Issued: 03/25/09
Revised: 05/06/16
Revision: H

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Ada Technologies Inc Supplier Quality Manual

Signature Page

By combining the requirements of ISO 9001, applicable portions of TS-16949; as-well-as, key portions of Ada Technologies' Customer Quality Manual into this ATI Supplier Quality Manual, the management of Ada Technologies Inc. hopes to underscore the importance of the development and implementation of a systematic approach to product and process Quality as described by this Supplier Manual. In hopes that each and every company supporting Ada Technologies Inc. is able to realize improvement in quality and improvements in waste reduction.

We strongly encourage each supplier to adopt these standards as a minimum quality expectations and continuously strive to develop improved practices that are both systemic and value-added.

(Noriyuki Suzuki President ATI)

(John Petersen, Quality Assurance Manager)

(Joe Centers, Sr. Manager)

Supplier Acknowledgement

As a supplier of material, parts and/or components for Ada Technologies Inc product manufacturing, I acknowledge that I have received a copy of the ATI Supplier Quality Manual and acknowledge that under paragraph B or Section 10 of the Purchase Agreement, that provisions detailed in this Supplier Quality Manual need to be applied to product and/or process provided to Ada Technologies Inc.

(Signature) (Printed Name)

(Company Name) (Title) (Date)

Supplier System Certifications (please circle all that apply and fax copies of certifications to ATI).

ISO-9001	TS-16949	ISO-14001	Other _____

Please send this completed acknowledgement by fax to:

Ada Technologies Inc.
Quality Department

fax: 419-634-9998

805 East North
Ada, Ohio 45810

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Expectations for Suppliers:

Conflict Minerals

In support of Ati's policy of conflict minerals, suppliers are expected to supply materials to ATI that are "DRC Conflict-Fr, Burundi, Rwanda and Uganda." DRC includes the countries of Democratic Republic of Congo, Republic of Congo, Central African Republic, South Sudan, Zambia, Angola, Tanzania, Burundi, Rwanda and Uganda.

Suppliers are expected to adopt policies and management systems with respect to conflict minerals and to require their suppliers to adopt similar policies and systems. Ati expects suppliers to establish their own due diligence programs to ensure conflict-free supply chains.

In the event Ati determines that a supplier's efforts to comply with this policy have been deficient and the supplier fails to cooperate in developing and implementing reasonable remedial steps, Ati reserves the right to take appropriate actions up to and including discontinuation of purchases from that supplier.

Under the definition of "DRC Conflict Free," products supplied to Ati:

1. Do not contain tantalum, tin, tungsten or gold as elements necessary to their production or functionality.
2. If products supplied to Ati do contain these minerals, the minerals must originate outside the DRC, come fro scrap or recycled sources, or be supplied from smelters that have been evaluated by an independent private sector party to be conflict free certified conflict free. Certified conflict-free smelters are validated as compliant to the "conflict free smelter protocol, using the Compliant Smelter List. (CFS) Through the CFS program, smelters are audited globally; the list of compliant smelters and refiners is posted at www.conflictfreesmelter.org.

Ati may survey direct suppliers as part of our conflict minerals due diligence program. Suppliers are expected to respond to survey requests I a timely

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manner and with full disclosure following the specific instructions provided.

SECTION 2: QC Regulations

QUALITY CONTROL REGULATIONS

This regulation covers the continuing quality assurance and performance required of the supplier on all parts, materials and services ordered from the supplier by Ada Technologies Incorporated (ATI).

Zero Defects:

ATI has established a "ZERO Critical Defects" Goal!

CONFORMANCE TO INTERNATIONAL STANDARDS

All ATI suppliers are encouraged to conform to the requirements described by ANSI/ISO/ASQ 9001 & 14001 Standard(s). Unless otherwise notified by ATI, suppliers are encouraged, but not required to have their compliance conformed by an independent audit / auditor.

Regardless of the suppliers registration status, Ati retains the right to assess to suppliers conformance to ANSI/ISO/ASQ 9000 standard.

Environmental Management System requirements.

ATI expects that all of its Suppliers and Service Providers comply with all applicable Governmental, Federal, State and local environmental regulations. Suppliers and Service Suppliers must also ensure compliance of their products and services to all applicable laws and regulations. This includes compliance to all environment, health and safety requirements or restricted, toxic and hazardous substances, prior to shipment of any products or delivery of any services to and from ATI, that fall into this category.

Document & Data Control:

In addition to the requirements of ISO 9000 / TS16949 / Engineering Specifications, ATI is expecting the supplier has established a procedure to maintain all applicable drawing and specifications and quality control documents to the most current status. All obsolete information must be removed from active use at the time it becomes obsolete. Contents and date for changes needs to be retained for a minimum of 20 years, as indicated later in this document, unless otherwise advised by ATI that a particular document requires a longer retention period.

Sub Supplier Control:

Suppliers to ATI need to enter into agreements with their suppliers that provide for similar quality control regulations, particularly regarding "Change Point Control," using IPP / IPPAAR / PPAP documentation, as indicated. If ATI deems it necessary to inspect any sub-supplier quality system, production process or inspection procedures or records; ATI and/or the supplier will be permitted access.

Test results and/or Inspection Data:
Lack of laboratory facility or equipment does not exempt the supplier for providing ATI with applicable test results.

Test Results / Inspection Data:

Test Results: Supplier needs to perform tests for all parts and product materials when chemical, physical, metallurgical performance, durability or functional requirements are specified by the design record or Control Plan (PQCT). Records of these tests or analysis need to be provided to ATI, when requested, and/or retained as an element of part or material Traceability.

Inspection Data: Supplier needs to conduct inspections as required by Design Record or Control Plan (PQCT). Records of these inspections need to be provided to ATI, when requested, and/or retained as an element of part or material traceability.

Corrective and Preventive Actions:

The supplier's corrective/preventive action system needs to be a documented procedure containing a flowchart format, detailing:

Responsible authority for investigation and tracking of activities / issues and findings.

Responsible authority for revision of quality documents to include preventive action.

Include some evidence of Audit results confirming implementation and effectiveness.

Statistical Techniques:

ATI retains the right to specify statistical techniques required for establishing, controlling and verifying process capability and product characteristics.

SECTION 3: Best Practices

BEST PRACTICES

The following activities and/or actions are offered as recommendations as "Best Practices" which may be used to improve your own processes and more successfully meet ATI's expectations.

SAP,PFMEA and PQCT

Suppliers are required to complete, maintain and communicate results of important procedures and events to ATI. As necessary, forms may be provided by ATI. In these cases, these forms have been designed to help suppliers focus on information about the products or components delivered to ATI and / or the services that ATI requires. These forms are "tools, " designed to improve communication, planning, resource allocation and data analysis and utilization.

These procedures and forms are recommended as tools to improve your own operations. These tools may be used to improve internal and external communication and efficiencies in the use of limited resources.

NOTE: (SAP) Specific Action Plan, including the Process Failure Mode Analysis and Control Plan, as discussed in Appendix "A" of this document.

(PFMEA) Preliminary / Pre-Production / Production Failure Mode Events and Analysis.

(PQCT) Process Quality Control Table - equiv. Control Plan.

COMMON CHARACTERISTICS

The following are offered as some common characteristics of efficient and effective Management Systems.

a.) All procedures and forms designed to support continuous improvement; such as, meeting the ISO 9001 requirement for effective implementation and employing the PDCA - "Plan-Do-Check-Act" approach to problem solving and resolution.

b.) Sufficient support activities to provide information necessary to identify Preventive; as well as, Corrective Actions.

c.) All Procedures and/or Forms designed and developed to facilitate reduction of variation in operations, leading to producing good product and/or service.

