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SUPPLIER MATERIAL QUALITY REQUIREMENT CODES
Revision: A
OWNER: Quality Department

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NOTE:

(1) The quality codes listed in this procedure are the only authorized and recognized codes to be used by MQE/QE's when coding Purchase Orders and Requisitions. Additional codes that may still reside in the "system" must not be used unless added to this procedure.

1. Purpose

This document has been established to provide the quality flow-down requirements to applicable Suppliers listed on the Approved Supplier List (ASL). This document outlines requirements for suppliers of materials, products or services provided to ATK-MCS. It is intended to clearly communicate to the Supplier the requirements they are responsible for meeting.

2. Scope

It is understood by both ATK-MCS and the Supplier that this document is applicable to every purchase order/contract where the procured product, services or processes are deliverable/consumable by ATK-MCS customers. Suppliers of specific component parts or special processes must meet the quality system requirements contained herein when performing to an ATK-MCS purchase order/contract which contains reference to this document.

The codes listed in this procedure apply to both MCA and Gun Programs out of ATK Mesa PMO.

3. Responsibilities

3.1 MQE/QE

Responsible for ensuring proper quality codes are flowed down to the suppliers.

4. Definitions

N/A

5. Quality Code List

**Q 001 QUALITY SYSTEM COMPLYING WITH ANSI/ASQ/ISO 9001:2000
REQUIRED**

Q 002 QUALITY SYSTEM COMPLYING WITH SAE AS9100 REQUIRED

Q 003 QUALITY PLAN SUBMITTAL AND APPROVAL REQUIRED

Q 004 CRITICAL DEFECT PLAN REQUIRED

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- Q 005 NATIONAL AEROSPACE AND DEFENSE CONTRACTORS ACCREDITATION PROGRAM (NADCAP)
- Q 006 HÄGGLUNDS AND/OR GOVERNMENT QUALITY ASSURANCE (GQA)
- Q 007 NONCONFORMING MATERIALS REQUIREMENTS
- Q 008 CORRECTIVE ACTION REQUIREMENTS
- Q 009 CERTIFICATE OF CONFORMANCE
- Q 010 FASTENER MATERIAL CERTIFICATION
- Q 011 MATERIAL/PROCESS CERTIFICATIONS SUBMITTAL
- Q 012 MATERIAL/STANDARD PART CERTIFICATION FOR AVL/QPL SOURCES
- Q 013 NONDESTRUCTIVE TEST (NDT) CERTIFICATIONS SUBMITTAL REQUIRED
- Q 014 MCS GENERAL PROGRAM REQUIREMENTS GMS6031
- Q 015 AMENDED ORDER – ALL PREVIOUS QUALITY REQUIREMENTS APPLY
- Q 016 FIRST ARTICLE INSPECTIONS PER SAE AS9102
- Q 017 FIRST ARTICLE ACCEPTANCE TEST (FAAT)
- Q 018 ATK-MCS SOURCE INSPECTION
- Q 019A ATK-MCS SOURCE SURVEILLANCE
- Q 019B GOVERNMENTS SOURCE SURVEILLANCE
- Q 020 GOVERNMENT SOURCE INSPECTIONS
- Q 021 INSPECTION RECORDS
- Q 022 NEW DIE/MOLD VERIFICATION
- Q 023 LOW COST HARDWARE - PAN STOCK (PS)
- Q 024 ACCEPTANCE INSPECTION EQUIPMENT

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- Q 025 ACCEPTANCE TEST PROCEDURE APPROVAL REQUIRED**
- Q 026 ACCEPTANCE TEST REPORT SUBMITTAL REQUIRED**
- Q 027 NON-INSPECTION OF HARDWARE**
- Q 028 SOURCE PRODUCT INSPECTION, PROCESS VERIFICATION AND AUDITS**
- Q 029 DELIVERY OF MEASURING AND TEST EQUIPMENT**
- Q 030 TEST EQUIPMENT AND GAGING**
- Q 031 STAMP OR ETCH GAGE**
- Q 032 GAGE WEAR ALLOWANCE**
- Q 033 GAGE APPLIED TOLERANCES**
- Q 034 THREAD GAGES CONFORMING TO HANDBOOK H-28**
- Q 035 THREAD - RING AND PLUG GAGES**
- Q 036 GAGE MATERIAL**
- Q 037 GAGE/TOOL/INSTRUMENT REPAIR**
- Q 038 GAGE MEMBERS ORDER AS SEPARATE ITEMS**
- Q 039 SPECIAL TOOLING REQUIREMENTS**
- Q 040 NEW OR MODIFY TOOLING REQUIREMENTS**
- Q 041 CONTRACT KICK-OFF MEETING AT SUPPLIER'S FACILITY**
- Q 042 MANUFACTURING BASELINE REVIEW**
- Q 043 APPROVAL OF CHANGES TO PROCESSES REQUIRED**
- Q 044 ENGINEERING EVALUATIONS**
- Q 045 ENSURING SOLDER INSPECTION TO IPC-A-610 (CLASS 3)**
- Q 046 DEVICES REQUIRING SOLDERABILITY TO MIL-STD-883**
- Q 047 DEVICES REQUIRING RESISTANCE TO SOLVENTS PER MIL-STD-883**

