

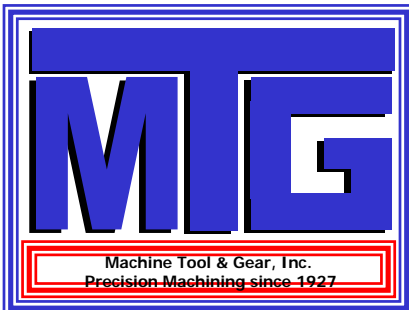
Newcor Precision Machining Group Supplier Quality Manual



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8/19/09

1.0 Preface

At Newcor Precision Machining Group, we have a total dedication and commitment to continual improvement in everything we do. Continual improvement has become a way of life through a comprehensive quality operating system. Quality is an obsession as we continually strive for unprecedented levels of customer satisfaction.

In order for Newcor Precision Machining Group to be successful in our continual improvement efforts, we are dependent on you, our key suppliers. Your total commitment to never ending improvements in quality and productivity will allow us to reach our common goals.

The intent of this manual is to communicate uniform quality expectations to our key suppliers of production material and to provide general instructions and guidelines for conducting business with Newcor Precision Machining Group.

2.0 Environmental Commitment

It is Newcor Precision Machining Group's policy to operate its facility and processes in an environmentally responsible manner. We are committed to an environmental management system in which we seek to continually improve our processes and materials in order to reduce environmental impacts associated with our work. Our company subscribes to the following core principles:

- Comply with international, federal, state, and municipal laws (including labor) and customer requirements.
- Design, manufacture and distribute products in an environmentally sound manner.
- Continually seek opportunities to improve our management systems in order to achieve our environmental objectives and the prevention of pollution.
- Communicate our policy to employees and as appropriate, to the public.

It is the expectation that all suppliers understand and follow our environmental policies and standards. Upon entry of any Newcor Precision Machining Group facility, all suppliers are required to sign in and out each time they visit. Suppliers are required to remove all tools, supplies, and waste brought into any facility.

All suppliers are encouraged to seek compliance and registration to the ISO 14001 Environmental Requirements (this may already be a customer-specific requirement for companies that are direct suppliers to General Motors, Daimler Chrysler, or Ford Motor Company). Suppliers that are registered to ISO 14001 will provide a copy of their current registration certificate.

3.0 General Requirements

3.1 Supplier Expectations

All key suppliers of automotive production materials, components or services must have, or develop a documented quality system that meets the requirements of ISO 9001:2008 or ISO/TS 16949:2009. Suppliers of special processes such as heat-treating, plating, or coatings shall also submit their AIAG CQI self survey. All suppliers are encouraged to seek compliance and registration to the ISO 14001 Environmental

Requirements (refer to section 2.0). AIAG Global MMOG/LE is encouraged as a guide to maintain an orderly delivery system.

Compliance to the requirements outlined in this supplier quality manual is a condition of conducting business with Newcor Precision Machine Group. This supplier quality manual is made part of the purchase order terms and conditions for all production materials, components and services, unless specifically excluded on the face of the P.O.

3.2 Confidentiality

All Newcor Precision Machining Group documents and other information exchanged with the supplier in order to conduct business shall be considered confidential and shall not be shared with any other company or organization without permission. Such information includes, but is not limited to pricing, drawings and specifications, technical data, equipment and process information, etc.

3.3 Contingency Plan

The organization shall prepare a documented contingency plan for safeguarding Newcor Precision Machining Group product requirements in the event of an emergency such as utility interruption, labor dispute or process failure. Upon request the organization shall provide a copy of their plan to Newcor Precision Machining Group.

3.4 Control of records

All records shall be kept per the ISO/TS standard and AIAG reference manuals.

3.5 Management's Responsibility

When a supplier's representatives change the Newcor Precision Machining Group Quality Manager and Purchasing Manager must be notified by updating the Supplier Information Sheet (Appendix B).

4.0 Product Realization

4.1 Advance Product Quality Planning

All suppliers are expected to have a formal system for advanced product quality planning for new product development. This system must utilize the AIAG: Advanced Product Quality Planning and Control Plan, APQP, as a guideline for APQP activities. For all new programs a timeline is required outlining the major milestones of the program and all key APQP activities. Newcor Precision Machining Group quality and purchasing departments will communicate additional requirements. See Appendix - A for a list of the AIAG Manuals used to implement these requirements.