ROLE OF TOP MANAGEMENT

The expectation is that Suppliers Top Management participate in Day To Day Management Activities by:

a.) Planning - for who and when some action needs to be taken; what resources might be needed and otherwise acquire/provide those resources, when needed.

b.) Allocating time and / or other support and resources.

c.) Use of reports and empirical data to make business decisions.

d.) Top management sets and communicates goals that are in alignment with customer and organizations' quality objectives. During production stages, top management communicates changes to all appropriate people.

e.) Conducting some sort of review to ensure that Management System is performing to plan.

NOTE: Other Management responsibilities as per ISO 9001.

Section 4: Supplier Systems

System Expectations:

ISO 9001:

As previously stated, suppliers are encouraged to at least be compliant with the provisions of ISO 9001. Although Third party certification is preferable; it is not, however, necessarily required, at this time. Note: Pertinent Provisions of ISO 9001 will be used in conducting the initial "Quality Assurance Visit," and any subsequent follow-up audits.

Registered Suppliers are requested to provide copies of Registration Certificates, and to provide new copies whenever certifications are issued / re-need / up-graded.

ISO/TS 16949:

Third party registration to ISO 9001 /TS 16949 and ISO 14001 would be the optimal situation; however, certification to this Standard is not an ATI requirement.

Registered Suppliers are requested to provide copies of their Registration Certificates and to provide new copies whenever certifications are issued / re-need / up-graded.

Environmental System Requirements:

ISO 14001:

Where-ever possible, suppliers are encouraged to be certified and/or working to achieve compliance with/to ISO 14001. As appropriate, suppliers are encouraged to at least be compliant with the provisions of ISO 14001. Third party certification is preferable; however, not necessarily required.

Registered Suppliers are requested to provide copies of their Registration Certificates and to provide new copies whenever certifications are issued / re-need / up-graded.

Safety Data Sheets: Material Data Sheets (MDS) / or Safety Data Sheet (SDS)

In order for ATI to continue to comply with requirements of its' own Environmental Management System, ATI must be aware of any chemicals used in and/or applied to product arriving at ATI. Please provide the appropriate MSDS for any substances that may be in or on product arriving at ATI.

Coatings and Rust Preventatives

Providers of coatings and rust preventative services need to be able to provide evidence of compliance to applicable Environmental Requirements and/or adherence to the specifications provided by ATI. Should your process involve applying a rust preventative or some other substance to parts being shipped to ATI, please provide appropriate MSDS for any substances that may be in or on the product arriving at ATI.

SECTION 5: Supplier Parts Specification

Part or product design:

Part design, specifications and requirements are detailed by ATI's New Model Department and will be considered to be the property of ATI. All changes and/or modifications to design and/or specifications are to originate with the ATI New Model Department and may be communicated by a drawing or other means and released through ATI Operations Department.

NOTE: After part, component or material is released for production, delivery requirements become the responsibility of ATI Operations Department and may be adjusted to meet the realities of production requirements.

Deviations:

There will be no deviation to ATI or ATI's Customer Engineering Drawings, specifications or ATI requirements without prior written approval and/or deviation approval from ATI's New Model, ATI Quality Assurance Departments or ATI's Customer.

The Supplier is responsible for knowing the quality level of material before it is shipped. If the Supplier identifies any nonconforming material in their inventory, that may or may not be represented in product already shipped to ATI, the Supplier is obligated to notify ATI. (Reference Section 9 of this document)

Deviations to part specifications and/or requirements may be requested through ATI's "Deviation Request and Approval" System; however, any request must be approved by the New Model or Quality Assurance Departments and, if required, ATI's Customer, prior to implementation. Implementation of any change to part or process makes the part, component, material subject to re-submission through the Part Approval Process as described in Section 11 of this document.

Special Characteristics:

Special Characteristics are any product or process characteristics that affect safety or compliance with regulations, fit, function, performance or subsequent processing of the product. These may be defined by either ATI's New Model or Quality Assurance Departments or ATI's Customer. ATI's expectation is that these Special Characteristics be handled in accordance with the requirements of ISO 9001 / TS 16949. Special Characteristics need to be identified and specifically addressed, as appropriate, on a relevant version of the FMEA, Control Plans. Process Flows, Work Instructions and/or any other associated documents. Suppliers are responsible for ensuring that relevant Special Characteristics are explained, understood and controlled by their suppliers.

The following matrix may provide some assistance in determining the required actions:

Special Characteristics Application Table:

Control Items:

	Critical Safety Part	Critical Quality Characteristic	Manufacturing Quality Standard	Part Quality Standard	Part Inspect Standard	Regulated	Other
Identification:	**(HS HA HB)**	**(Q)**	**(MQS)**	**(CHK)**			
Customer supply drawing	o	o					
Process Plan	o	o	o	o			
PFMEA		o	o	o			
QA Matrix		o	o	o			
Process Dwgs	o	o		o			
Supplier Process Dwgs	o	o		o			
Process verification sheet		o	o	o			
PQCT	o	o	o	o	o	o	
Inspection Standard	o	o	o	o	o		
Operation Standard		o	o	o	o		
Check Sheet		o	o	o	o		
Inspection Result Certificate *		o	o		o		**IMDS**

***note: Where end customer/user has requested data be gathered and reported either with the parts or on a periodic basis.**

As defined:

Circle Q	**Symbol used by Honda to identify an individual characteristic as being Special or needing Special Control measures.**
CHK	**Symbol us be ATC to identify an individual characteristic as being special or needing special control measures.**
MQS	**Manufacturing Quality Standard, as indicated by the Customer.**
HS-HA-HB	**Important Safety Functions.**

HS	**Parts which may cause the loss of important functions, may cause serious accidents.**
HA	**Parts which may cause the loss of important functions, may cause serious accidents. May show some sign or warning.**
HB	**Parts which may cause the loss of important functions, may not cause or result in serious accidents.**

Critical / Special Process

Critical / Special Processes are those processes, which after manufacture, verification by inspection / measurements are difficult, that means that trouble is found only after destructive test or product use, and greatly impacts product function. ATI has defined the following as Critical / Special Processes:

a. Heat Treating Processes

b. Welding Processes, various

c. Riveting Process

d. Press Process

e. Torque

f. Final QA Machine

Part Characteristics produced by these processes are to be considered as being Process Controlled. Process Controls may be described in appropriate "Minimum Process Requirements," as referenced in section # 10 of this manual or otherwise specified by ATI or ATI's Customer.

Annual Re-Qualification:

Unless waived in writing by ATI's Quality Assurance Department, the supplier may need to inspect and provide annual test results for a sample of each active product supplied, assuring conformance to all ATI specified requirements. These inspection requirements need to be included in the supplier's production control plan. Material testing needs to be carried out by a qualified laboratory. Results of these annual validation inspections need to be forwarded to ATI.

Cleanliness Requirements

ATI requires all material arriving at ATI's facility to be clean and free of contamination. The Supplier is responsible for ensuring that material be contamination free through-out the Suppliers manufacturing process, packaged in a manner to maintain material cleanliness and delivered to ATI free of contamination. Additional cleanliness and other requirements may be communicated through engineering specifications and/or Purchase Order requirements.

Gage Control:

The supplier shall define installation and control methods of measuring and monitoring equipment in accordance with the requirements specified by ATI to assure results of measuring and monitoring of parts delivered to ATI. Limit Samples need to be controlled by this or some other similar Calibration and periodic re-review and documentation system.

a. Traceability to National Standards

b. Established schedule for regular check, inspection and calibration

c. Identification method to indicate traceability and calibration status.

d. Abnormal reaction plan

e. Records, as appropriate to indicate calibration status and condition, relative to calibration schedule.

Limit Samples:

"Limit Samples" may be used to determine parts fit-for-use; for example, appearance or items that have a judgment factor involved in the Accept/Reject decision. In these instances "Limit Sample" may be identified as examples of range limits relative to the subjective feature or characteristic involved.

