

Net Shaped Solutions

Supplier Quality Manual



Supplier Quality Manual

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QUALITY POLICY

The Employees of NSS recognize that quality is the cornerstone of our business. Through Continuous improvement of our People, Products, Processes and Services, we strive to meet or exceed our customers' expectations.

The Net Shaped Solutions - Supplier Relationship

Net Shaped Solutions is committed to maintaining its position as a Global Leader within the automotive and manufacturing sector. We will continue to be the supplier of choice to our customers, through continued leadership and excellence in innovation, technology, cost, quality and delivery. Recognizing the integral role that each supplier has in the value chain, it is our intent to establish strategic, long-term relationships to bring lasting value and benefit. Those suppliers demonstrating the desire and ability to support us through the appropriate engineering, quality and manufacturing disciplines focused on effective design validation, mistake-proofing, process controls, delivery, service and continual improvement will continue to share in this partnership.

The relationship between Net Shaped Solutions and its suppliers shall be managed to the highest degree of honesty, integrity and professionalism. Our standard of conduct will ensure that we consistently make our decisions based upon optimization of value and sound business principles. We will not allow any undue influence or inappropriate activity to compromise those decisions. We are committed to managing our supply base in a manner that continues to bring shared value, growth and reward.

In support of maintaining a professional business relationship with our suppliers, our Net Shaped Solutions Senior Management encourages an open-door policy to facilitate discussion and resolution of issues through escalation, as appropriate.

Introduction

Suppliers to Net Shaped Solutions are expected to understand and comply with conditions of business as described within this Supplier Quality Manual. These requirements are consistent throughout all our Divisions and Corporate entities of Precision Castparts Corp & Berkshire Hathaway and detail terms and conditions for doing business with Net Shaped Solutions, in addition to those other requirements as detailed in Purchase Orders, Statements of Work and similar documentation.

For purposes of clarification, or in cases of perceived contradiction, you are encouraged to contact the Quality or Purchasing Team within Net Shaped Solutions.

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Net Shaped Solutions Expectations

The foundation of a good relationship with our supply base is premised on open, effective and proactive communication. The occurrence of non-conforming product, unauthorized changes or related supply or capability issues, present risk to both Net Shaped Solutions and to our Customer when not communicated and managed effectively. This risk also generates when these occurrences happen at your Tier 2, 3 or 4 suppliers or sub-contractors.

Our Expectations are as follows:

1. Proactively communicate with your Customer. Know when to raise the “red flag”.
2. Notify the Customer of proposed material or process changes.
3. Notify the Customer of proposed manufacturing location changes.
4. Watch for Divisional issues and tell your Customer about them.
5. Notify the Customer of potential supply and/or capability issues.

The intent of these requirements is to eliminate surprises and special cause events that can impact upon Net Shaped Solution’s Customer. The requirements include ALL suppliers and sub-contractors included as part of the process of manufacturing our components, and it is expected that you will manage your entire company and supply base with these principles.

We consider these requirements as paramount in establishing a relationship of trust with our suppliers, and violation of any requirement will result in escalation to the NSS Purchasing Team and Senior Management within NSS. If deemed necessary, a Supplier’s ISO/IATF Registrar will be contacted and asked to conduct the appropriate investigations and assessments, at the Supplier’s expense. Continued non-compliance could lead to loss of business.

If you are uncertain as to whether Net Shaped Solutions should be notified, you are asked to contact Net Shaped Solutions for guidance.

1. Supplier Communication

Net Shaped Solutions communicates to its suppliers in a variety of ways. The language to be used for all forms of communication, including corporate and day-to-day operations is English.

An essential ingredient to a successful partnership is clear, concise communication. At Net Shaped Solutions, our means of communicating direction, expectations and guidelines may include, but not be limited to:

- Purchase Orders
- Supplier Performance Data / Annual Scorecards
- Letter of Intent
- Sourcing Commitment Documentation
- Statement of Work
- Memos, Emails, Phone Discussions
- Scheduled Meetings
- Supplier Quality Manual
- Communication of customer / NSS specifications / requirements
- Feasibility Form
- Communication of Quality or Delivery issues or notifications
- Audits

Revisions will be made to this manual, as appropriate.

2. Supplier Selection

Using a risk-based model, NSS shall determine a minimum acceptable level of QMS development and target QMS development level for each supplier. For higher risk suppliers to become approved, a Non-Disclosure Agreement and Supplier Audit shall be completed. For new parts, feasibility is requested and for special processes (Heat Treat or Plating), annual CQI-9 or CQI-11 are required.