Newcor Precision Machining Group suppliers must have CAD file translation capability compatible with AutoCAD 2000 or Solid Works (7.2.3.1).

Suppliers of automotive OEM components or materials must be capable of receiving 830 EDI release requirements from Newcor Precision Machining Group and transmitting

ASN (Advanced Shipping Notification) to Newcor Precision Machining Group, or have submitted an approved plan for compliance (7.2.3.1).

Suppliers must supply a letter of compliance that their product meets all governmental and state regulations for health and safety constraints on restricted, toxic, and hazardous materials, as well as environmental, electrical, and electromagnetic considerations. An ELV material data sheet or IMDS (www.mdsystem.com) and NAFTA country of origin certificate will be required with each production part approval process (PPAP) submission (7.2 & 7.4.1.1).

Suppliers are required to have an established delivery system and the resources to insure 100% on-time delivery while responding to Newcor Precision Machining Group schedules.

Newcor Precision Machining Group and our customers reserve the right to conduct an on-site review of a supplier's facilities, including but not limited to, the organizational structure and overall policies pursuant to quality assurance and material control issues (7.4.1.2).

Material certification must be supplied with each shipment upon request (7.4.2.1).

Suppliers must have ability to submit statistical verification of conformance to special characteristics upon request (7.3.2.3).

Suppliers may be required to submit an annual design revalidation, as directed by Newcor Precision Machining Group. Annual revalidation of all Ford and Chrysler parts will be required (8.2.4.1).

4.2 Quotation Requirements

Responses to requests for quotations are to be completed utilizing the Newcor Precision Machining Group RFQ form in its entirety (see Appendix D), or an alternate format approved by Newcor Precision Machining Group. All RFQ content must be included in the quotation (7.2.2.2).

All quotations are considered firm upon submission. Quoted price is expected to remain firm for the duration of the program, with annual productivity improvements.

Any deviations from drawings or material specifications that you perceive necessary to your production of quoted parts should be reported in writing immediately to the appropriate Newcor Precision Machining Group contact.

Packaging is the responsibility of the supplier, unless otherwise specified. Newcor Precision Machining Group concurrence with packaging is required, unless otherwise notified. Packaging costs must be included on the RFQ form.

All costs associated with PPAP submission and all ongoing quality statistical requirements specified in this manual must be included in the quote.

4.3 Special Characteristics (7.2.1.1 & 7.3.2.2)

Special characteristics are product characteristics in which the anticipated variation is likely to significantly affect the fit, form, or function of the product. Newcor Precision Machining Group and/or our customers determine special characteristics.

Characteristics designated by Newcor Precision Machining Group customers will use the customer-designated symbols. Additionally, suppliers are encouraged to select characteristics, which are key to their own products and processes.

All special characteristics shall be identified on the control plan and controlled using statistical techniques. Suppliers shall provide evidence of statistical capability for all special characteristics as requested by Newcor Precision Machining Group.

Waiving of these requirements must be approved by the quality manager (7.2.2.1).

4.4 High Impact Suppliers

High Impact suppliers are those that supply a High Impact Characteristic (HIC). An HIC is a product / process characteristic that, when outside the specification tolerance, severely affects subsequent manufacturing operations or customer satisfaction; the product or process is not, however unsafe. Suppliers identified as "high impact" should be prepared to show compliance to documented processes should circumstances arise which would mandate a verification visit by Newcor Precision Machining Group.

4.5 Prototype Requirements

Suppliers required to submit prototype material are required to provide documented evidence of meeting all engineering requirements as specified on the purchase order. The same materials, tooling, and processes, as will be used in production, should be used in the manufacture of prototype material whenever possible (7.3.6.2).

Any questions regarding the prototype requirements should be forwarded to Newcor Precision Machining Group project engineer for further clarification.

4.6 Production Readiness Reviews

Selected suppliers may be identified by Newcor Precision Machining Group quality, purchasing and/or engineering functions as requiring production readiness reviews. The purpose of the production readiness review is to verify that the supplier's production process is ready to produce material that meets all engineering requirements at the required volumes (7.3.1.1).

4.7 PPAP (7.3.6.3)

Prior to making the first shipment of a new production part or material, or a change to an existing part or material, all suppliers must receive production part approval from the Newcor Precision Machining Group quality department. The samples shall be submitted in accordance with the AIAG Production Part Approval Process - PPAP

Manual (pg 6), level III requirements, unless otherwise directed by Newcor Precision Machining Group quality department or the purchase order.