Limit Samples would be identified, in agreement with the supplier, ATI and possibly ATI's Customer, in sets. One set would be retained by the Supplier and the other set would be provided to/by ATI. In cases where questions arise, pertaining to the subjective characteristic, the agreed-upon sample needs to be considered as the Standard upon which the pass/fail decision is made.

"Limit Sample" parts need to be properly identified by tag, label or other appropriate means. Tagging should provide, at a minimum, the following information:

Part name
Part number
Effective Period (if there is any limit, in time, to the application of the sample.)
Appropriate signatures and acceptance Date.
Brief description of the application of the Limit Sample.

SUPPLIER PERFORMANCE

The supplier Performance Management Process evaluates Suppliers in three (3) basic performance parameters: Quality, Delivery; and Response. These three parameters are the metrics used in the calculation of monthly Supplier Performance Index, and will be an important tool used to develop a continuously improving Supply Base.

Monitoring of these three basic metrics, as-well-as, other key indicators will be accomplished by joint efforts of two ATI Departments, with the Operations Department measuring Delivery, Shipment Documentation and additionally cost; and the Quality Assurance Department monitoring Parts Quality, with both measuring response time for issues.

A.) Delivery Performance Indicators (key metric plus other pertinent measures):

ATI requires 100% on-time delivery. Costs incurred as a result of delivery non-conformance will be the responsibility of the supplier. The following list details the specific requirement of this Delivery Performance.

1.) **On-Time Delivery:**

Quantity of parts that are received on time, as defined as being zero days late or no more than 5 days earlier than the agreed upon delivery date. As indicated in Section 17 of this Supplier Manual, Late Delivery may cause ATI to issue a Trouble Report.

2.) **Delivery Quantities:**

Number of shipments with quantities under or over the quantities specified by the ATI purchase order. (Trouble Report (TR) may be issued if shipments do not conform to correct quantities.)

3.) **Documentation:**

Includes packing slips, invoices, Certificates of conformance/Certificate of Analysis, etc. As required, these must be present with each shipment if required by Purchase Order/contract. Failure to properly document shipments could result in ATI issuing a Trouble Report.

B.) Parts Quality

Parts Quality are monitored by Quality Assurance Activity. Any deviations from the original specifications and tolerances that may be detailed and communicated in the New Model Phase will become the evaluation standard; unless and until these specifications may be otherwise modified through ATI's New Model / Operations or/ Quality Assurance Department's).

1.) **Parts Quality**

May include dimensional; application; or performance of parts, components or material supplied to ATI. Non-conformance of parts, components or material may result in ATI issuing a Trouble Report for the discovered issue.

2.) **PPM (Parts per Million)**

Statistical results of number of parts, supplied by a single supplier, involved in Parts Quality Issues for a specified period of time, may be divided by the total number of parts supplied by that same supplier for that same time period, projected in terms of results for One Million Units.

3.) **Assigned Index Points**

A measure of Supplier Performance based on the severity of the problem created by the part or performance failure, as indicated on the assigned Trouble Report and Request, as defined in Section 13 of this document.

4.) **Quality Documentation**

Measured as the arrival of any supporting data such as, Statistical Data; dimensional data; Initial Production Parts (IPP/IPPAAR) or other information, as may be required, on the arrival of the supplied parts.

C.) Responsiveness to "Trouble Reports":

When notified by ATI of a parts quality or delivery non-conformance through the issuing of a "Trouble Report," as described in Section 17 of this Manual, each Trouble Report will be assigned a "Due Date" - that is the date by which ATI will be expecting an investigation and countermeasure response from the Supplier or requested extension with supporting documentation.

The measured criteria consists of the number of days the reply was returned (late) after the initial Due date for the Delivery or Quality Issues.

D.) Cost

Another aspect of each Suppliers' evaluation will be "Cost." Any change in cost of materials, parts or components will be considered relative to the previous year's price. On a rating scale of 0 - 100 points, retaining the previous year's pricing would produce a 50 point score; a cost-down equal to or exceeding an ATI request would yield 100 points on the scale; where as, a cost increase, exceeding any would yield a score of 50 points or less, on the rating scale. This value will be become a portion of the Overall Score.

E.) Overall Performance:

The Overall Score is a function of totaling of the points earned in Delivery Performance + the points earned in Quality Performance + the points earned in Responsiveness +Cost. Overall performance will be expressed as the total of these four ratings, on a scale of 0 to 100 points, a perfect score would be 100 points.

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Monitoring Process:

As required, representatives from Operations and Quality Assurance Departments, will compile supporting evidence as to the key metrics for each Supplier.

On a monthly basis, evidence is summarized and forwarded to the appropriate department manager - either Operations or Quality, to be compiled, as appropriate, into the "Supplier Performance Rating ."

As appropriate, Managers of Quality and Operations Departments, on a monthly and quarterly basis - make final assessment of evaluation and assignment of performance; preparation of "Supplier Performance Rating" form; assignment of grade or Score (ranging from Excellent / Good / Improvement Needed / to Immediate Action Required) and determination of necessity of continuation or follow-up.

Results of this Measuring and Monitoring process may be compiled for presentation to Management Review, at either monthly or quarterly reviews, as appropriate.

After compiling the results for the "Supplier Performance Rating," on a quarterly basis, these same results may be made available to individual Suppliers' via the most appropriate method.

Sub-Supplier Management:

ATI Suppliers need to require their suppliers to conform to the requirements specified in this manual. For the purpose of sub-supplier development, ISO 9001 and ISO 14001 are acceptable systems. ATI reserves the right to visit sub-suppliers.

Supplier Charges:

ATI reserves the right to apply, as appropriate, "Back Charges" for unusual costs resulting from any of the following reasons:

a.) Quality Nonconformance Report (parts quality) or nonconforming service and/or delivery issues. (as described in Section 15, " Nonconforming")
b.) Nonconforming Product Deviation Requests- issued by Supplier to ATI.
c.) PPAP/IPPAAR submission rejections, delays, or shipments of unapproved products.
d.) Supplier Delivery Performance Failures.
e.) Warranty and Cost Recovery - resulting directly from Supplier's part / component / material.
f.) line stoppage
g.) sort time (w/ cost)

Section 7: Control Plans

CONTROL PLAN

The Supplier needs to develop "Control Plans" at the system, subsystem, component and or material level for the product supplied to ATI. This Control Plan needs to list the controls used in the manufacturing process for materials supplied to ATI. These Control Plans are to be kept current by being up-dated whenever applicable change occurs affecting product, manufacturing process, measurement, logistics, supply sources or FMEA. Note: change for any reason requires re-submission for ATI approval. (Reference Section 11, of this document)

Control Plan Format:

Use of the ATI's PQCT format (Process Quality Control Table) is encouraged; however, any alternate format is acceptable as long as it addresses all of the categories found on the ATI form, and is compatible with AIAG.