In those cases where sources are directed by Net Shaped Solutions Customer, for a specific part or commodity, all directed sources shall be obliged to meet all requirements as detailed within this Supplier Manual.

3. Current Suppliers

Current Suppliers listed within Net Shaped Solutions Supplier Management, must continue to meet performance objectives of Net Shaped Solutions. Supplier performance will be monitored as specified in the “Supplier Performance Monitoring / Evaluation” section whereby these performance measures will serve as the basis for future sourcing decisions.

All suppliers are requested to provide:

- 1) A Supplier profile consisting of general information and company contacts
- 2) A Confidentiality agreement (NDA)
- 3) A Completed supplier audit (F-PUR-006)
- 4) A Supplier acknowledgement form (on last page of this manual)

The Supplier will provide documents required by this manual to Net Shaped Solutions as requested.

QMS IATF16949 / ISO9001 and Environmental ISO14001 Certification

IATF 16949:2016 contains specific requirements for developing suppliers. Because NSS is a registered company, the following are required for suppliers:

1. Require suppliers of automotive products and services to develop, implement, and improve their quality management system (QMS). For eligible organizations, the ultimate objective is becoming certified for IATF 16949:2016.
2. Use a risked-based model to define the minimum acceptable level of QMS development for each supplier. Unless otherwise authorized by the customer, the minimum acceptable level should be a QMS certification for ISO 9001.
3. Guide suppliers through the QMS process based on performance and the potential risk to the customer:
 - o ISO 9001 certification is gained via a third-party audit by a member from the International Accreditation Forum Multilateral Recognition Arrangement. The accreditation's main scope of expertise includes the IOS/IEC 17021 management system certification.
 - o ISO 9001 certification should comply with other QMS requirements defined by the customer via second-party audit.
 - o ISO 9001 certification should comply with IATF 16949 as well via second-party audit.
 - o IATF 16949 certification is gained via a third-party audit by an IATF certified body.

The prioritization of suppliers for development depends upon, for example the supplier's quality performance and the importance of the product supplied and risk rating.

Suppliers shall have effective environmental management, which ensures compliance with respective applicable environmental regulations, and improves continuously and efficiently the environmental conditions of the supplier. The supplier shall show commitment to environmental protection by implementing an environmental management system. Suppliers operating foundries, galvanizing and paint shops, or performing any surface treatment using chemicals or dyes, resins, etc. grease and oil shall provide ISO 14001 or equivalent system.

4. Purchasing

Purchase Order / Letter of Intent

Net Shaped Solutions will issue purchase orders to suppliers for awarded programs. In advance of receipt of purchase orders, suppliers to Net Shaped Solutions may receive a letter of intent (LOI) from the Purchasing Department providing the following information pertaining to Supplier conditions, requirements, and responsibilities:

- Design, development, prototype and production source award.
- Pricing
- Packaging (Expendable and Returnable)
- Tooling design and timing
- Freight and Customs
- Pre-Production Activity
- Cost Reduction
- Currency
- Feasibility

It is Net Shaped Solutions intent that the supplier be the product supplier for the related program provided the supplier meets commercial, design, program support, quality, and delivery requirements.

Where Net Shaped Solutions or OEM dictated program changes necessitate adjustments to the purchase order or LOI, the Supplier will be required to quote and substantiate such adjustments.

Suppliers will be required to conform to Net Shaped Solutions and/or OEM tooling documentation and audit requirements. Net Shaped Solutions reserves the right to audit tool costs incurred by the Supplier in support of awarded programs. Such an audit may include, but not be limited to, a review of quotes, purchase orders, invoices, and other documentation.

Note: When a PO is sent to the supplier, an acknowledgement of receipt is required. In the case of having no response for a total 3 business days, the purchase order is considered as accepted.

Statement of Work

Suppliers will receive a copy of the applicable program Statement of Work (SOW) issued to prospective suppliers for applicable programs. Suppliers will be expected to fulfill all applicable elements of the SOW. The requirements outlined in the SOW are consistent with the OEM expectations of Net Shaped Solutions and reflect a cascading of these expectations to Tier II – III & IV suppliers.

Product / Program Changes

Net Shaped Solutions will not accept cost increases during product launch due to process-oriented developmental changes that are necessary to meet the design requirements (e.g. under-bid). Suppliers will be reimbursed only for approved costs associated with product/program changes mandated by Net Shaped Solutions or the OEM.