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- Q 048 ENSURING SOLDERABILITY TO MIL-STD-883**
- Q 049 DEVICES REQUIRING SOLDERABILITY TO MIL-STD-750**
- Q 050 ENSURING SOLDERABILITY TO MIL-STD-750**
- Q 051 ENSURING SOLDERABILITY TO MIL-STD-202**
- Q 052 ENSURING SOLDERABILITY TO MIL-STD-202 WITHOUT SPECIFYING PLATING TYPE OR PROCESS**
- Q 053 SOLDER LEAD COATING IS REQUIRED**
- Q 054 ENSURING SOLDER REQUIREMENTS PER J-STD-001**
- Q 055 ENSURING SOLDERABILITY PER J-STD-002**
- Q 056 ENSURING SOLDERABILITY PER J-STD-003**
- Q 057 MEETING J-STD-004 REQUIREMENTS**
- Q 058 MEETING J-STD-004, J-STD-005, AND J-STD-006 REQUIREMENTS**
- Q 059 MEETING J-STD-004 & J-STD-006 REQUIREMENTS**
- Q 060 MEETING J-STD-006 REQUIREMENTS**
- Q 061 PRINTED CIRCUIT INNER LAYER AND PRINTED CIRCUIT BOARDS REQUIREMENTS**
- Q 062 ENSURING SOLDER INSPECTION TO IPC-A-620 (CLASS 3)**
- Q 063 ESD PRECAUTIONS REQUIRED**
- Q 064 STATISTICAL PROCESS CONTROL**
- Q 065 DELIVERY HOLD - UNRELEASED PRODUCT DEFINITION**
- Q 066 PROCESS CONTROL DOCUMENT**
- Q 067 SUB-TIER SUPPLIER LIST SUBMITTAL**
- Q 068 CONTROL CONFIGURATIONS**
- Q 069 FIRMWARE/SOFTWARE CONFIGURATION**

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- Q 070 OVERHAUL CONFIGURATION UPGRADE, REWORK OR REPAIR ORDER**
- Q 071 REQUIREMENTS FOR REWORK**
- Q 072 SUPPLIER DRAWING**
- Q 073 PARTS LIST REQUIRED**
- Q 074 INSPECTION DATA**
- Q 075 AMMO DATA CARD**
- Q 076 TEST DATA REPORT**
- Q 077 CERTIFIED MATERIAL TEST REPORT**
- Q 078 RECORDS RETENTION REQUIREMENTS**
- Q 079 RUBBER CURE**
- Q 080 MATERIAL SOURCES AND/OR LOT CONTROLLED**
- Q081 DATE/LOT CODE PART IDENTIFICATION REQUIRED**
- Q 082 SHELF LIFE REQUIREMENTS**
- Q 083 AGE LIMITATIONS REQUIREMENTS**
- Q 084 IDENTIFICATION TRACEABILITY REQUIREMENTS**
- Q 085 REQUIRED LOT NUMBER GENERATION FOR AMMUNITION**
- Q 086 HOMOGENEOUS SUPPLIED MATERIALS**
- Q 087 REQUIREMENTS FOR CALIBRATION SERVICES**
- Q 088 GOVERNMENT PROPERTY**
- Q 089 ATK-MCS PROPERTY**
- Q 090 FURNISHED MATERIALS, ATK - MCS OR GOVERNMENT**
- Q 091 PACKAGING REQUIREMENTS FOR ELECTROSTATIC DISCHARGE (ESD) SENSITIVE ITEM SHIPMENTS**
- Q 092 HARDWARE PACKAGING**