Elements of Control Plan:

	General data:	**Expectation:**
a.)	Control Plan number	That each plan be clearly labeled by a unique identification number, indicating a level of Document Control.
b.)	Issue date and revision data, if any	The Control Plan needs to be dated according to both original issue and for any revisions made.
c.)	Customer information	For parts manufactured for ATI, this fact needs to be detailed on the Control Plan Heading.
d.)	Organization's name/ site designation	The Supplier's name and address need to be displayed in the heading of the Control Plan.
e.)	Part number	The part number, displayed on the ATI Drawing / purchase order, needs to be on the control Plan.
f.)	Part name / description	The part name, displayed on the ATI Drawing / purchase order, needs to be on the control Plan.
g.)	Engineering change level	The control Plan needs to indicate the Revision Level of the drawing applicable when the Plan was written or current revision, as applicable.
h.)	Design, Development or manufacturing phase covered	The Control Plan needs to clearly indicate the design, development or manufacturing phase for which it is written.
i.)	Key contact	Supplier personnel responsible for the contents and maintenance of the Control Plan needs to be indicated on the Plan.
j.)	Part/process step number	Each step in the manufacturing process identified on this control plan needs to be identified by name and sequence number.
k.)	Process name or Operation description	Each step in the manufacturing process identified on this control plan need to be identified by name and sequence number.
l.)	Process flow-chart	A Flow-chart showing or describing the entire process to manufacture the part being controlled. Include any inspections or tests.
	Product Control	
a.)	Product related special characteristics	Indicate a process characteristic specified by ATI or ATI's customer, - on drawing or related specification as being of particular importance and requiring monitoring.
b.)	Other characteristics for control (number, product, process)	A part or process characteristic specified by ATI or ATI's customer, - by drawing, related specification or other means as being of particular importance to the form, fit or function of the part.
c.)	Specification/tolerance	The actual specification including tolerance, if applicable, for the characteristic.
	Process control	
a.)	Process parameters	The measurement, including tolerances, if applicable, by which the responsible associate will know that manufacturing condition/ process is or is-not in control.
b.)	Process-related special characteristics	Identify the manufacturing processes that are the controlling quality characteristics that have been deemed critical by ATI or ATI's Customer.
c.)	Machines, Jigs, fixtures, tools for manufacturing	Identify the equipment, fixtures and other tools necessary for each step in the manufacturing process.

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Methods

a.)	Evaluation measurement techniques / Control Method	Identify the measurement system being used. This could include gages, fixtures, tools or test equipment to measure the part, process or manufacturing equipment.
b.)	Error-proofing	Identify any "hard countermeasures" included in tooling, fixturing or the process, for the purpose of eliminating "opportunity for error."
c.)	Sample size and frequency	When testing or sampling is required, indicate the number of parts required to be sampled and the number of times per hour or shift that the test must be conducted.
d.)	Identify responsibility	Indicate the person's) responsible to ensure parts are inspected/checked according to the schedule and responsible to relay the results to the correct Quality or Manufacturing Representative.

Reaction plan and corrective actions

a.)	Reaction plan	Plan that specifies the corrective actions necessary to avoid producing non-conforming products or operating out of control.
b.)	Corrective action	A set of actions to analyze, identify and permanently eliminate the root cause of a non-conformance.

PROCESS QUALITY CONTROL TABLE (PQCT)

The Control Plan format preferred by ATI is designated as a "Process Quality Control Table (PQCT)." The PQCT outlines the overall control plan for producing the specific part. It is based on the idea that consistent quality comes from a consistent (controlled) process. It is developed by a cross-functional team and addresses both part and process characteristics on opposite sides of the same form. As per example in Appendix "C."

Control Plan / PQCT Requirements:

ATI's expectation is that the supplier create and maintain a Control Plan / PQCT for each part, component and/or final assembly supplied to ATI. ATI reserves the right to request a copy of the control plan/PQCT for review and may request a reference copy for file.

Identical Processes:

Each part requires each own control plan / PQCT except in cases of identical processes. If one or more part numbers have identical processes, one control plan / PQCT may be written, as long as, each applicable part number is listed on the Control Plan/PQCT.

Approval:

Before a completed PQCT is submitted to ATI for review, it is approved according to the supplier's internal approval procedure. It is expected that the approval come from the Quality Manager or equivalent.

Revisions:

The supplier is responsible to maintain the PQCT as an accurate description of the current process. The supplier notifies ATI, by the most appropriate method, when a change occurs in the process flow, component or material source, quality characteristics control or manufacturing condition control. ATI will then indicate the appropriate documentation required for the specific situation, or may be requested as per the following.

Control Plan / PQCT Notifications or Submittal Timing

PQCT Type		Confirmation Items
Part Approval (New Control Plan / PQCT)		Review of PQCT Tables I & II Adequate controls Communicate concerns
(IPP) Part Approval		Compare PQCT to manufacturing process
(IPPAAR) Part Approval after: a.) change in process flow b.) change is component or material c.) change is quality characteristic d.) Design Change e.) Model Reviews		Confirm adequate controls and completeness for change point items.

Section 8: Part Approval and Change Control Process

Production Part Approval Process

Production Part Approval Process - General Information

The specific form and format required for Product Approval may be established by ATI's Customer. When a Supplier finds a situation which meets the requirements for Part Approval, the Supplier should contact ATI, at least two months before the anticipated change by phone or email, to obtain specific requirements pertaining to particular part/component and/or material involved, as indicated in Section 10, of this document.

Production Part submissions will be, most generally, required to be presented in accordance with the IPP/ IPPAAR requirements, as outlined below; however, in some situations a PPAP, such as described in the AIAG PPAP manual may be acceptable. In the absence of any specific instructions, the supplier needs to compile documentation equivalent to the default of a level 3 PPAP. As indicated on the matrix below, this roughly equates to the requirements of an IPPAAR.

NOTE: In situations that involve product/components designated by ATI as safety/critical related, no deviations/concessions shall be permitted on features that affect the functionality/reliability of the product without the appropriate validation and ATI or ATI's Customer approvals.

IPP/IPPAAR SYSTEM

The Initial Production Part (IPP) System is used by ATI to approve and/or track changes to parts or processes. When this system is used correctly, both ATI and its' suppliers have documented approval and accurate records of any change that occurs to parts or products.

The IPP system helps to ensure final product quality by providing a way to identify, approve and control change points. This control is necessary to safeguard the quality of finished products.

Applies to:

The IPP system applies to all parts, components and materials that are shipped to ATI that are part of a finished product.

Requirements:

The suppliers' quality department is responsible for understanding the contents of any change and ensuring the change has no negative effect on the overall product quality.

IPP Control Levels

There are three (3) levels of control in the IPP process. They are listed in the table below:

	Control Level	Procedure		Control Method
A.	IPPAAR / PPAP Level III	The supplier initiating the IPP must obtain ATI Parts Quality approval prior to using affected parts in Mass Production. (Complete and submit the IPPAAR form) A completed IPP Tag must accompany the first IPP parts submitted for Mass Production, parts must be labeled according to requirements.		Delivery of parts must be done according to FIFO (First In-First out) The supplier must keep the following information: Content of IPP tag. Date of IPP'd parts production. Date of delivery. Quality confirmation data such as inspection or testing data.
B.	IPP Tag PPAP Level I & II	IPP Tag must be attached to first IPP parts shipped. If requested, fax a copy of the IPP tag to ATI Parts Quality - for information, only.		Same steps as level A
C.	Supplier	Internal at the supplier.		The supplier tracks these changes. Information to be made available to ATI, on request.

METHOD

Within ATI, the New Model or Quality Assurance Department may be responsible for establishing the part and/or process requirements and reviewing them with the supplier.

Then the supplier is required to ensure parts meet those drawing or process requirements or specifications and to prepare and be able to provide evidence that the process meets the requirements.