Three additional documents are required for each PPAP submission. First, a letter of compliance to government and safety constraints on restricted, toxic, and hazardous materials, as well as environmental, electrical, and electromagnetic considerations is required. Second, a NAFTA country of origin certificate is required. Third, an ELV material data sheet is required. Failure to submit these additional documents with a PPAP submission will result in the PPAP's rejection 7.2.1.

All documentation submitted with the PPAP will be less than one year old at the time of submission.

Unless otherwise specified, the PPAP sample will be taken from a production run of 300 parts minimum.

In addition, production part approval is required per Section I.3 of the AIAG PPAP manual.

Any questions concerning the need for production part approval should be directed to Newcor Precision Machining Group quality department.

4.8 Statistical Data

All products that cannot demonstrate process stability and capability greater than a Cpk of 1.33 shall be 100% inspected prior to shipment. A preliminary process capability (Ppk) of 1.67 or greater is required for PPAP submissions on kpc items. Statistical techniques must conform to those outlined in the AIAG manual, Statistical Process Control - SPC.

Newcor Precision Machining Group may request an onsite review at the supplier's facility prior to the production approval process.

The review will consist of the manufacturing process at required line rates, including manpower, equipment, tooling, procedures, and testing. All production part approval process (PPAP) documentation will be reviewed for completeness.

4.9 Annual Validation

Annual product and/or material validation are required, PPAP level 4 for all production material, components, and services for Ford and Chrysler product. For the annual validation submissions, a Level 4 is the same as a Level 3 but without parts. The validation PPAP is due within one year from when the previous sample submission approval was granted.

All documentation submitted with the annual validation will be less than one year old at the time of submission.

Failure to submit an annual validation by the due date will result in an MCN being issued, impacting the supplier's performance each month until the annual validation is received. No PPM's will be charged against this MCN but it will include a \$300.00 administrative fee.

4.10 On-Going Quality Documentation

On-going quality documentation requirements will be communicated on the purchase order, if required. Newcor Precision Machining Group reserves the right to reject the shipment if the required documentation does not accompany the receipt of the material.

Certificates of analysis are to include the following information:

- applicable NEWCOR PRECISION MACHINING GROUP part or material number,
- the specification number(s) being certified,
- the actual test result compared with the given specification,
- the batch or lot number to which the certification applies,
- the date of the certification,
- an approval signature.

5.0 ON TIME DELIVERY (7.4.3.2)

The criteria for 100% on-time-delivery performance is:

Releases are issued weekly or monthly. Your release is a delivery release. This means that the quantity released is due at Newcor Precision Machining Group on the designated day(s) of the week indicated.

Newcor Precision Machining Group will assign you a freight carrier. If product is shipped on Friday (with a one-day transit carrier) and does not arrive until Tuesday, that is Newcor Precision Machining Group responsibility, as carrier designator and you will not be penalized.

You are on a weekly ship schedule. Newcor Precision Machining Group will pay only for shipments made on your designated day(s). Any additional shipments caused by a past due status or material shortage will be the responsibility of the supplier. These shipments will be coded prepaid by the supplier. Additional shipments that are not received prepaid will be debited against your account.

You are expected to respond, within 20% up or down, to changes in released requirements. We will try to stabilize your schedule as much as possible. At times you may be asked to stop shipment due to a customer shutdown or to report on your ability to respond to a sudden increase. Your cooperation is anticipated should this situation occur (7.2.2.2).

Over shipments of more than completion of standard pack will not be tolerated and will be returned at the supplier's expense.

When returnable containers are provided by Newcor Precision Machining Group, at our expense, these containers are to be treated as customer owned materials and placed in an

area that will insure protection of the containers from damage. These containers shall not be used for anything other than the specified product. Any returnable containers that are lost, damaged or otherwise unsuitable for use will be reported to Newcor Precision Machining Group (7.5.4).