If Net Shaped Solutions initiates product/program changes that result in reduced production tooling or manufacturing costs, Net Shaped Solutions would expect piece price or tooling costs to be reduced to reflect the entire amount of the reduction.

Quotation Response Requirements

When Net Shaped Solutions is considering a product or program change, a Request for Quote (RFQ) will be generated and forwarded to the supplier.

Suppliers are expected to respond to Net Shaped Solutions by the due date identified in the RFQ, with documentation as defined by the initiator. Failure to meet expectations established within the RFQ, including timing, cost breakdowns and similar detailed requests, may result in new business hold or removal from the Approved Supplier List.

Manufacturing Process

If the supplier's manufacturing process assumptions are based on new technology, or processes new to the supplier, they must document how and when the processes will be proven out in a pilot program prior to production launch. The pilot program must provide for the manufacture of a sufficient quantity of parts so that your program production launch curve is based on the experience of the pilot program rather than unproven assumptions.

If a pilot program cannot be accomplished, the supplier must detail a back-up manufacturing plan based on proven processes. The back-up plan would be implemented if problems were encountered in the launch of the new technology or processes that may jeopardize supply of products to Net Shaped Solutions.

Supplier Performance Monitoring

Supplier performance is monitored via Net Shaped Solutions *Supplier Performance Management Report*. Scorecards will be issued on an annual basis. Performance ratings are based on the following guidelines:

QUALITY RATING CRITERIA

Criteria	Deductions	Max Demerits
Customer Disruption	-5 each issue (-10 Repeat)	25
NSS Issues	-2 each issue (-5 Repeat)	25
Responsiveness (CAR etc)	-5 ea late or rejected CAR or non-responsiveness	25
PPAP Performance	-1 late or lacking info	7
PPM	-1 each 25 over 50	12
Compliance	-1 ea Requirement lacking	6

(Contribution to Overall Rating = Score X 0.4)

Customer Disruptions	Any Prototype, Pre-Launch, Launch, Production or Service Quality issues incurred by Net Shaped Solution's OEM Customer attributable to a supplier caused or related issue that causes customer disruption / issue.
NSS Issues (Internal)	Any Prototype, Pre-Launch, Launch, Production or Service Quality issues incurred by Net Shaped Solutions attributable to a supplier caused or related issue.
CAR Responsiveness	Supplier responds to a Net Shaped Solutions request for corrective action, for a quality discrepancy, within the specified timeframe. Initial response is to be received within 24 hours and a Permanent Corrective Action is to be received within 15 working days.
PPAP Performance	PPAP submissions that are submitted past the Program Date as reflected in the Net Shaped Solutions APQP process.
	PPAP submissions that are rejected by Net Shaped Solutions for reasons including but not limited to incomplete, insufficient data, incapable processes, dimensional errors etc.
PPM	The total parts per million based on rejects from Net Shaped Solutions. Calculation is based on actual number of parts or items rejected against the total number of receipts for that part.
System Compliance	Supplier has a valid ISO 9001 or IATF16949 or VDA "Latest Revision" Certificate as issued by an accredited Registration Body. The Supplier has the responsibility to report to Net Shaped Solutions, any revocation or probation extended against the registration. Current CQI-9 / CQI-11 where applicable

DELIVERY RATING CRITERIA

Criteria	Deductions	Max Demerits
On Time/Premium Freight	-50 if late more than 5 times in half -5 each occurrence -25 if bad service	100
Responsiveness	-5 per late or no response	25
Compliance	-5 truck – label - paperwork	25

(Contribution to Overall Rating = Score X 0.4)

On-Time Delivery/Premium Freight	Prototype, Pre-production and Production shipments are received at Net Shaped Solutions within the delivery window specified, utilizing normal production freight (no premiums).
Responsiveness	Supplier responds to Net Shaped Solutions request for corrective action, for a shipping discrepancy, within the specified timeframe. Initial response is to be received within 24 hours and a Permanent Corrective Action (Plan) is to be received within 15 working days.
Label/Packaging Compliance	Packaging and labeling on all prototypes, production and service product must be labeled as per AIAG specifications and requirements as defined by Net Shaped Solutions.

SERVICE RATING CRITERIA

Criteria	Deductions	Max Demerits
Communication/Documentation	-5 per issue =15 if communication is avg =20 if exceptional	20
Cost	50 if constant – 25 if increase >50 if price drops	70
Compliance (Terms & Conditions)	-5 if non-conforming to corporate terms	10

(Contribution to Overall Rating = Score X 0.2)

Document Compliance	Supplier has met requirements for completion of documentation required by NSS including Request for Quotes, Purchase Order acknowledgement, Shipping Orders etc. and communication is consistent to NSS.
Cost	Supplier keeps cost consistent to get 50 pts Supplier increases cost to lose 25 points Supplier decreases cost to gain 25 points
Compliance	Supplier is compliant with terms and conditions and any other designated requirement from NSS.