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- Q 093 DROP SHIPMENTS (DD 250)**
- Q 094 RAW MATERIAL SPECIAL PACKING INSTRUCTIONS – BILLETS / CASTINGS / FORGINGS**
- Q 095 WARRANTY RETURN, ALL PREVIOUS QUALITY REQUIREMENTS APPLY**
- Q 096 DELIVERY OF EXPLOSIVE MATERIAL**
- Q 097 ENVIRONMENTAL EFFECTS CONTROL PLAN**
- Q 098 LABELING OF OZONE DEPLETING SUBSTANCES REQUIRED**
- Q 099 CHEMICAL INVENTORY FOR AIR POLLUTION REPORTING (MARICOPA COUNTY)**
- Q 100 WELDING VERIFICATION**
- Q 101 WELDING TO US TANK AUTOMOTIVE AND ARMAMENT COMMAND GROUND COMBAT VEHICLE WELDING CODE**
- Q102 CARC COATING PER MIL-DTL-53072**

6. Supplier Quality Assurance Requirements Text:

Q 001 QUALITY SYSTEM COMPLYING WITH ANSI/ASQ/ISO 9001:2000 REQUIRED

The supplier shall maintain a quality system complying with ANSI/ASQ/ISO 9001:2000, Model for Quality Assurance in Design/Development, Production, Installation, and Servicing. Registration with or certification by an independent third party certification body or registrar is not required, but evidence of such registration or certification to this quality standard may show compliance to this requirement without further actions by ATK-MCS or the supplier. ATK-MCS reserves the right to conduct surveillance at the supplier's facility to determine that the supplier's quality system meets the requirements of the quality standard as set forth herein. ATK-MCS approval of the supplier's system does not constitute acceptance of goods or services or relief of purchase order or subcontract requirements. This quality system is the minimum system applicable to this product. Any equivalent or higher level approval from ATK-MCS is also appropriate for this procurement.

Q 002 QUALITY SYSTEM COMPLYING WITH SAE AS9100 REQUIRED

The supplier shall maintain a quality system complying with The Society of Automotive Engineers document SAE AS9100 "Quality Management

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System Requirements for Suppliers.” Registration with or certification by an independent third party certification body or registrar is not required, but evidence of such registration or certification to this quality standard may show compliance to this requirement without further actions by ATK-MCS or the supplier. ATK-MCS reserves the right to conduct surveillance at the supplier's facility to determine that the supplier's quality system meets the requirements of the quality standard as set forth herein. ATK-MCS approval of the supplier's system does not constitute acceptance of goods or services or relief of purchase order or subcontract requirements. For questions regarding SAE and for ordering SAE documents, contact the SAE website at <http://www.sae.org>.

Q 003 QUALITY PLAN SUBMITTAL AND APPROVAL REQUIRED

The supplier shall create and submit a written a Quality Plan which references the purchase order/contract number and the part number within 30 days after issuance of this purchase order/subcontract, prior to the scheduled start of fabrication, to the ATK-MCS Supply Chain Representative (buyer) for review and approval by ATK-MCS Supplier Quality (ATK – MCS Supplier Quality, will respond with the approval status within fifteen days of submission).

The Quality Plan shall describe the overall process by which the supplier will assure the item's conformance to **all** requirements of the purchase order/subcontract. The Quality Plan will include the processes to be used to meet **all** purchase order/subcontract flow-down requirements, and the processes for assuring the quality of products from sub-tier suppliers. Any supplier documents referenced in the Quality Plan shall accompany the submittal.

The quality plan will list the part characteristics which will be inspected including the location of these inspections in manufacturing sequence, the sampling plans and quality levels, sampling procedures, the measuring and test equipment used, work instructions including revisions, criteria for approval or rejection of the product and the manner in which lot formations for product submissions are determined.

The quality plan will also include Inspection and test records including nature and number of observations made, the number and type of deficiencies found and how the defect was detected, the required actions and notifications when a nonconformance is detected, how suspect product and nonconforming units will be separated from, and remain separated from, conforming product, how nonconforming units will be disposition, how suspect product and nonconforming units will be separated from, and remain separated from conforming product, how nonconforming units will be disposition, criteria for an acceptable effectiveness level, how verification of the plan's effectiveness is performed, actions required when one or more of

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the effectiveness levels are exceeded, reporting (including format, frequency/timing, and distribution), effectiveness levels when a critical nonconforming condition is detected, activities during corrective action(s), authority for initial start, stoppage, and restart of production, the quantity approved and rejected, and corrective action implemented and follow-up, a process map (must show the process control points for all KEY characteristics) indicating the flow of fabrication and assembly operations including: inspection and test points with a brief description of the inspections and tests, requirements for training, testing and certification of operators and inspectors, Any other information considered pertinent as determined by the supplier or ATK-MCS. The quality plan must be updated to describe any changes made to the present operation. Copies of revised quality plans must also be approved by ATK-MCS.

