, dies or patterns,
- Has an initial sample rejected or
- Measurement system changes
- The Schafer Gear Works drawing and/or specification changes.
- Any request to change material shall first go to Schafer Gear Works Engineering (Engineering Change Request), and approval be granted before the intent to submit FAIR.

Supplier may download the AS9102 latest revision form at following web address:  
[www.sae.org/aag/publications/as9102af1.doc](http://www.sae.org/aag/publications/as9102af1.doc)

## **SUPPLIER APPROVAL**

### **FOUR-STEP APPROVAL PROCESS**

The Schafer Gear Works Division has implemented a four-step approval process for all Suppliers. The following is the outline of the four-step process with requirements for each step identified:

#### **STEP 1 – Supplier Consideration:**

- Valid quote for product submitted to Purchasing
- Significance of commodity
- Reason for the change
- Confidentiality agreement signed
- Site audit (optional)

#### **Step 2 – Supplier Selection:**

- Change Management Board review
- Supplier self-audit submitted and approved
- Quality System Approval (ISO 9001/IATF 16949)
- Site visit (optional)

#### **Step 3 – Supplier Performance evaluation:**

- Quality Parts Per Million (Number of Nonconformance Reports and Supplier Corrective actions issued.)
- Delivery

#### **Step 4 – Supplier Certification:**

- Meets the scoring requirements for delivery/support/commercial/quality.
- Site visit results are satisfactory
- Third party certified ISO/QS/IATF

Engineering, Quality, Production, and Purchasing concurrence is required for approved status.

### **CAPABILITY OF MACHINES/ PROCESSES**

At no extra charge to Schafer Gear Works, process capability studies are requested on all part numbers with critical callout on the drawing and materials quoted and/or supplied. The Supplier shall contact the Schafer Gear Works Quality Department to identify the key and/or critical characteristics on products that are to be supplied. These characteristics shall be documented, studied, and periodically updated. If requested by Schafer Gear Works, they shall be made available for review and serve as the basis for authorizing the use of sampling inspection or statistical process control as an on-going monitor of conformance. Capability studies shall be performed for key/critical characteristics. The results are to be submitted with

the PPAP. Data results from reliable calculators with standard deviation programs, computers or conventional plotting analysis are all acceptable. Cp/Cpk mean of 1.33 is the requirement for Process Capability.

The results of the Process Capability Study and verification of the PPAP samples will:

1. Assure that the Supplier is aware of and understands all drawing and specification requirements.
2. Determine if the Supplier's process is consistently capable of producing product within 99.7% of the specification tolerance within  $\bar{x} \pm 3\sigma$ . Capability studies shall be performed on at least 30, and preferably more, off of production tooling on all products quoted and supplied.

If destructive testing/measuring is used to demonstrate capability, less than the 30 piece minimum may be used if documented approval by the Schafer Gear Works Quality Department is given.

If any assistance is necessary to explain or clarify process capability format or methods, please call the Schafer Gear Works Quality Department.

## **SUPPLIER REQUESTED PROCESS CHANGES**

Samples selected from production tooling for the capability study and the Supplier's PPAP may be required for Schafer Gear Works verification. Any changes in a Supplier's process, i.e., manufacturing location, machine/tooling, method/process, sub-Suppliers, packaging, etc., different than the conditions that produced the original approved samples, shall require Schafer Gear Works Quality and Purchasing Departments approval and a revised PPAP, FAIR and/or study.

Whenever a Supplier plans to make changes to a process that could conceivably affect the final product, written notification shall be submitted to the Schafer Gear Works Quality Department, prior to implementation for evaluation of fit, processing, performance and function.

## **SUPPLIER REQUEST FOR ENGINEERING DESIGN CHANGE**

Subsequent drawing revisions that affect fit' form and function shall require a Schafer Gear Works Engineering approval and a new PPAP submission from the Supplier and approval from the Schafer Gear Works Quality Department. The Supplier assumes all responsibility for any product produced and shipped without submitting a PPAP, FAIR and/or receiving documented approval from the Schafer Gear Works Quality and Purchasing Departments. Schafer Gear Works Form for Engineering Change Request shall be requested by the supplier from either the Purchasing or Quality Departments.

## **INSPECTION PROCEDURES**

The supplier shall maintain an adequate monitoring system.

Evaluation/monitoring instructions shall reflect the latest design requirements supplied by Schafer Gear Works. Inspection frequencies shall assure that acceptable quality levels are maintained. Lot sampling plans are permissible after process integrity has been established. Only sampling plans with proven statistical validity shall be used and lot acceptance only when zero non-conformities exist ( $C = 0$ ).