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Supplier performance data is monitored closely and is integral to sourcing decisions. In the event a Supplier exhibits chronic performance issues, or systemic deterioration of key performance metrics, they may be requested to attend a Supplier Performance Review Meeting with Net Shaped Solutions. It will be incumbent upon the Supplier Senior Management to present to Senior Divisional Management, the Supplier's plan to address the systemic drivers to deteriorating or unacceptable performance levels.

Premier	90+	Will receive RFQ for all new business
Preferred	75 - 89	May receive new business
Probationary	60 - 74	Not eligible for new business
Problem	<60	May lose existing business

5. Supplier Continual Improvement

Net Shaped Solutions promotes the effective use of statistical applications and we direct that our Suppliers monitor the performance of their processes, through appropriate techniques including Pp, Ppk, Cp and Cpk. Statistical tools, when combined with Process Audits, shall provide the data necessary to support Continual Improvement. Evidence of these activities shall be supported by maintaining records for a two-year period, at minimum, or as otherwise dictated by Record Retention Policy. Records shall be available for review by Net Shaped Solutions, upon request.

6. Control of Inspection Fixtures, Measuring/Test Equipment

Monitoring

The supplier must have a documented system in place to control, calibrate, and maintain the proper function and an accepted level of gage repeatability and reproducibility of all inspection fixtures, measuring / testing instruments and equipment.

Updating Instructions

Operator instructions must be displayed at every inspection station with a gage, describing the proper methodology for use in inspection. These instructions must include a reference to the gage identification number, and revision level, and be approved by appropriate plant management. Whenever there is any change to the inspection procedure that affects the use of the gage, or when any identification information is revised, the operator instructions must be updated to reflect the current status.

Calibration

Measuring equipment shall be calibrated or verified at specified intervals. The calibration certificate must be on file at the supplier's facility, and be traceable to the actual gage identification information. Internal and external calibration services must have a defined Lab Scope and be accredited to ISO/IEC 17025 or national equivalent or be approved by Net Shaped Solutions.

Equipment Identification

All gages and test equipment must have an identification tag affixed reflecting the gage identification number, the gage revision level, the last calibration date, the calibration expiration date and OEM owned checking fixture (clearly & permanently indicated).

Inspection, Measuring, and Test Equipment Records

Records must include any revision information, traceable to the part revision level, demonstrating conformance to applicable standards, the OEM customer specific requirements, and corrective action taken where applicable.

Measurement System Analysis

Gage R&R acceptance criteria must conform to the requirements of the latest released edition of the AIAG Measurement System Analysis manual.

Record Retention

Suppliers are expected to maintain applicable retention periods as specified in applicable standards, unless superseded by legal, governmental, Net Shaped Solutions or Customer Specific Requirements.

GD&T

Suppliers are expected to build to meet the customer's engineering specifications, unless superseded by a NET SHAPED SOLUTIONS GD&T.

7. Packaging & Labeling

Upon launch of a new product, the supplier must receive approval from the Manufacturing Departments at Net Shaped Solutions, prior to Run @ Rate, in order to ensure planned packaging fits with Net Shaped Solutions practices. A signed approval must be uploaded with the PPAP submission as a record.

A completed Supplier Packaging Form must be submitted to Net Shaped Solutions for approval of all new packaging or proposed changes to existing packaging. Approval must be granted prior to the first production shipment. Packaging is also a requirement of the PPAP Submission package.

Returnable Containers

Returnable containers are the primary packaging method considered on new programs. On an individual basis, packaging engineering will assess current production part packaging feasibility using returnable containers. Suppliers are encouraged to review conversion to reusable containers and contact the Packaging Engineer or Buyer.

Net Shaped Solutions has developed and implemented returnable containers with many suppliers. As a result, specific styles of containers best suited to shipping, storage and manufacturing requirements have been identified.

Any inquiries regarding packaging may be submitted to the Packaging Engineer or buyer at Net Shaped Solutions. Any deviation from agreed upon packaging shall be signed off by NET SHAPED SOLUTIONS Purchasing and Materials Department.

Labeling

All materials for prototype or production consumption, shipped to Net Shaped Solutions, must be identified with human-readable.