Note 1: Characteristics will be classified into four categories: “critical”, “major”, “minor”, and KEY Characteristics. The quality plan shall address your approach to controlling unlisted characteristics (those not placed into one of the four categories) necessary to assure that product conforms to applicable drawings and specifications.

Note 2: Quality plans for sub-tier suppliers will be submitted only if listed characteristics are involved.

Note 3: Other listed characteristics will be controlled in accordance with contract and specification requirements and may include **all** of the above elements. For example, it may be desirable to control 100% major and special characteristics the same as critical. ATK-MCS reserves the right to disapprove the control plan.

Q 004 CRITICAL DEFECT PLAN REQUIRED

Prior to production, you are required to prepare and submit a critical defect plan for characteristics listed in your classification of characteristics or referred to in applicable specifications. Incorporation of a “critical defect plan” is intended solely for the purpose of ensuring the delivery of conforming product to the ultimate customer as well as to reduce the likelihood (as much as possible) through preventative measures and actions, the occurrence of defects which could cause an unsafe condition during processing, handling, storage. Or use of a product or component or the occurrence of a condition which might result in a mission failure. It is not intended to absolutely guarantee that adherence to such a critical defect plan will absolutely prevent/eliminate all potentially unsafe conditions or performance of the practical function of a major end item. While product is under supplier control, ATK-MCS assumes no liability resulting from any subcontractors' property damage, injuries, death, or other causes of action

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that arise or may arise from the subcontractors' development, use of and/or reliance on such a "critical defect plan," whether formally or informally approved by ATK-MCS. Your critical defect plan for critical characteristics must include, as a minimum, the following elements:

- source and revision of supporting detail work instructions,
- requirements for training, testing and certification of operators and inspectors,
- how critical nonconformance's are to be detected,
- required actions and notifications when a critical nonconformance is detected,
- corrective action and follow-up,
- how suspect product and nonconforming units will be separated from, and remain separated from, conforming product,
- how nonconforming units will be disposition,
- criteria for an acceptable effectiveness level,
- how verification of the plan's effectiveness is performed,
- actions required when one or more of the effectiveness levels are exceeded,
- reporting (including format, frequency/timing, and distribution) of: — effectiveness levels when a critical nonconforming condition is detected, activities during corrective action(s)
- authority for initial start, stoppage, and restart of production.

Other listed characteristics will be controlled in accordance with contract and specification requirements and may include all of the above elements. For example, it may be desirable to control 100% major and special characteristics the same as critical. ATK-MCS reserves the right to disapprove the control plan. The supplier shall submit a Process Effective Quality Level (PEQL) every quarter on all critical defects to the ATK-MCS Supply Chain Representative (buyer) for review by ATK-MCS Quality Assurance.

**Q 005 NATIONAL AEROSPACE AND DEFENSE CONTRACTORS
ACCREDITATION PROGRAM (NADCAP)**

All suppliers and processing sources used by suppliers and their sub-Tier suppliers shall be approved by ATK-MCS or provide evidence with shipment certifying that special process(es) were performed by facilities that are National Aerospace and Defense Contractors Accreditation Program

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(NADCAP) approved for the process being performed (i.e. Non Destructive testing, Heat Treating/Furnace Brazing, Chemical Processing, Coatings). Approved ATK-MCS sources can be found listed by process on the ATK Data Exchange website, which can be accessed at <https://bpl2.atk.com> in the ATK Gun Systems, Library and Miscellaneous folder. In the Miscellaneous folder, approved suppliers by process can be located in the file titled *AVL* which provides a list of ATK approved process houses.

SHIPMENT DOCUMENTATION: Each shipment shall be accompanied by a certification stating the name and address of the ATK-MCS approved processing source and the specification performed.

Q 006 HÄGGLUNDS AND/OR GOVERNMENT QUALITY ASSURANCE (GQA)

Compliance to NATO Standard AQAP 2110 paragraph 7.4.2 "All requirements of this contract may be subject to Hägglunds and/or GQA". You will be notified of any Hägglunds and/or GQA activity to be performed." If notified, Hägglunds and/or GQA activity is required prior to shipment from your plant. In the event, the Hägglunds and/or GQA representative or office cannot be located; the ATK-MCS Supply Chain Representative (buyer) should be notified immediately. Hägglunds and/or GQA do not replace ATK-MCS inspection responsibilities if so required elsewhere in this purchase contract.

SHIPMENT DOCUMENTATION: Evidence of Hägglunds and/or Government Quality Assurance (acceptance stamp or office number and signature on the shipping document) shall accompany **each** shipment of product to ATK-MCS.