All machine set-ups and tool changes shall be inspected prior to a production run. The inspection shall include all key/critical characteristics controlled or affected by this operation. Control procedures shall be established to insure continued part compliance to specifications during the entire production run.

Acceptance of a lot of product by any sampling plan or control procedure does not relieve the Supplier of the responsibility that each part produced meets all of our specifications. Sampling plans and control procedures are not a permissive vehicle to ship discrepant product.

Records of inspections and tests made for the critical characteristics shall be maintained and made available for review by our representatives.

Inspection and testing shall be described by clear, complete and current written instructions to validate the Schafer Gear Works drawing, specification and purchase order. These instructions shall include the inspection and tests of materials used, work in process and completed product. In addition, the instructions shall include criteria for approval, rejection, and the degree of inspection to be performed. When specified by the purchase order, specific documented inspections and tests may be required.

A system for controlling all material/product purchased shall be in effect by the Supplier. This system shall be made available to a Schafer Gear Works representative, if required, to determine its conformance for assuring that the material/product meets physical, chemical, visual and/or dimensional requirements. The inspection and test results and material identification shall be recorded, on file and available for review.

Schafer Gear Works representatives shall be afforded the right to verify that the contracted product conforms to the specified requirements either at the Supplier's or sub-Supplier premises. This does not absolve the Supplier/sub-Supplier of the responsibility to provide acceptable product, nor shall it preclude subsequent rejection by the Schafer Gear Works Division.

## **AVAILABILITY OF INSPECTION DATA**

Schafer Gear Works reserves the right to receive a copy of inspection/test data used in the verification process of the parts supplied. The data requested may be in the form of inspection/test documents and/or frequencies, SPC data, current quality trends, etc. Suppliers are responsible to retain quality documents for minimum of 7 years and up to 99+ years when required at the discretion of Schafer Gear Works.

## **CONTAINMENT REQUIREMENTS**

When defective parts/material is found, Schafer Gear Works will initiate Defective Material Report (DMR). Parts found with repetitive defects on the production line will be handled in accordance with Schafer Gear Works Procedures. The parts will be segregated by moving to containment area, the Supplier will be notified of the defect and the need for them to sort parts both at SGW and the supplier. The Supplier will be required to provide parts certified to be conforming to SGW as soon as possible to avoid production shutdown.

Parts found with repetitive defects at a Customer of SGW location will be handled in accordance with Schafer Gear Works Quality Procedure. Any finished inventory at SGW will be sorted and any scrap or rework generated will be charged to the supplier. The Supplier will be notified to verify all parts in their inventory and may be requested to send their personnel to SGW or the Customer's location to sort parts or make corrections. A Supplier Corrective Action Request (SCAR) will be issued to the supplier at the discretion of Schafer Gear Works to determine the root cause and document corrective actions taken to prevent re-occurrence.

## **MATERIAL REVIEW (DEVIATIONS)**

Nonconforming material may be deviated for use if it is determined that there is no impact on form, fit, function, interchangeability, the manufacturing process or reliability of end product. Precede any shipment, a request for deviation shall be documented on Schafer Gear Works' "Request for Deviation Form" and submitted to the Schafer Gear Works Buyer.

If approved, the completed Form shall accompany each container. Product rejected at Schafer Gear Works, and subsequently approved by a "Request for Deviation" shall not be entered on the Supplier's quality record as rejected material (PPM - Parts per Million). Contact the Buyer with the deviation to initiate the Form.

## **RETURN MATERIAL AUTHORIZATION**

The Schafer Gear Works Quality Department will contact the Supplier requesting a return authorization number to return Nonconforming material. The Supplier should respond within 3 days.

## **CORRECTIVE ACTION**

If a nonconformance exists during production, at final inspection, or, an out of control condition occurs (for statistical process control), the Supplier shall invoke 100% inspection on processed product or work in process until corrections are in place and verified effective. Corrective actions shall be documented and available for Schafer Gear Works review. Suppliers who have shipped nonconforming material may be issued a "Supplier Corrective Action Request" (SCAR). This Form will document the nonconformance and specify a time frame for response. The response shall identify:

- Initial Containment/Certification of inventory (raw material, WIP, in transit or finished)

- Root Cause
- Interim Corrective Action
- Verification of Interim Corrective Action
- Preventive Action
- IMMEDIATE ATTENTION AND RESPONSE IS REQUIRED.