8. APQP

Requirements and specifications shall be communicated, and Feasibility shall be assessed when quoting when new work or updates to existing work.

PPAP requirements will be communicated to supplier and an APQP kick-off meeting will be scheduled if necessary, upon business award. Personnel representing the Supplier program management and quality assurance shall participate to establish and outline APQP requirements, timetables, and contacts. All immediate technical concerns must be addressed at this time. For material and heat treat or plating processes this can be accomplished by a conference call between NSS & the supplier.

The PPAP submission is a validation that the production process meets the customer and NSS specification and requirements. The expectation is that by the PPAP date all issues are resolved. PPAP dates are determined between the supplier and the NET SHAPED SOLUTIONS. If the supplier is unable to meet the PPAP date determined, the supplier is required to notify the NET SHAPED SOLUTIONS one week prior to due date.

It is the responsibility of all suppliers to ensure that their subcontractors are meeting similar expectations and requirements as well.

Suppliers must submit Level 3 PPAP requirements, as defined in the APQP, unless specifically directed otherwise by Net Shaped Solutions.

For OEM directed suppliers, prior OEM Approval does not negate the need for initial submission or for annual validation, to Net Shaped Solutions. All suppliers shall maintain annual validation PPAP, as determined by the date of the original PPAP submission, not the original approval date.

For suppliers with reporting requirements as defined by IMDS Standards, IMDS documentation shall be part of the Supplier's PPAP requirement. The IMDS number should be included on the Warrant at time of submission. Failure to comply will result in rejection of the PPAP Submission.

For dimension or product requirements that do not meet specification, the Supplier shall obtain approval as documented on a "*Supplier Request for Deviation or Change*" (SDRC) prior to submitting PPAP. The signed authorization must be included in the submission. Failure to comply will result in rejection of the PPAP Submission.

A Corrective Action Report will be required for PPAP submissions that are:

- Rejected for non-compliance
- Rejected for non-conformance

Critical characteristics shall be identified either on the part drawing, or on separate documents as detailed in the Statement of Work. Suppliers shall be required to establish, validate and maintain acceptable short and long-term capability on all critical

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characteristics. Net Shaped Solutions will communicate the appropriate method of critical characteristic designation (SC, CC, G etc.)

- Run-at-Rate (R@R)

All production processes are required to have a completed Run-at-Rate package submitted with the PPAP. Depending upon the level of risk associated with the Supplier and Part Number, the R@R may be observed, on site, by Net Shaped Solutions. If deemed to be low risk, by Net Shaped Solutions, the Supplier will complete the R@R without the presence of a Net Shaped Solutions representative.

Run-at-Rates must be conducted on the production process. The OEE results of the R@R must be “0” or “Positive”. Submission of a “Negative” OEE result, without an approved Corrective Action Plan, will result in rejection of the PPAP.

- Lubricants

The presence of oxidation, resulting in rust on any raw material and/or component part is unacceptable.

Prototype Supplier Requirements

Suppliers of prototype parts or material shall submit to Net Shaped Solutions, the following documentation:

- Inspection and findings for all features, dimensions and specifications shown on the print from NSS. A Deviation Request must be submitted to the Quality team for any nonconforming product. A failure to do so could result in excessive process / product cost associated with the defect.
- Other inspection or testing as required in writing
- Control Plan
- Material certifications for each lot of material & 3rd party material certifications

Early Production Containment

The purpose of Early Production Containment is to document the supplier's efforts to gain control of its processes during start-up and acceleration, so that any quality issues that may arise are quickly identified and corrected at the supplier's location. This can be waived by NSS if determined that the process is matured on prior product.

The supplier MUST develop a system to verify and certify every shipment during the launch period until 90 days of clean inventory is obtained. This may include but not limited to:

- Visual (100%) –
- Dimensional – at a minimum 3 piece layout per shipment per part number is required. Supplier shall define characteristics & method.
- Containment Records – must be maintained throughout the launch (available upon request).
- Testing – if required, Suppliers to define characteristics & method.
- Mixed Parts – parts verified as correct.
- Product during the launch period will be classified as “Certified Material”, and shall be identified as such;

Issues during this period and regular production activities shall be controlled by a Quality Alert. If the supplier is issued a Quality Alert during the launch period – that information shall be added to the containment inspection criteria. The QA number and brief description shall be added to the certified material tag.