Q 007 NONCONFORMING MATERIALS REQUIREMENTS

The supplier shall not deliver any material that departs from drawing, specification or maintenance requirements. The nonconformance shall be identified and controlled to prevent use or delivery to ATK-MCS or other designated destinations. The supplier shall document and maintain a system for handling, controlling, and disposition nonconforming material. This system shall ensure that **all** nonconforming material is positively identified to prevent use, shipment and intermingling with conforming material. The supplier is required to ensure containment of identified nonconformance's within the supplier's system which prevents shipments of similar defects. Product that does not meet ATK-MCS requirements may be provided to ATK-MCS only after approval has been given and documented using ATK-MCS:

VCAR: Vendor Corrective Action Record

RCCA: Root Cause Corrective Action Form

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PAR: Product Assurance Record (in electronic format this record is an EPAR)

MAR: Material Assurance Record

The supplier shall obtain written approval from ATK-MCS Supply Chain Representative (buyer). ATK-MCS approval shall be provided to the supplier via ATK-MCS: disposition or letters, methods other than this are not acceptable and may result in delays of product acceptance and purchase order/contract schedules.

The supplier is required to support an investigation into any hardware discrepancies or systemic quality concerns discovered by the supplier or ATK-MCS pertaining to the goods or services being supplied to the extent necessary for ATK-MCS review and approval. The supplier shall provide **all** information necessary (i.e. objective evidence of contributing, root cause, corrective action) to their ATK-MCS Supply Chain Representative (buyer) for review and approval of the nonconformance. Previous dispositions of similar nonconformances shall not be considered as precedents and shall require separate documentation and dispositions.

Note 1: Submittal or re-submittal of nonconforming material which has been determined acceptable by ATK-MCS by this means shall be identified on the Certificate of Conformance with the corresponding ATK-MCS VCAR, RCCA, EPAR, or MAR number.

Note 2: The supplier shall provide prompt, written notification to ATK-MCS Supply Chain Representative (buyer) if nonconforming product or process escapes are identified after shipment to ATK-MCS has taken place.

Note 3: If the supplier's investigation reveals that no actions can be accomplished or there are no actions required by the supplier, the response shall state as such and include the justification for this response.

Q 008 CORRECTIVE ACTION REQUIREMENTS

Supplier shall provide a corrective action response within 15 days for **all** discrepancies or systemic quality concerns identified by ATK-MCS pertaining to the goods or services being supplied via the applicable VCAR – Vendor Corrective Action Record, RCCA – GS1401 Root Cause Corrective Action Form, PAR – Product Assurance Record (in electronic format this record is an EPAR), MAR- Material Assurance Record, and shall state **all** the actions to be accomplished by the supplier to correct the issue. The supplier shall establish a documented procedure to define requirements for determining the cause of nonconformance's and to identify, analyze, correct, and implement appropriate actions to prevent recurrence of repetitive, significant deficiencies or similar equipment and human

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performance problems. The corrective-action system should include provisions for the nonconformance's, internal nonconformance, internal audit system nonconformance, and customer returns or corrective-action requests. Corrective actions shall be reviewed for effectiveness. If the supplier's investigation reveals that no actions can be accomplished or there are no actions required by the supplier, the response shall state as such and include the justification with their response.

Q 009 CERTIFICATE OF CONFORMANCE

The Supplier shall provide a Certificate of Conformance with **each** shipment. Your certificate must be dated and signed or stamped by an authorized representative of the supplier. Failure to submit the certification will result in rejection of the lot. Mark the appropriate container "DATA ENCLOSED." The Certificate shall include as a minimum:

- Supplier's name and location
- Manufacture's name and location (if different)
- Date of Manufacture / expiration if applicable
- Date of Certification
- ATK Part Number, Revision level, and Description
- Manufacturer's Part Numbers, if applicable
- ATK Purchase Order/Contract Number
- ATK-MCS Purchase Order/Contract Document Line Item Number(s) that the shipment is fulfilling
- Quantity of items
- Identification of the lot, batch and/or date codes, all serial numbers if applicable.
- Shelf Life Requirements, if applicable
- **All** required Governing specifications and revisions as specified on the ATK-MCS Purchase Order/Contract and notes.
- Any exclusions to the requirements of the applicable drawings, specifications, purchase document requirements, or design configuration requirements and the method by which such exclusions were authorized by ATK-MCS (e.g., an ATK-MCS Product Assurance Record (PAR) including the PAR number).

In the event that an item(s) is being delivered to ATK-MCS that was previously returned to the supplier from ATK-MCS via ATK-MCS Electronic Product Assurance Record (EPAR) and the states EPAR number. Supplier shall provide a statement on the certificate of Conformance certifying that the items in this shipment meet **all** the requirements of Purchase Order/Contract.