If additional response time is needed, a request shall be documented on the SCAR Form and directed to the Schafer Gear Works Quality Department.

It is the responsibility of the Supplier to assure that the quality level of the product meets all of Schafer Gear Works drawing and specifications prior to shipment. It is not the intent of the Schafer Gear Works Quality Department to inspect Supplier material and identify nonconformance. It is our intent, however, that the inspection will reflect the Supplier's quality system is implemented and effective.

If nonconforming material is found during receiving inspection, manufacturing, assembly, or final receiving audit, the supplier will be contacted by a Schafer Gear Works Quality and/or Purchasing representative explaining the nonconformance. It is the supplier's responsibility to travel to the affected Schafer Gear Works location and sort and/or inspect all discrepant material. If the supplier is unwilling or cannot accommodate this request, Schafer Gear Works reserves the right to have the material returned to the supplier or negotiate a disposition to sort, inspect or rework it at the supplier's expense.

If it becomes necessary to have the material sorted at the Schafer Gear Works location, Schafer Gear works Quality and Purchasing Departments shall coordinate the effort as to people, arrival time, and estimated duration. The required inspection and/or rework characteristics shall be identified through the Schafer Gear Works Quality Department. Upon completion, a report will be provided to the Quality Departments detailing (as applicable):

- Nature of the nonconformance
- Cause of the nonconformance
- Corrections taken to preclude the nonconformance from recurrence
- Shipment date of correct product
- Status of product in transit
- Quantity of product sorted.
- Quantity of defective material.
- Arrangement for return of defective material
- Arrangement for replacement of defective material to meet production schedules

## **ON-TIME DELIVERY**

Delivery schedules of purchased product are critical for our systems to work as intended. Therefore, 100% on time delivery is expected to be the standard from our suppliers. Any problems related to missed due dates must be communicated to the purchasing department immediately. Any order late is counted as a miss.

## RECOVERY FEES

Schafer Gear Works believes that it is important to preserve working relationships with its Suppliers/partners while ensuring justified expenses resulting from a quality or delivery problem are recovered. Our management has been given the responsibility to maintain this balance by exercising good judgment in recovering these expenses. Reimbursement of the following categories may be requested from our Suppliers at the full rate shown or at a lesser value (shared responsibility by Schafer Gear Works and the Supplier) as determined by the Schafer Gear Works Purchasing Department. In addition, an administration fee of \$150.00 will be applied to those shipments that do not meet requirements. All related charges, incurred by Schafer Gear Works, due to discrepant and/or late material, will be borne or shared by the Supplier.

## EXPEDITED SHIPMENTS

Expedited shipment charges are used when Schafer Gear Works incurs additional transportation and logistics cost when Supplier failure-to-deliver is imminent and Schafer Gear Works must attempt to complete the scheduled Supplier on-time delivery to avoid late shipment to our customer(s). The Supplier will be debited for the actual cost of the shipment above the normal shipment cost for the scheduled delivery.

## SUPPLIER RATING SYSTEM

SCHAFER GEAR WORKS has developed a rating system to communicate how Suppliers are performing. The rating system will keep suppliers and Schafer Gear Works current on key performance indicators. Rating results will be sent to Suppliers at intervals agreed to between Purchasing and Quality. The rating sheet will specify the time frame (quarterly, monthly, etc.) and become part of a 6-month rolling average.

## SUPPLIER QUALITY INDICATORS

Four rating categories will be graded having a combined total of 100% possible:

- PPM (Parts Per Million) – 30% (actual number after inspection)
- DMR (defective material report) – 30%
- Delivery Performance as a percent – 30%
- Supplier Responsiveness - 10%

### PPM:

PPM is based upon the total number of parts rejected divided by the total parts received multiplied by 1,000,000. The list below will be used to calculate the percentage value.

<u>RATING</u>	<u>PARTS PER MILLION DEFECTIVE</u>
30%	Equal to $\leq$ 500 PPM
20%	Greater than 500 PPM and $\leq$ 1500 PPM
10%	Greater than 1500 PPM and $\leq$ 2500 PPM
0%	Greater than 2500 PPM



If PPM totals more than 2500 in a one-month period, no points will be awarded and Schafer Gear Works may request to audit your facility.

### DMR:

A Defective Material Report (DMR) is the record that may be generated when a nonconformance is found. The list below will be used to calculate the percentage value.

<u>RATING</u>	<u>NUMBER OF DMR'S INITIATED</u>
30%	0
20%	1
15%	2
10%	3
5%	4
0%	5

If a total of more than five corrective actions, in a six month period, no points will be awarded and Schafer Gear Works may request to audit your facility.