Failure to contain issues during the launch period may result in 200% containment at the Suppliers expense. The supplier may be issued a Supplier Chargeback, in which the supplier will be provided authorization form to sign. Failure to resolve nonconforming product issues which result in recurrences and/or process downtime could result in 3rd party containment in the Suppliers facility, at the Suppliers expense. The 3rd party would certify product before shipment to NET SHAPED SOLUTIONS, until permanent countermeasures are proven effective.

The period for Early Production Containment will be specified by quantity or a time period and shall be communicated from the Net Shaped Solutions Quality team. 90 days or 3 shipments is typical.

Pass Through Parts

Per Customer Specific Requirements

9. Materials Planning

Suppliers will be issued either Purchase orders stating due dates (on dock) and quantities required, or production material requirements as need dictates. It is the responsibility of the Supplier to immediately contact Net Shaped Solutions in the event they are unable to meet any requirements for delivery date, time, quantity and quality.

Forecasting

Material forecasting information will be communicated to the suppliers through the scheduled releases. While this information is an indication of future material requirements, it is not considered binding on the part of Net Shaped Solutions, unless supported by a specific purchase order.

Suppliers shall maintain the ability to absorb a 15% volume increase at all times. Suppliers may be requested to maintain sufficient safety stock and finished goods inventory to accommodate 100% on-time delivery, if applicable to the product, process or service they provide. Short shipments must be communicated immediately, along with a corrective action and recovery plan.

Suppliers need to maintain an effective contingency plan, in order to mitigate undue risk to Net Shaped Solutions, in the event of utility or labor disruption or equipment failure. The intent of the contingency plan is to reasonably protect the procuring division from disruption of supply in the event of an emergency.

Service Parts Requirements

Suppliers with production contracts with Net Shaped Solutions, must maintain the ability to provide after-market and service components for a period of ten years (or as specified by customer) following the end of program or production for individual components or assemblies, or for such longer or shorter period of time as stipulated by Net Shaped Solutions respective OEM Customer for the Program, if so communicated to the Supplier. The Supplier has the responsibility to maintain any tooling and/or assembly equipment in condition sufficient to support service requirements. Service schedules and pricing shall be determined in negotiation with Net Shaped Solutions.

10. Transportation

It is important that our suppliers are aware of transportation and delivery requirements, as it is one of the key performance metrics upon which they will be assessed. Net Shaped Solutions supports the industry initiative of inventory reduction, recognizing however the importance this places on accurate and timely delivery of quality product. It is our expectation that suppliers will deliver 100% on time to our locations, in compliance with scheduled requirements.

Schedules, Routings & Carriers

All trucking, routing & delivery schedules are specified by schedule via release. This routing will be set up thru NET SHAPED SOLUTIONS Materials and/or Purchasing Department prior to the first shipment. It is the sole responsibility of the supplier to maintain and reconcile cumulative requirements.

Late Deliveries

It is the supplier's responsibility to meet scheduled requirements per release. If Supplier fails to meet scheduled requirements, it will be the Supplier's responsibility to schedule logistics/expedite in order to prevent line interruption. If supplier fails to meet the scheduled requirements by due date, then any and all costs incurred as a result of a line interruption will be clearly the responsibility of the supplier and shall be recovered from the supplier.

Packing Slips & Documentation

It is a requirement that all material shipped be identified on a Packing Slip or Bill of Lading. While individual division specifications may differ, the information typically required includes:

- Shipment date
- Invoice/Packing Slip number
- Address Sold to
- Address Shipped to
- Individual line item for each part number shipped
- Part Number and Part Description
- Purchase Order number and line, for each part number
- Quantity ordered & Quantity shipped
- Number of cartons/skids/containers shipped
- Total number of cartons/skids/weight
- Certifications shall be batch / part specific

11. Corrective Action Reporting

This system is designed to prevent the use of suspect and/or nonconforming purchased material. Purchased components found to be nonconforming through either line rejections, testing / audit failures, failed inspection results, customer concerns and customer returns or obsolete material are handled through the following procedure:

- Supplier will be notified of the concern via telephone and/or electronically. All relevant containment actions shall be handled within twenty-four (24) hours. If not possible, must communicate and make plan with NSS / customer. Added cost will be tracked for chargeback.
- Supplier shall acknowledge receipt of the issue
- Quality issues and responsiveness will be reflected on the supplier ratings

(Note: Should a response not be received from a supplier, any stated charges associated with the notice will be considered accepted by the supplier.)

- A corrective action (CAR's) report is required to address the concern and must be received within the following time frames:
 - Initial response within 24 hours describing containment.
 - 15-working days (unless otherwise approved) for completed CAR's.
 - 8D shall be submitted to NSS or supplier shall work with NSS to complete customer 8D. Review and agreement shall be provided.