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Note: When the items on this purchase order are supplied by a distributor, a copy of the manufacturer's certification and the distributor's certification stating compliance and the manufacturer's name and address shall be provided.

Q 010 FASTENER MATERIAL CERTIFICATION

For procurement of ASTM, ASME, SAE, MS, AN, or NAS specification fasteners, (bolts, nuts, screws, studs, washers, rivets, pins, etc.), the following requirements apply: Hex head and socket head fasteners, shall be purchased directly from only those manufacturers traceable to a known North American manufacturing source by the fastener head logo marking and written documentation. The Hex Head and Socket Head fastener must be identified with proper grade symbol markings and shall be marked with the manufacturer's identification head logo. The certification shall identify the original manufacturers and their lot numbers for **each** lot in the shipment. Multiple lots within a shipment shall be kept separate and clearly identified as to the original manufacturers and their lot numbers.

Q 011 MATERIAL/PROCESS CERTIFICATIONS SUBMITTAL

The supplier shall include certification(s) for the material(s) and/or process(es) used in this order and includes them in the shipping documentation package. Certification(s) shall include, as a minimum;

- The purchase order number/contract and the material and/or process specification(s) number that the material(s) and/or process(es) conform to where applicable.
- the nomenclature(s) of the material(s) and/or process(es) used
- Your certification(s) must be signed by an officer/agency that has certified the material(s) and/or process (es) used whose authority is binding on your company.
- Failure to submit the certification(s) will result in rejection of the shipment.

Q 012 MATERIAL/STANDARD PART CERTIFICATION FOR AVL/QPL SOURCES

Material or Standard Parts on this purchase order/contract shall be procured from an approved supplier as indicated on the applicable ATK - MCS Approved Vendor List (AVL) or Government Qualified Product List (QPL).

NOTE: Approved sources for ATK - MCS Material Specifications and Standard Part Specifications can be obtained by contacting the ATK-MCS Supply Chain Representative (buyer) indicated on the face of this purchase order/contract. For **all** other ATK - MCS Standard Parts and ATK - MCS Material sources, reference the specification.

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SHIPMENT DOCUMENTATION: Each shipment shall be accompanied by a certification stating the name and address of the ATK - MCS AVL source or the Government QPL source and the specification number.

Q 013 NONDESTRUCTIVE TEST (NDT) CERTIFICATIONS SUBMITTAL REQUIRED

Supplier shall include with each shipment a certificate that lists the Nondestructive Tests (NDT) performed, the specification(s) used, NDT method used, and the results of the inspection. The supplier shall maintain records to include the procedures/techniques used signature or stamp of the employee performing the NDT, the NDT certification level of the employee, and the results. Identification of any sub-contracted testing services performed shall be clearly noted with the name and location of the facility.

Q 014 MCS GENERAL PROGRAM REQUIREMENTS GMS6031

Quality requirements of this purchase order/contract are included in the MCS General Program Requirements GMS603 Rev. N/C dated July 3, 2006, Purchase Description (PD) or in a Statement of Work (SOW) referenced in this purchase order/contract. MCS Quality requirements in addition to those listed in the MCS General Program Requirements GMS603 Rev. N/C dated July 3, 2006, Purchase Description (PD), or in the SOW may be imposed via drawing definition documentation, General Terms and Conditions, contractual notes and/or articles that may also form a part of this purchase order/contract.

Q 015 AMENDED ORDER – ALL PREVIOUS QUALITY REQUIREMENTS APPLY

This is an amendment to an existing order. In addition to any quality requirements that may be stated in this amendment, all quality requirements stated in previous versions of this order apply to this amendment unless otherwise specified in this amendment. Supplier quality requirements that continue to be applicable for this order may have previously been stated in Supplier Quality Requirements, Statements of Work (SOW), Purchase Description (PD), General Terms and Conditions, and/or contractual requirements of previous versions of this order. Previous First Article Inspection requirements applicable for this amended purchase order/contract apply and must be reviewed for the possibility of new First Article Inspection or “Delta FAI” submittals.

Q 016 FIRST ARTICLE INSPECTIONS PER SAE AS9102

The supplier shall complete a First Article Inspection (FAI) in compliance with AS9102 requirements on the forms directed therein and submit the FAI to ATK-MCS Quality Assurance for approval via the ATK-MCS Supply Chain Representative (buyer) prior to the delivery of any items on this

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purchase order/contract. The supplier shall perform a First Article Inspection (FAI) of this item per the Society of Automotive Engineers (SAE) document AS9102. For questions regarding SAE and for ordering SAE documents, contact the SAE website at <http://www.sae.org>. Supplier designed forms are acceptable as long as they include all data required per AS9102. Partial or complete re-accomplishment of the FAI may be required for deliveries subsequent to the original FAI as directed per AS9102 and also require submittal and approval prior to deliveries of the items. A FAI shall be performed for an item representative of the lot of the items on purchase order/contract. This includes all details and sub-assemblies which constitute the end-item ordered. The FAI shall not be considered complete until all non-conformities have been resolved and the FAI is reviewed and approved by ATK-MCS Quality Assurance.