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REQUIREMENTS

As applicable to each situation or as directed by ATI or ATI's Customer, the supplier completes and reports applicable items from the following listing:

Item	Description
Appearance Evaluation / Appearance Approval Report	An appearance part is one with any standards judged visually, including but not limited to color, gloss, texture and cleanliness. The supplier prepares data and/or samples confirming each appearance item.
Data / Inspection results	Part data may be required for each trial event and other times, as requested by ATI or by ATI's customer.
Internal QAV	The supplier audits its own processes and documentation, prior to the ATI Quality Assurance Visit (QAV).
Limit Samples	Limit Samples may be used to set the quality requirements for appearance, and or other standards, as appropriate.
Lot Control	For designated parts, the supplier submits a completed Lot Number Display Detail (LNDD) sheet or Lot Control Chart for review to ATI.
Mass Production Ready Line Trial / (equivalent to) Run At Rate	Including, (may also be part of ATI's - QAV, NMR's): 2 hour or 200 piece trial (whichever is greater) per process, mass production associates running parts on production ready line all documentation approved and line side all equipment, fixtures, inspection jigs, gagging completed internal audit completed and presentable running the process at a production rate (run - at - rate) mature process flow parts made within tolerance
Minimum process requirements	Includes a listing of each process and the evaluation that each process meets the minimum process requirements.
New Model Reports	Status of all New Model Reports is closed, or at least a temporary countermeasure is implemented, prior to approval being granted.
Process FMEA	Addresses past and potential problems.
PIS	Process Inspection Standard - the PIS is created to clarify critical control points with a process and the frequency that they must be confirmed.
PPA	Potential Problem Analysis - sheet to communicate and document potential problems to suppliers for countermeasure/preventive activity.
PV Test	Product Validation Testing: As indicated by ATI's Customer and communicated via. Drawing, specifications or other means.
PQCT or Control Plan	Process Quality Control Table (PQCT): The PQCT outlines the overall control plan for producing a specific part's). It provides an accurate description of the process and defines the control methods for manufacturing conditions and quality characteristics for each item requiring quality control. It also includes the items listed on the Part Inspection Standard (PIS) /(if issued)/ Supplier Quality Standard (SQS), countermeasures to past problem history issues and highlights critical characteristics of the part.
Specification Evaluation / Inspection Data & Test Results	A physical layout/testing is done to determine conformance. HES, JIS and drawings are used in confirming conformance to specifications. A capability study is completed on critical characteristics.
Specified Action Plan (SAP) or project schedule	The supplier provides a plan or schedule including all activities related to new model introduction. This evaluation includes both hard (tooling) NS soft side (instruction / training) countermeasures. It also includes a detail plan for the first three months of any additional checks or line verifications to guarantee a smooth start-up. May also be applied to planned changes in Mass Production product or processes.
Tool Trials	The supplier tracks and maintains records of evaluations, problems, causes, countermeasures and design change levels; and reports to ATI any non-conformances. NOTE: ATI participation in tool trials does not relieve the supplier of any responsibility.
Verification of "Fool-proof" or "Poke-Yoke" devices	The supplier demonstrates that the device effectively prevents nonconforming parts from completing the assembly process. The frequency, methods and responsibility for periodic effectiveness confirmation are included in the PQCT and the Operating Standards.
Verification of Inspection Fixtures	The supplier provides layout data, confirming the fixture meets ATI tolerance requirements. The supplier also has a system to assure continuing conformance.
Verification of Training	The supplier needs to provide evidence that affected associates have been or are being trained to creation of or changes to pertinent process documents.
Design Records	Drawings / specifications for proprietary components/details for all other components/details.
Engineering Change Documents	Authorization to produce or change
Customer Engineering approvals	May need specific signatures as authorization.
Material performance test results	May consist of physical, chemical or metallurgical results as appropriate.
Initial Process Studies	Some analysis results indicating process capability or performance.
Qualified Laboratory Documentation	Qualified laboratory shall have Lab Scope and Documents showing that the Lab is qualified for the specific test or tests for which results were presented.
Records of Compliance	Certifications or other documents as evidence that material or process met Customer Specifications.
Part Submission Warrant	The organization shall verify that all of the measurement and test results show conference with customer requirements and that all requirement documentation is available - a responsible official of the organization shall approve the PSW and provide contact information.
IMDS	Certificate indicating that the appropriate information has been input into the IMDS Database.

TYPES OF CHANGES:

It is necessary to issue IPP Tags when there are changes to parts or processes that make those parts. The table below explains each change type, lists some examples and basic guidelines for determining the Level of Control Required.

Always consult ATI Supplier Representative for clarification about reporting situations and requirements.

No.	Item	Explanation / Examples	IPP/IPPAAR Control Level	PPAP Level* (see below)
1	Design Change	The part drawing changes, altering the physical structure or number of the part. New part design Design change that affects the part.	**A**	**III**
		Design change that does not affect the part, such as part name or part number.	**C**	**II**
2	New Supplier	A supplier or sub-supplier, who has never produced the part or component, begins manufacturing the part for ATI. Addition of a new supplier or sub-supplier Change the supplier or sub-supplier New delivery location Change from in-house production to outside supplier (or vise-versa) Change in factory location.	**A**	**III**
3	Material Change	The material's) used to manufacture the part is changed. Change of material supplier. Material Supplier changed for outside to self-supplied Change in material composition (including anti-rust or lubrication oil.	**A**	**III**
	IMDS	Registry of Material content or materials used or applied to components - Certificate of data entry required.		
4	Manufacturing Method Change	A process method, setting or condition used in manufacturing the part is changed or modified. This includes any change which affects the way the parts are produced, as reflected in the PQCT. Casting or forging method change. Sintering condition change Heat treatment condition change Welding condition change Plating or coating condition change Machining or cutting condition change Process standards or setting method change	**A**	**III**
5	Process Order Change	The manufacturing process order / sequence of steps is changed or deviates from the PQCT. Change to the order of the process or add or delete steps. Change a temporary process to a permanent process.	**A or B** depending on situation	**II/III**
6	Machine Change	When there is a change in the equipment used to produce product: Initial use of a New Machine.	**A**	**III**
		Modification or major repair of a machine.	**B**	**II**
		Equipment location, within the plant.	**C**	**I**
7	Tool or Fixture change	When the primary or secondary tooling are changed, potentially affecting the quality function, appearance or reliability of the part: Change in Machining master New or modified fixtures / tools.	**B**	**II**
8	Die or Mold Change	A die or mold that is used in the manufacturing process is new or changed: New or renewed die or mold. Revision or repair of the die or mold.	**A**	**III**
9	Inspection Method Change	The inspection methods of the part are changed, potentially resulting in either an improvement or changes in the part's quality performance.	**A**	**III**
		New or modified inspection equipment.		
		Measuring method or measuring equipment changes.		
10	Transportation / Package Change	Any change in the method of transporting the part to ATI, or the packaging of the part for shipment, may deviate from the approved PQCT, description.	**A**	**III**
		Change in delivery method, package materials or containers.		
11	Sort	To be used at ATI direction of ATI to identify parts that are to be sorted / re-inspection, outside of the PQCT.	**B**	**II**

* NOTE: See Section 11 - "IPP Control Levels," for clarification.

NOTE: Always check with your ATI Contact to verify the exact requirements for your situation.

NOTE: A completed, approved IPPAAR form is required for all "A" Level changes, prior to shipment of the changed part. All "A" Level changes also require an IPP Tag on the first production shipment to ATI.

Confirm Change

The Supplier is to confirm that the First Lot conforms to all quality requirements before shipping and may confirm this activity by using an AIAG "Warrant" Form. Confirmation data is to be retained by the Supplier in a form and format that may be provided to ATI, should ATI request the additional documentation.

Identification of the "First Lot"

The supplier identifies the "first lot" (first production lot following some type of change) shipment with properly completed IPP tags. Attached directly to the container, in a conspicuous location but not over other shipping labels.

IPPAAR System (PPAP)

Advance Planning

The supplier is responsible to create a quality confirmation plan and schedule to verify the change. The schedule outlines all activities needed to implement the change. For example - when test parts will be available, when the dimensional confirmation will take place, when any outside testing will be performed and completed.

Important notes for IPPAAR Planning:

The supplier is responsible to contact the appropriate ATI department - Operations or Quality Assurance. And together, set target dates for shipment / delivery.

If the date can-not/will-not be met, the supplier is required to contact ATI.