(Note: The CAR's must be received, citing as a minimum; containment actions, root cause(s) analysis and permanent/preventative actions planned as well as verification of the above.)

Terms (length of time charges can be applied and factors such as sort costs and methods of calculation) of any costs charged to the supplier as a result of a quality concern are determined by the Net Shaped Solutions Quality Team.

Charges that could be applied to a quality concern are as follows:

- NSS sort of supplier product at our plant until certified stock arrives
- Production line shutdown
- Finished product sort and/or scrap of material
- Any material transfer of nonconforming supplier product
- Quality Department time for problem investigation
- Testing if required
- Any sort/rework charges incurred by Net Shaped Solutions
- Related transportation expenses
- Any costs incurred by the Net Shaped Solutions for disruption of customers
- \$150 administration fee

All charges incurred by the supplier will be discussed and approved through the Quality & Purchasing Personnel of Net Shaped Solutions and the designated personnel of the supplier facility.

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The supplier will receive notification of the chargeback's through a Supplier Chargeback Form. Supplier must dispute charges in 10 working days or NSS will automatically consider charges accepted.

It is the responsibility of the supplier to notify Net Shaped Solutions in the event there is reason to believe that a nonconforming condition of supplier components exists in Quality, Delivery, Warranty or other.

Notification must be followed by:

- Immediate action within 24 hours (e.g., new materials, etc.)
- Interim corrective action, containment; response time of 24 hours

Controlled Shipping

When directed by the Net Shaped Solutions, suppliers may need to certify product after a lot rejection has occurred, at the Supplier's Expense. Usually, two types of controlled shipping actions are employed when this situation occurs:

- Supplier conducted sort and certification of subsequent part shipments, and
- Third party sorting and certification

All controlled shipping actions are the responsibility of the supplier to coordinate and follow-up on. Parts supplied to Net Shaped Solutions must meet released quantities without supply interruption.

The supplier and Net Shaped Solutions will, mutually, define the certified material identification.

Corrective Action Reports will be issued for both non-complying material as well as non-compliance to requirements and standards. Repeat Non-Compliance Reports for the same failure modes may be charged double the normal Administration Fee.

12. Engineering Changes

Suppliers are required to obtain approval prior to shipping any material for which a deviation from specification is required. The supplier shall submit a Deviation Request to Net Shaped Solutions, detailing the required deviation(s). Once approval is received the D.R. should be forwarded to the Net Shaped Solutions Quality group.

Material can be shipped only after an Accepted Deviation number has been issued. The A.R. number must be indicated clearly on all shipments of material.

FIRST SHIPMENTS OF ALL MODIFIED PRODUCT MUST BE CLEARLY IDENTIFIED AS DIRECTED BY NET SHAPED SOLUTIONS.

13. Lot Traceability

The supplier shall follow Net Shaped Solutions traceability method Material must be traceable from receipt of raw material, to each processing stage and through final assembly and shipping to Net Shaped Solutions and our customer.

A container should contain a specific quantity of parts and lots/heats should be kept separate during processing.

Other documented methods of lot control may be submitted for Net Shaped Solutions approval.

The supplier shall ensure implementation and management of an effective FIFO method of stock rotation.

Failure to comply with traceability requirements may lead to rejection of material and issuance of non-conforming material reports. Traceability Records shall be maintained and accessible for the life of the product, including Service, plus one year. Certain traceability record retention deviations can be obtained only if received in writing from your Net Shaped Solutions.

14. Confidentiality and Non-Disclosure

Suppliers are reminded that all engineering and purchasing information generated as a result of business with Net Shaped Solutions, is strictly confidential. Suppliers are prohibited from sharing any Net Shaped Solutions technical or cost data without prior, written authorization from their Purchasing Buyer.

Suppliers are required to sign the Net Shaped Solutions Non-Disclosure Agreement (NDA) prior to business award.

15. Audits

Second-party audits may be used for:

- Supplier risk assessment
- Supplier monitoring
- Supplier QMS development
- Product audits (received parts at NSS)
- Process audits

The frequency and scope of audit will be based on risk analysis, including product safety / regulatory requirements, performance of supplier, and QMS certification level. A third party auditor or customer may conduct audit with cooperation of NSS.

Associated Business Conditions

Additional situations may arise, from time to time, that are not specifically addressed in other sections of this manual. They will be noted in this section.