Note 1: The FAI shall be updated when changes occur to any of the following: part number configuration, method of production, to include new process equipment and/or process flows, and/or facility re-location, a lapse in production for six months, a natural disaster, such as fire, flood or earthquake which may adversely affect the manufacturing process, or when required as part of the corrective action process for a part number having two or more rejections within a twelve month time span.

Note 2: A FAI is not required if one has already been submitted for this product on a previous procurement and there have not been any design, manufacturing process, or sub-tier supplier changes.

Q 017 FIRST ARTICLE ACCEPTANCE TEST (FAAT)

The supplier shall perform a First Article Acceptance Test (FAAT) in accordance with the FAAT Plan and any other requirements imposed by this purchase order/contract. The supplier shall submit the FAAT results to the ATK-MCS Supply Chain Representative (buyer) for review and approval by ATK - MCS Quality Assurance prior to production. ATK-MCS reserves the right to witness and/or perform surveillance by ATK-MCS, Government and/or ATK-MCS customer representatives in support of this purchase order/contract, which will be communicated via the FAAT plan or this purchase order/contract.

Q 018 ATK-MCS SOURCE INSPECTION

Source Inspection by an ATK -MCS Quality Assurance (QA) Representative is required at the supplier's facility. The supplier shall provide **all** test reports, inspection records (including access to all quality records and related data for contracted goods), facilities, assistance, equipment and personnel necessary to perform the appropriate inspection of product. Unless you are otherwise notified, the ATK - MCS QA Representative will

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perform or witness end item acceptance tests. Supplier shall notify the ATK-MCS Supply Chain Representative (buyer) at least fifteen (15) working days prior to the expected time of the presentation of the item to ATK-MCS QA Representative for source inspection. Shipment shall be withheld pending necessary action by the ATK-MCS QA Representative. Compliance to this requirement shall be denoted by a stamp and/or signature or both by the authorized ATK-MCS QA Representative on the supplier's inspection document to be included in the shipping documents package.

Relief from this source inspection requirement may only be obtained with a written waiver of source inspection from ATK-MCS Supply Chain Representative (buyer) signed by ATK-MCS Quality Assurance. The request for source inspection waiver will include the build and inspection documentation for approval by the ATK-QA Representative. The approved request shall be included with the shipping document package.

NOTE: If ATK- MCS Customer source inspection is required, ATK-MCS Customer Representative will accompany the ATK-MCS QA Representatives when the source inspection is scheduled. During the scheduling of the source inspection ATK-MCS QA Representative will notify supplier that ATK-MCS Customer will be accompany him/her during the scheduled source inspection.

Q 019A ATK-MCS SOURCE SURVEILLANCE

Alliant Techsystems maintains the prerogative of source surveillance inspection by an Alliant Techsystems Quality Representative. Alliant Techsystems will notify you if and when this option will be exercised.

Q 019B GOVERNMENTS SOURCE SURVEILLANCE

During performance of this Subcontract/Purchase Order, activities at your facility may be monitored by an authorized Government Representative through delegation from the Government QAR located at the contractor's facility. This may include audits, inspections, and/or tests. Government Inspection or release of product prior to shipment is not required unless you are otherwise notified, in writing, by the authorized government representative. (Note: Neither notification of Alliant Techsystems by the authorized government representative nor notification of the supplier by Alliant Techsystems is required.)

Q 020 GOVERNMENT SOURCE INSPECTIONS

Government inspection is required prior to shipment from your plant. Upon receipt of the order, promptly notify the Government Quality Assurance Representative (QAR) who normally services your plant, so that appropriate planning for:

- Government Source Inspection (GSI) and/or

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- In Plant Quality Evaluation (IQUE) can be accomplished.

In the event, the Government representative or office cannot be located, the supplier shall notify the nearest Army, Navy, Air Force or Defense Logistics Agency inspection office. If the representative or office cannot be located, the supplier shall notify ATK-MCS Supply Chain Representative (buyer) immediately. The delegated government representative may review work instructions and identify mandatory inspection points that the government must accept prior to further processing of the item. A letter of delegation (LOD) authority signed by the DCMA showing that the specific part number being shipped has been granted GSI delegation shall also be acceptable. Any letter of delegation authority must be linked to the part numbers that have been granted delegation. Evidence of Government Source Inspection (QAR acceptance stamp or office number and signature on the shipping document) shall accompany **each** shipment of product to ATK - MCS.