The supplier is responsible to review the plan with ATI representatives so that ATI input may be integrated into the plan.

The supplier is responsible to submit the completed IPPAAR form, confirmation plan and schedule to ATI, allowing enough time for ATI to review and approve these documents prior to shipment of the parts.

If the IPPAAR process cannot be completed before parts are to be shipped, contact Quality Assurance immediately for additional information and/or requirements.

IPPAAR Supporting Documents

The IPPAAR submittal may include any or all of the following, as necessary:

1. Capability study (number determined by ATI or ATI's Customer)
2. Sample Parts (number determined by ATI or ATI's Customer)
3. Material testing, as applicable.
4. Characteristic testing, as applicable.
5. Any documentation that needs updated
6 & 7. Information from the supplier showing that the changed part meets all Quality requirements and is fit for use
8. Other information as requested by ATI or ATI's Customer.

Labeling Requirements:

Please contact ATI for appropriate labeling instructions. In some cases, ATI may be able to provide labeling. Applicable Color Codes are as follows:

Label Color	Label Type	Label Use
Pink	IPP Enclosed In/On this container	To place on any container that holds and IPP Tag.
Green	New Style Parts	To place on all containers, in the IPP shipment, that are new style parts.
Blue	Old Style Parts	To place on all containers, in the IPP shipment, that are old style parts.

ATI Approval:

When Supplier submits the IPPAAR and supporting documentation:

ATI reviews submittal package, may request Customer input and/or approval.

ATI evaluates the IPPAAR results and sample parts, as applicable, may verify inspection data from sample or other parts.

Once all requirements have been met, and approval given, the supplier is then permitted to begin shipping production parts.

Section 9: Part Identification / Lot Control

TRACEABILITY & LOT CONTROL (Change Control)

Traceability and lot control require the assigning of unique identification, by Manufacturing Lot, to the component parts produced for ATI and ATI's Customers products.

This "Identification" needs to correlate the specific manufacturing data, collected during production of that lot, with the specific supplier raw material receiving and the Suppliers' Manufacturing Lot Identification. Manufacturing data may consist of, but not be limited to, "Manufacturing Start-Ups," "Change" control; "First Piece;" "Inspection;" and/or "Test records."

Bar Code requirements, if needed will be identified and communicated on an individual basis.

TRACEABILITY

Purpose:

Traceability and lot control require identification of the component parts for ATI products, so that if any problems occur due to those components parts, it can be traced, isolated, contained and corrected. ATI requires all parts to conform to the appropriate degree of control, as determined by ATI.

Expectations:

Sequential	Each group of parts has a unique identifying number or code that links to the suppliers' manufacturing lot number, with which ATI may further link its' lot control and finally the Customer delivery number.
Basic Traceability	1. Manufacturing Lot Number 2. EDI or other Container Label - Box serial number 3. Advance Ship Notice (ASN) / Ship Date.

Displaying the Lot Number:

Unless otherwise specified by ATI, the format and method of displaying the lot number is proposed by the supplier and approved by ATI.

All Parts:

All parts, regardless of the control level, require the suppliers' manufactured lot number be identified in relationship to the EDI or other container label and linked to any form of advanced notification or associated documentation. NOTE: PQCT's should reflect key lot control items.

Determining Lot Size:

Lot size maximum may be limited to product produced within one day or shift. When determining lot size, much thought needs to be put into how it will be controlled process to process. Suppliers must also consider the impact to themselves and ATI, in the event of a part concern. In general terms, smaller lot sizes are encouraged, and may be directed by ATI.

Controlling Lots

To have good lot control/traceability, suppliers must control lots - process to process.

Key Requirements:

Some of the basic expectations for in-process lot control would include, but not be limited to:

1.) FIFO throughout each process
2.) 100% accountability for all product produced within a manufacturing lot.
3.) Timely disposition of repair parts within the same manufacturing lot.
4.) Supplier internal systems must be capable of promoting all ATI key requirements.
5.) Parts are not mixed when traveling from process to process.

Change Point Control

Documentation & recording when & why changes were made to the manufacturing equipment, tools, fixtures and/or changes to the parameters of equipment operation, which would subsequently alter or modify manufacturing conditions. These records need to be kept to reflect/document such things as date, time and manufacturing lot affected by the change.

Key Requirements:

Some of the basic expectations for in-process Change Point Control would include, but not be limited to:

1.) All change point information must be directly linked to the manufacturing lot number and be retrievable upon request.
2.) Confirmation / documentation of production conditions before and after a change point.
3.) Understand what change points apply to the part or part containers, EDI or other type serial number.

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Sub-Supplier Requirements

Each supplier to ATI is responsible for it's own suppliers lot control/traceability. Each suppliers' lot control/traceability needs to be subject to periodic internal audited and be readily understandable.

Re-worked Product Requirements

All reworked product is required to conform to drawing specifications and to have traceable lot control information available that is linked to the product being shipped. Product removed from the normal process must maintain traceable lot control. Suppliers are required to clearly identify and understand how this is accomplished in their facility. ATI must be notified prior to beginning any rework and needs to review and approve any re-work procedures before the work begins.

Shipping Lot Control (minimum requirements)

1.) EDI/other container labels are required on each container/ for each part number.
2.) Must know all manufacturing lot/change point information in relationship to each container
3.) Must add a human readable manufactured lot number on each container label.
4.) Link the manufacturing lot number to all container serial numbers (EDI or otherwise) and appearing on all other associated documents (i.e. ASN)

Record Retention:

Unless otherwise specified, the supplier is expected to keep lot control records, for the following:

1.) Materials
2.) Sub-components
3.) Manufacturing conditions
4.) Inspection Results
5.) Change Points
6.) Shipping Records
7.) IMDS

As per Section #5, "Document and Data Control," (of this manual)required period of retention for these documents is 20 years.

Section 10: Minimum Process and Test Requirements

1. Minimum Process Requirements, General

Defined:

The Minimum Process Requirements define the controls and methods ATI requires in applicable manufacturing processes. These requirements are established to prevent future process related quality defects. These requirements are minimum process requirements. ATI reserves the right to establish additional requirements where applicable.

Purpose:

The purpose of this document is to clarify and communicate minimum process requirements intended to reduce process related defects. It is the suppliers' responsibility to maintain the minimum process requirements.

Scope:

This procedure is intended to apply to all parts and materials delivered to Ada Technologies Inc.

The supplier must assure that the Minimum Process Requirements are built into the applicable processes. Requirements are to be included when developing each manufacturing process and reflected in the PQCT (Process Quality Control Table). Should the supplier be unable or unwilling to meet the minimum process requirements, the supplier is expected to respond to ATI in writing, explaining the requirements and the reasons that they are unable to satisfy this requirement.

General Minimum Process Requirements

Number	Requirements
1	Equipment must have start up check sheets using a detailed check sheet, a minimum of once per shift and after maintenance. Start up checks must include verification of process controls.
2	Equipment must have documented Preventive Maintenance Schedule and tracking method to alert scheduled maintenance. PM schedule must be based on manufacturer recommendations and past problem history.
3	Must have process operation standards at each process. Operation standards to include the detail of part to be manufactured including materials, components, and process order, as well as machine, tooling and equipment settings.
4	Must have a detailed training procedure for each process. Training must be documented showing evidence of operators trained on each process, including updated training as required. As applicable, training must include rework and maintenance processes.
5	Must have documented procedure for containment of nonconforming parts. Nonconforming parts must be identified and stored in designated containers until disposition is made.
6	Must have procedure for off line rework, approved by Quality Control/Assurance. All rework parts must go through final inspection before re-entering normal part population. Rework must be documented with part number, date, shift, rework associate and appropriate Lot Control information.
7	Only trained or authorized associates should have access to change equipment parameters.
8	Must have documented and certified gage program to guarantee the collection of variable and attribute data.
9	Must practice FIFO throughout the process.
10	All parts, materials and containers must be clearly identified throughout the supplier's manufacturing process.