### DELIVERY PERFORMANCE

This category's score is based on the "as scheduled" delivery date. The actual delivery will be compared to delivery schedule. Any shipment delivered after the due date is considered late. No penalty is given for shipments that arrive early. Late shipments will be calculated per line item. (40 line items arrived late = 40 late shipments). The percentage of line items delivered on time:

<u>RATING</u>	<u>% ON TIME</u>
30%	100%
20%	75%
10%	50%
0%	Below 50%

### RESPONSIVENESS

Based on consensus of change management board

### SUPPLIER RATING WORKSHEET

SUPPLIER: \_\_\_\_\_ DATE: \_\_\_\_\_

<u>CATEGORY</u>	<u>MAX SCORE</u>	<u>RESULTS</u>	<u>SCORE</u>
<u>PPM</u>	30%	_____	_____
<u>DMR</u>	30%	_____	_____
<u>DELIVERY</u>	30%	_____	_____
<u>RESPONSIVENESS</u>	10%	_____	_____

## SUPPLIER GRADING

Overall Score	Comments
95-100%	Supplier with 95-100% overall performance score for four consecutive months will be granted Certified status.
80-94%	Supplier with acceptable performance rating in all reported areas with potential for improvement. Self-directed improvement activity is advised for Suppliers with the score below 85%
60-79%	Supplier must conduct internal improvement activities documented in SCARs.
Less than 60%	Supplier does not meet minimum performance standards. Over six months with the overall score below 60% will result in presentation of formal corrective action plan to recover. Any award of new business for Supplier with score below 60% must be approved by the Change Management Board.

The Purchasing and Quality Managers shall initiate corrective action to assist the supplier in meeting Schafer Gear Works expectations.

## SHIPPING AND PACKAGING

The Supplier shall insure that products, when complete, are packaged in such a manner as to provide adequate protection against damage, corrosion and contamination. The Supplier shall maintain a system that insures adequate control of the packaging and shipping phase. Bar codes will be pre-approved by Schafer Gear Works to assure compatibility. The use of commercial practices of transport does not relieve the Supplier of responsibility for properly controlling his packaging and shipping functions in a manner that insures acceptance at the delivery point. The contents of each container shall be clearly marked and identified.

Unless other arrangements are agreed upon prior to shipment, Schafer Gear Works preferred transportation method as follows;

- All domestic shipments under 150 pounds shall use UPS ground.
- Ground shipments that are over 150 pounds shall use R+L carriers.
- Schafer Gear Works will inform you if there is a need of expedited shipment
- Schafer Gear Works reserves the right to debit back the cost of different between UPS ground and expedited shipment costs if the expedited shipment was made without SGW approval.
- If the SGW preferred carrier does not serve your area, please contact SGW for alternative options.
- If you consolidate multiple orders into single shipment, the shipment must be individually bagged/boxed with its own packing slip attached to ensure material segregation within the consolidated shipment.
- All shipment documentations must be clearly indicate the information such as purchase order, part number or description, quantity, and date shipped, etc.
- All text shall be human readable.
- Each Box/Container/Pallet should be labeled.

- Packaging shall be sufficient to protect the product from damage during normal shipping / receiving process

Please contact your purchasing agent if you have any questions regarding shipping requirements.

## REVISION HISTORY

Revision	Description	Revision Date	Revised By	Approval Date	Approved By
Original	Released	12/31/2013	Myo Win	12/31/2013	Myo Win
A	Revised for relocation from Fort Wayne to South Bend	09/09/2016	Myo Win	09/09/2016	Myo Win
B	Revised for updating Supplier Rating system and to match SGW practices and AS9100:D.	10/04/2017	Myo Win	10/04/2017	C. Hibschman
C	Added record retention section	12/29/2017	C. Hibschman	12/29/2017	C. Hibschman
D	Multiple changes based on review with team ( changes captured in document)	09/26/2018	R Ellsworth	09/26/2018	Chad Carrico
E	Added Schafer Aviation Products clause	11/29/2018	Chad Carrico	11/29/2018	Chad Carrico
F	Updated right of access to include Schafer customers and regulatory bodies.	12/12/2018	Chad Carrico	12/12/2018	Chad Carrico
G	Re-inserted ethical behavior clause	12/21/2018	Chad Carrico	12/21/2018	Chad Carrico
H	Revised to add flow down requirement for counterfeit risk mitigation	09/08/2022	Myo Win	09/08/2022	Chelsey Hunter