Any deviation to the above must be handled by contacting Newcor Precision Machining Group. For your protection, you should request an approved supplier Performance Deviation form (Appendix F). This would be used in cases such as:

- Lack of customer provided dunnage
- Customer increase in excess of 20%
- Customer requested additional shipments (not resulting from a past-due status)
- Preplanned supplier shut down

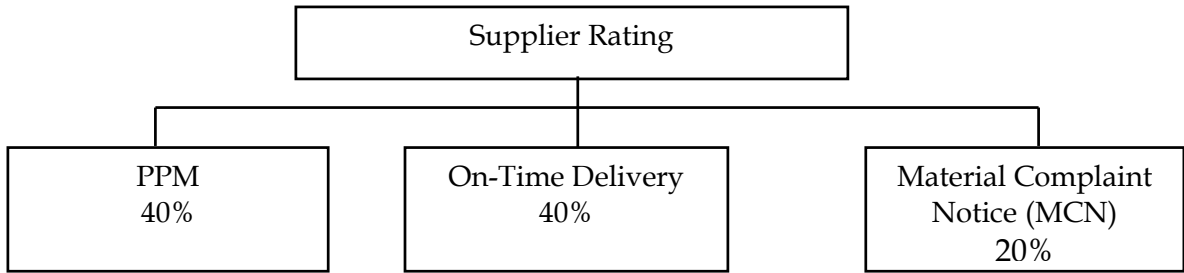
Suppliers shall notify Newcor Precision Machining Group within 24 hours about requirements that cannot be fulfilled.

6.0 Supplier Rating System

Key suppliers to Newcor Precision Machining Group will be evaluated on quality and delivery.

Newcor Precision Machining Group will evaluate the quality and delivery performance on a monthly basis. Two consecutive "NEEDS IMPROVEMENT" ratings may require a corrective action plan, based on magnitude and risk, defining the required actions to correct and prevent the problem from occurring. This plan will be submitted to Newcor Precision Machining Group quality department. More than two "NEEDS IMPROVEMENT" ratings in a twelve month period may require a corrective action plan defining the actions required to correct and prevent the problem(s) from occurring, **which could result in an on site verification per Newcor Precision Machining Group discretion.**

Scoring:



PPM Defective:

<u>Points</u>	=	<u>PPM</u>			
40	=	0 PPM	15	=	301 ppm
35	=	1 ppm	13	=	351 ppm
33	=	13 ppm	11	=	401 ppm
31	=	26 ppm	9	=	451 ppm
29	=	31 ppm	5	=	501 ppm
27	=	61 ppm	4	=	751 ppm
25	=	81 ppm	3	=	1001 ppm
23	=	101 ppm	2	=	1501 ppm
21	=	151 ppm	1	=	2001 ppm
19	=	201 ppm	0	>	2001 ppm
17	=	251 ppm			

Material Complaint Notices per Month:

<u>Points</u>	=	<u>MCNs</u>
20	=	0 MCNs
15	=	1 MCNs
10	=	2 MCNs
5	=	3 MCNs
0	>	3 MCNs

On-Time Delivery (Supplier Responsible):

<u>Points</u>	=	<u>% On-Time</u>		<u>Points</u>	=	<u>% On-Time</u>
40	=	100%		28	=	93%
35	=	99%		26	=	92%
34	=	98%		24	=	91%
33	=	97%		22	=	90%
32	=	96%		20	=	85%
31	=	95%		0	<	80%
30	=	94%				

Acceptable 80% - 100%
Needs Improvement <80%

7.0 Non-Conforming Material

The organization shall have processes and systems in place to prevent shipment of non-conforming material.

7.1 Containment and Cost Recovery

All non-conforming material within Newcor Precision Machining Group will be rejected and quarantined from the production process. The non-conformance will be communicated to the supplier by the appropriate report.

Suppliers will be given the opportunity to provide replacement parts or material, if this does not interfere with current production schedules.

Suppliers will be given the opportunity to sort non-conforming parts or material within the requirements of the production schedule. If a supplier is unable to sort, the supplier will be required, at the discretion of Newcor Precision Machining Group, to provide sorting and rework within the Newcor Precision Machining Group facility or accept charges incurred by Newcor Precision Machining Group for sorting and rework in order to maintain production schedules. Otherwise the supplier is responsible for all sorting costs. The current sorting charge is \$55 per hour.

PPM and MCN's will be charged per the following table.