2. Minimum Process Requirements, Specific

These Minimum Process Requirements define the minimum controls ATI's Customers require to be in place for the following Manufacturing Processes. These controls were established in order to address the possibility of future process related quality issues. See Sect 2: QC Regulations / Document Control, of this document.

The expectation is that the Supplier assure the applicable Minimum Process Requirements are built into the appropriate processes.

Ati is urging each Supplier to complete the appropriate Minimum Process Requirements Check sheet for their process to verify that the appropriate MPR's are built into the applicable process.

Ati Auditors will also document their review of the MPR's, using the appropriate worksheet as a part of their normal Quality Assurance Visit.

MPR check sheet is used as a tool for confirmation that the minimum process requirement were verified when developing the suppliers manufacturing process.

It is the suppliers responsibility to maintain minimum process requirements.

2.a. Minimum Quality Check sheets per application:

Casting	link to check sheet
Fluid Fill	link to check sheet
Heat Treat	link to check sheet
Hot Plate Welding	link to check sheet
Injection Molding	link to check sheet
Labeling	link to check sheet
Machining	link to check sheet
Painting	link to check sheet
Part Marking	link to check sheet
Printed Circuit Board	link to check sheet
Sonic/Vibration Welding	link to check sheet

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Stamping	link to check sheet
Torque	link to check sheet
Weld	link to check sheet
Wire harness	link to check sheet
Error Proofing	
Leak Test	

2.b. Minimum Test Requirements: (HSQM 0108)

SRS Electronic Control Unit Assemblies (HSQM 0109)
Electro-Mechanical and Mechanical Assemblies (HSQM -0111)
Electronic Assemblies (HSQM 0112)

Inspection Requirements:

It is the contractual responsibility of each supplier to deliver material which conforms to all requirement and specifications. In order to assure this, it is required that all characteristics will be final inspected, unless specific instructions indicate some other frequency.

Verification of Product:

The supplier shall allow ATI, an approved 3rd party representative or customers of ATI the right to verify, at the supplier's premises, that the product and subcontracted product conforms to specified requirements.

First Piece:

The supplier needs to establish and maintain a "First-Piece" System, requiring the inspection of the First Piece Produced following the initial set-up; as-well-as, after any subsequent set-up or change-over, of the machine or tooling repair; at shift start-up, operator change or other interruption of production, as appropriate. Results of these First Piece Inspections need to be documented/recorded, reflecting actual readings/dimensions as checked and identification of actual authorization granted to continue, resume production.

In-Process Inspection:

Throughout the production process the supplier needs to check subsequent pieces, preferably at definite intervals, to make sure that the work is still being produced within tolerances. ATI reserves the right to require recording of certain designated in-process dimensions and may require the supplier document or record the Statistical data on appropriate forms.

Inspection Check List:

ATI strongly recommends that suppliers compile Inspection Checklist's) for each part / assembly supplied to ATI.

This Checklist could be used to confirm that all characteristics of a part/assembly have been inspected and verified by the supplier's inspection personnel.

If used, the inspection check list could consist of, but not be limited to the following:

- ☑ Part / Assembly number
- ☑ All drawing characteristics with method of inspection.
- ☑ Entries to verify these inspections
- ☑ Evidence of acceptance of inspections by supplier's quality personnel
- ☑ Rejection report numbers
- ☑ Confirmation that each applicable inspection/test has been performed and the results are within requirements.
- ☑ Confirmation that surfaces are free of damage, corrosion, machining chips, tool marks and contamination.

Sampling:

The use of sampling in lieu of 100% inspection may be permissible, as long as that sampling plan and related procedures have been approved, in writing, by ATI's Quality Assurance Department. Information regarding submittal and approval requirements may be obtained from ATI's Quality Assurance Department.

Statistical Process Control:

The use of Statistical Process Control (SPC) techniques may be permissible in lieu of 100% inspection, if process capability can be demonstrated, and the process control scheme is approved, in writing, by the ATI Quality Assurance Department. Information regarding submittal and approval requirements may be obtained from ATI Quality Assurance Department.

Certificate of Conformance:

Unless otherwise stated, deliveries of raw material (steel rod/wire or forgings), heat-treated or plated parts are expected to be accompanied by a signed Certificate of Conformance. These certificates are expected to consist the actual results of physical testing, measurements and/or analysis as indicated by the New Model Agreement and reflecting compliance with all specified requirements.

Inspection Status Identification:

The supplier needs to maintain a part/assembly in-process identification system relative to the "Inspection Status" of the parts or material. c This identification may consist of appropriate marking, tags, tickets or labeling of parts/assemblies, as appropriate. Inspection stamps, if used for this or other records, must be traceable to individual inspectors.

Verification Reviews of Purchased Product

If necessary, the supplier needs to be able to support an on-site verification of purchased product, by a Representative of ATI, an approved 3rd party representative or ATI Customer Representative. Prior to conducting such verification reviews, the responsible ATI contact will specify both the arrangements and method of performing the review. ATI representatives may be present for 3rd party or Customer Reviews.

Section 12: Nonconforming Product

NONCONFORMING PRODUCT

General:

The supplier is expected to have implemented and be maintaining a system for the identification and segregation of nonconforming parts and/or assemblies, found at the Suppliers Location. Any materials found to be nonconforming need to be conspicuously tagged and controlled to prevent it from becoming intermingled with conforming materials. ATI requests to be notified of any nonconforming output of processes producing product for ATI, this notification may be by phone or email.

Definition:

"Non conforming" parts/components or materials can be defined as any/all parts failing to conform to specified quality requirements. ATI judges the nonconformity to be the Suppliers responsibility if any of the following conditions exist:

~The part does not conform to the current drawing or specification.
~The part does not conform to applicable quality standards.
~The part does not conform to limit or master sample guidelines.
~The part does not perform or function per design intent.
~The part does not conform to expected commercial quality.

Requirements:

Supplier Initial Response:

The supplier's initial response, when notified of a "nonconforming condition" is expected to consist of, but not be limited to:

1.) Method of containment. - An explanation of how the supplier is going to assure ATI that no further defective parts are to reach ATI.

2.) Action Plan - Details on how supplier is going to satisfy the requirements specified by this requirement.

3.) Any investigation or analysis results available - Has the supplier been able to verify that the reported nonconformity is / is not present in un-shipped inventory.

4.) Any other situation related items that may be requested by ATI.
5.) Preparation / submittal of "Part Approval," IPP or IPPAAR.

General Requirements:

When ATI informs the supplier that non-conforming parts have been found, the supplier is expected to:

1 Undertake inspection, segregation, and/or repair of suspect parts.
2 Analyze the cause's) of the non-conformance and implement appropriate corrective action.
3 Report results of sorts, suspect lot range information, re-work, investigation and corrective actions to ATI.
4 Reflect results to similar systems or processes and to the supplier's problem history records.