- Net Shaped Solutions and its customers expect to have access to supplier facilities and records at reasonable times for the purposes of surveys, assessments, inspection of goods and associated control systems.
- Suppliers must be willing to extend the benefits of cost reduction efforts with Net Shaped Solutions.
- It is expected that a target for compliance of zero discrepancies be set for all goods and services to be supplied to Net Shaped Solutions.
- Warrants and certification requirements will be stated on Net Shaped Solutions purchase orders. Independent annual validations for raw material are to be carried out by an accredited testing facility and be Independent if required by Net Shaped Solutions.
- Suppliers will be held accountable for poor quality costs due to negligence, and /or process issues.
- The ability or willingness of suppliers to provide additional documents upon request by Net Shaped Solutions Purchasing Department will be taken into account during the supplier selection process.
- Suppliers will be accountable for all costs associated with an interruption in material supply to Net Shaped Solutions resulting in a shutdown, due to labor, utility disruptions or equipment failures. All suppliers must have a contingency plan to mitigate risk.

Net Shaped Solutions

Supplier Quality Manual

Record of Revisions

New Revision Level	Page #	Description of Change	Modified by
01		Initial Release	
02	5	Added to communication (e.g. Feasibility)	
	6	Added environmental requirements	
	7	Added Feasibility	
	9	Added detail for scoring Scorecard	
	20	Added 8D for Corrective Action	
		Add administration fee	
	23	Added section 17	
03	3	Added Quality Policy	
	6	Changed "TS" to "IATF"	
04	3	Supplier Performance Monitoring: Updated ratings to align with Scorecard Form	
05	1	Added language	Amy Kahanec
		Updated Acknowledgement Form	
06	4	Change "supplier quality" to quality	
	5	Changed "forever requirements" to expectations	
	6	Removed Profile & Confidentiality	
	9	Added clarification for launch	
	18	Changed from "will be" to "may be"	
	19	Consideration for safety not (not required if does not apply)	
	20	Added requirement for certs to be part / batch specific	
	8	Added note about acknowledgement if there is no response	Roberto Tellechea
	19	Clarified that a requirement is sent through a PO in most cases	Roberto Tellechea

ACRONYMS

LOI	LETTER OF INTENT
SOW	STATEMENT OF WORK
OEM	ORIGINAL EQUIPMENT MANUFACTURER
RFQ	REQUEST FOR QUOTE
CAR	CORRECTIVE ACTION REQUEST
APQP	ADVANCED PRODUCT QUALITY PLANNING
PPAP	PRODUCTION PART APPROVAL PROCESS
EDI	ELECTRONIC DATA EXCHANGE
AIAG	AUTOMOTIVE INDUSTRY ACTION GROUP
GD&T	GEOMETRIC DIMENSION & TOLERANCING
R@R	RUN-AT-RATE
WHMIS	WORPLACE HAZARDOUS MATERIAL INFORMATION SYSTEM
IMDS	INTERNATIONAL MATERIAL DATA SYSTEM
SDRC	SUPPLIER REQUEST FOR DEVIATION OR CHANGE
OEE	OVERALL EQUIPMENT EFFECTIVENESS
QN	QUALITY NOTICE
JIT	JUST IN TIME
ASN	ADVANCED SHIPPING NOTICE
FIFO	FIRST IN, FIRST OUT
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS

APPENDIX A – FORMS

FORM TITLE	PAGE
1. SUPPLIER ACKNOWLEDGEMENT FORM	33

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SUPPLIER ACKNOWLEDGEMENT FORM



Net Shaped Solutions, is dedicated to the manufacturing of a defect free parts. As a supplier to Net Shaped Solutions, you are an intricate part of this process.

One of the key steps to the success of any process is a clear understanding by all players involved, as to what their part is in obtaining and maintaining this objective. Please review the Net Shaped Solutions Supplier Quality Assurance Requirements Manual to gain a complete understanding of Net Shaped Solutions' expectations and their supplier's requirements in this objective.

Net Shaped Solutions requests all suppliers to complete this acknowledgement form and return within 10 days of receipt.

By signing this document, the supplier acknowledges that they have read, fully understand their obligations and will comply with all of the requirements as stipulated in the Net Shaped Solutions Suppliers Quality Assurance Requirements Manual.

Distributed By: _____ Dated: _____

Supplier: _____

Address: _____

City, State, Zip: _____

E-mail Address: _____

Phone number: _____

Fax Number: _____

Supplier Quality Manual Revision Level: 06

Acknowledgement Signatures:

Supplier Quality Manager: _____ Dated: _____

Supplier Engineering/Sales Manager: _____ Dated: _____