Situation	PPM	MCN	Cost
Supplier notifies Newcor Precision Machining Group and replaces suspect material prior to use	No PPM will be charged	No MCN will be issued	No chargebacks will be issued
Supplier notifies Newcor Precision Machining Group but cannot replace the suspect material prior to use and must use alternative methods to support Newcor Precision Machining Group requirements	Actual PPM will be charged	No MCN will be issued	Chargebacks will be issued as situation requires
Newcor Precision Machining Group notifies supplier and Newcor Precision Machining Group sorts suspect material	Total lot size is charged as the PPM	MCN is issued	Actual sort charges (\$55 per man hour) and administrative charges of \$300.00
Newcor Precision Machining Group notifies supplier and Supplier sorts suspect material at Newcor Precision Machining Group facility	Actual PPM will be charged	MCN is issued	Administrative charges of \$300.00
Newcor Precision Machining Group notifies supplier and supplier sorts suspect material at an off-site location	Total lot size PPM will be charged until sort results are	MCN is issued	Administrative charges of \$300.00

	given back to the using plant		
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If any of the situations listed above result in a cost recovery being charged by the customer against Newcor Precision Machining Group, a cost recovery will be generated to obtain like compensation from the supplier. Such costs may include charges for containment, assembly teardown, premium transportation, etc.

Miscellaneous non-conforming material found within Newcor Precision Machining Group shall be held for supplier review and disposition. Each supplier will be given the opportunity to make disposition of the non-conforming material by authorizing to either scrap it or return it for full credit or replacement.

7.2 Corrective Actions

All responses to requests for corrective action shall be in an 8-D format or an alternate format approved by Newcor Precision Machining Group (see Appendix C for an example). The initial response shall include the interim actions to contain the non-conformity. The completed 8-D shall include the identification and verification of the root cause, and the actions taken to prevent reoccurrence. Interim containment action is required within two working days and permanent corrective actions within **15** working days, unless the timing to implement the permanent corrective action is concurred with by Newcor Precision Machining Group.

Corrective actions should include statistical techniques, mistake proofing, and verification activities to assure that the root cause was identified and eliminated. The FMEA and control plan must be updated by the supplier to reflect changes to the product or process. The supplier is responsible for making a sample submission (PPAP) if the corrective action involves a product or process change (see 7.6).

Newcor Precision Machining Group will verify corrective actions for effectiveness and impact to other areas upon receipt of the supplier's corrective action.

7.3 Rework and Salvage

Suppliers are not permitted to perform rework on any part or material that would produce a condition different from that which was originally approved during the PPAP process. Rework requires approval from Newcor Precision Machining Group prior to implementation.

In order for a supplier to receive approval of a rework procedure, they must make a written request through Newcor Precision Machining Group quality department. The request must include a copy of an instruction which defines the overall process to be used to rework the part or material, the parameters for inspection and test, a method to identify the parts or material to alert the using facility, and an estimate of the quantity of parts or material to be reworked. Any parts or materials shipped prior to obtaining written approval will be rejected and returned to the supplier at their expense and any costs incurred by Newcor Precision Machining Group due to processing parts or material that have unauthorized rework will be the responsibility of the supplier (8.3.2).

8.0 Safety Related Parts

Whenever a part is designated as a safety part, either by Newcor Precision Machining Group or its customer (such as Ford inverted delta, DaimlerChrysler shield, or GM circled inverted delta), the supplier will be required to meet special requirements for furnishing safety items as specified by Newcor Precision Machining Group or its customer.

The supplier will be required to submit a complete control plan for review and approval, showing their quality procedures, and specific process and inspection instructions defining the controls used to maintain and produce conforming parts.

These procedures should define the complete process from receipt of raw material, through each operation, including final inspection and shipping. They should indicate sample size gages used, frequency of inspection, lot control procedures, equipment used, time and temperature settings, and operating process instructions, and should be accompanied by the forms used to document this information.

Additional requirements for safety parts will be supplied by Newcor Precision Machining Group through the quality department and may encompass requirements such as lot control, process capability, engineering tests, destructive or non-destructive test requirements, visitations by both Newcor Precision Machining Group and it's customer. Full approval of the safety characteristics will be withheld until all testing, inspections and both Newcor Precision Machining Group and the customer make evaluations and one production run has been completed following sample approval.

The stringent procedures required to be implemented for safety parts are in addition to all other requirements specified within this manual.

9.0 Pass-Through Characteristics

Newcor Precision Machining Group requires all suppliers to take specific actions to ensure that all pass-through characteristics are to Newcor Precision Machining Group's customer specifications. Pass-Through Characteristics are characteristics of the product provided which are not directly used by the purchasing party but may be used during the evolution of the part by another customer/party.

10.0 Tooling and Gages

Tooling and/or gages supplied by Newcor Precision Machining Group for use are subject to proper care and maintenance by the supplier. Suppliers are responsible for all damage and/or refurbishing costs. Any tooling or gauging that is lost, damaged or otherwise unsuitable for use will be reported to Newcor Precision Machining Group (7.5.4).