1. Undertake Inspection, Segregation and/or Repair:

The following list clarifies the requirement to undertake inspection, segregation, and/or repair of suspect parts:

a.) Any required inspection, segregation, and/or rework will be undertaken without delay, upon direction from ATI with work instructions approved by ATI.

b.) Inspection, segregation, and/or rework may be required at a supplier's location, at a warehouse, consolidation center, at ATI or at a location specified by
c.) If temporary workers are used to inspect, segregate, and/or repair suspect parts, those workers are contracted by the supplier from a temporary service and are supervised by the contracting supplier.
d.) The supplier is responsible to provide the necessary tools and supplies for the repair/rework/sort.
e.) All supplier associates or contracted temporary workers at ATI must wear safety shoes and safety glasses. If additional safety equipment is required the supplier will be expected to provide.
f.) The supplier is responsible for all it's labor and material costs of inspection, segregation, and/or rework incurred by ATI, or its' customer. This includes time spent containing and/or reworking parts, components, sub assemblies, up-to and including completed vehicles. This may include any penalties leveled against ATI by its' Customer's).
g.) The supplier is responsible for the costs of any expendable items used in the inspection, segregation, and/or rework of suspect material or parts.

h.) The supplier may be responsible for the cost of any complete or partially complete end product that cannot be offered for sale due to the suppliers non-conforming part.
i.) At ATI's discretion, suspect lot's) of parts or material may be returned to the supplier for inspection, segregation, and/or rework. In this case, the entire lot's) may be charged as rejects for financial and inventory reconciliation.
j.) After ATI identifies parts as nonconforming, the supplier of those parts needs to decide final disposition of the non-conforming parts (does ATI return or scrap the parts?). The supplier is responsible for the costs of returning non-conforming parts to the their indicated location.
k.) Should the Supplier decide that parts or material requires a secondary process, the supplier needs to submit a "Work Instruction" or operation standard for ATI's approval, prior to the actual rework or sorting activity. Supplier / contract personnel must have documented knowledge of the inspection, rework, and or sort requirements.
l.) When working on-site at ATI, supplier associates must conform to ATI's Environmental, Health and Safety requirements, specifically concerning the use of particular oils, chemicals or other materials.

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2. Analyze the Cause, Implement Corrective Action:

The following list reflects some, but not all of the steps requires to analyze the cause of the non-conformance and implement appropriate actions. ATI's expectations are that whatever steps are taken, a "PDCA Cycle" will be created complete with Daily Completion Activities and some form of "Score or Progress Matrix" to track progress.

a.) The supplier is responsible to identify the root cause of the non-conformance and to implement an effective countermeasure to prevent recurrence.

b.) Corrective Actions are applied to similar systems and processed.
c.) The supplier is responsible for costs related to general testing.
d.) The supplier is responsible for testing and related costs to specifically conducted to confirm the root cause of the non-conformance.
e.) The Corrective Action System may require use of the IPP system, up-to and including IPPAAR.
f.) The corrective action requires revision of the quality document , if any change has an effect to the documents.
g.) The corrective action requires revision of the quality documents, if the change has an effect on the process documents (i.e.. PQCT / Operation Standards).

3. Supplier Final Response

A critical part of closing any problem situation, is the preparation and submission of appropriate documentation, indicating both Immediate and Long Term

The supplier's final response includes:
Appropriate management approval (prior to returning to ATI).
When attachments are used, indicate on the reply form and attach in logical order.

If corrective actions cannot be fully implemented by the response date, a schedule of correction activity must be submitted.

If the due date for the response cannot be met, the supplier must contact the ATI Parts Quality representative, prior to the due date.

Charge Backs:

ATI may charge the supplier for expenses due to non-conforming product. These charges may include, but not be limited to:

1.) Downtime
2.) ATI materials the supplier uses to sort or repair parts.
3.) ATI expenses for containing, sorting, repairing
4.) consolidation center or in-house fees.
5.) shipping fees for replacement parts or return of nonconforming material.
6.) investigation costs.

Additional Situations requiring Problem Solving & Documentation:

IPP Related TR's

The IPP procedure states" If changed parts which require advance approval are shipped without that approval, those parts may be rejected and/or counted against the supplier's index rating."

4. Customer Notification

The supplier must immediately notify ATI Supplier Quality Representative at the affected production facility and follow the non-conformance when:

1	The supplier determines that a non-conforming product has been shipped from the supplier's facility to ATI.
2	The supplier has been notified by the National Highway Traffic Safety Administration, or other government agency that the product shipped to ATI is or may be non-conforming.
3	The supplier commences an investigation relating to potential defects and/or potential non-conforming Federal Motor Vehicle Safety Standards.
4	If the supplier needs to notify NHTSA of or reports to NHTSA about a death claim and/or notice it has received.

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Section 13: Trouble Reports

NONCONFORMING REPORT AND CORRECTIVE ACTION REQUEST:

In the event that suspect or nonconforming material/parts are identified, or a production stoppage at ATI results from any Supplier Related cause, a Trouble Report and Response (852FORM04MFG001PW) will be generated by ATI. The primary medium for distribution of Trouble Reports will be electronic via. email); however, hard copy may be mailed or faxed, at the suppliers' request.

A written reply is expected from the supplier, addressed to the Quality Manager of ATI. Additionally, in this reply it is expected that the supplier provide ATI with information pertaining to: Immediate and Root Cause Analysis; Short-term and long-term corrective actions with effective dates.

The ATI Trouble Report Request also carries an expected Response Date. Again, the expectation is that the supplier will provide ATI with as much information as is available about the issue by the indicated date.

Should it become impractical for you to meet the assigned / expected response date, please contact Ati, in writing to request a later due date. Please provide ATI with as much information as is available pertaining to the issue.

Problem Ranking Process:

On each Trouble Report and Request will be a total of the Index Points assigned to that specific issue. This number is the total number of Index Points assigned to that specific issue This total is comprised of points assigned to Importance and Nuisance, as defined below.

I. Each problem is assigned a severity rank based on the impact or potential impact of a problem on the unit.

ii. Each problem is assigned index points in order to evaluate the impact of the suppliers' on the Customer.

1 Severity Rank -
Assigns a rank to determine the index value of a problem based on the failure or potential failure mode as defined in the Severity Table.

2 Number of Problems Rank -
Assigns a rank based on the quality of Non-Conforming products for an individual Trouble Report.

Formula: Severity Rank + Number of Problems Rank + any penalty points = Total Index

Severity Table

Rank	Severity Points	Description	Number of Problems Points
S / A	100	Those problems which could lead to sudden loss of functions….	**50**
F / B	10	Those function items other than A Rank which could impair the performance of products	**10**
O / C	5	Those items other than A or B rank.	**5**

Additional Nuisance Points
Penalty Points for issue reaching ATI's Customer

50	
50	

Systems	Element	Section	Level	Application	Number	Line
	741	QEMS	03	Adm	004	PW

Section: May 1, 2016 Revisions

Sect 2: QC Regulations

Document And Data Control

Up-dated ISO References

Up-dated Retention Period to 20 years

Added requirement to retain obsolete copies of PFMEA / Control Plans / Operation Standards (Work Instructions) for 20 years

Corrective / Preventive Actions

Added requirement for Countermeasure Confirmation, which needs to be reported to Management Review

Sect 3: Best Practices

Role of Top Management

Added requirement for documented Management Review

Sect 5: Supplier Part Specifications

Special Characteristics (Corrected spelling and punctuation issues)

Critical Special Processes

Added "Final QA Machine," where used.

Gage Control

Added "Limit Samples" to Gage Control and established 20 years as a retention period.

Limit Samples

added requirement for "Limit Samples" and review and record requirements.

Sect: 7 Control Plans

Revisions

Added requirement to retain copies of obsolete versions of these document retained as reference for 20 years.

Sect: 8 Part Approval and Change Control **(NOTE: Title Change)**

Production Part Approval Process

Added Requirement for prior notification.

Added NOTE about ATI acceptance of AIAG "Warrant" Format.

Sect 9: Part ID and Lot Control

Rework Product Requirements

Added Prior Notification and approval by ATI.

Sect 10: Minimum Process Requirements

#2 MPR, Specific

Added references to Honda "Error Proofing" and "Leak Test."

Added reference to Sect 2: QC Regulations - Document and Data Control

Sect 12: Nonconforming Product

General

Added requirement for period notification and approval from ATI.

General Requirements

Added requirement for application of PDCA with Daily Completion Activities