Q 021 INSPECTION RECORDS

Supplier shall provide inspection reports at the time of delivery for items on this purchase order. Reports shall include:

- the test and/or inspection procedure document number and revision level;
- part number inspected;
- serial, lot, batch, or date code numbers, as applicable
- identification of each inspection point
- the results of each inspection point and
- the identification of the person performing the inspection

Inspection results outside of the required limits that have been accepted shall reference the ATK-MCS Product Assurance Record (PAR), by which the departure was accepted. The supplier shall ensure that these requirements are flowed down through the supply chains that support the item(s) on this order. Suppliers and sub-tier suppliers shall maintain the inspection records for their respective first-tier suppliers.

Q 022 NEW DIE/MOLD VERIFICATION

You are required to perform a die/mold check on at least one part per cavity or mold on **all** drawing characteristics. The die/mold check will be recorded on a Quality Data Record No. 7 (ATK-MCS Form AQ-46) or similar vendor form that shows the print characteristic and **each** actual measurement taken. The die/mold check must be submitted to the cognizant ATK-MCS Supply Chain Representative (buyer) prior to the first production lot for ATK-MCS review and approval. **All** die/mold samples must be individually identified to the recorded variables data. **All** characteristics must be within tolerance for the die/mold check to be considered acceptable. **All** die/mold

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data for dimensional characteristics must be measured and recorded for **each** location. If your die or mold is modified or reworked, **all** characteristics affected by the rework or modification must be rechecked and the results of that check sent in prior to the first lot submitted after the rework or modification.

Q 023 LOW COST HARDWARE - PAN STOCK (PS)

The Supplier is responsible for performing or has performed **all** inspections and test necessary to substantiate that supplies or services furnished under this purchase order/contract conform to the requirements. ATK-MCS Quality Representative may elect to perform random sampling or 100% inspections. Documentation for **all** parts/hardware shall be identified with an indication of acceptance status, unique lot number, serial number, or other identifier traceable to the Supplier's manufacturing/acceptance documentation.

NOTE: Documents required for shipment with the product by other quality requirement clauses shall be reviewed for existence and adequacy by the Supplier and retained as quality records.

Q 024 ACCEPTANCE INSPECTION EQUIPMENT

Acceptance Inspection Equipment (AIE) used to perform the inspections and tests of those characteristics specifically identified must be submitted to ATK-MCS for approval prior to the first shipment of product. Acceptance of product by ATK-MCS will not be granted prior to approval. AIE documentation shall contain sufficient information to allow review and approval.

AIE identification shall include the following:

- a) Part Number, Revision, and Name
- b) Specification Number and Paragraph, if applicable
- c) Classification of Characteristics Number
- d) Characteristic description and dimension/parameter
- e) Purchase Order Number and Revision.

Submission of standard measuring equipment shall include:

- a) Manufacturer
- b) Model Number
- c) Accuracy
- d) Calibration procedure, as applicable

Functional gaging and laboratory equipment shall include:

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- a) Gage Number
- b) Gage drawing (2 copies)
- c) Set-up, calibration and operating procedures as required

If the listed characteristic is performed by a sub-tier supplier or independent inspection service, their AIE must also be submitted by you to ATK-MCS for approval.

Q 025 ACCEPTANCE TEST PROCEDURE APPROVAL REQUIRED

The supplier shall submit an acceptance test procedure for this item to the ATK-MCS Supply Chain Representative (buyer) for review and approval by ATK-MCS Quality Assurance at least 30 days prior to acceptance testing of the item. In the event the supplier performs the item's test prior to procedure approval (as identified in the purchase order/subcontract); the supplier shall be responsible for the cost to repeat the item's test and the replacement of necessary test hardware as determined by ATK-MCS. ATK-MCS approval will be provided via a contracts letter from the ATK-MCS Supply Chain Representative (buyer).

Q 026 ACCEPTANCE TEST REPORT SUBMITTAL REQUIRED

A legible and reproducible copy of the supplier's acceptance test report for this item must accompany each item's shipment. The report shall list purchase order/subcontract number, item name, part and serial number, lot code, drawing or specification number (including revision and amendments, if applicable). The report shall include a copy of the test data, copies of all test failure reports, and shall be authenticated by an authorized supplier representative attesting compliance to all applicable requirements.

Q 027 NON-INSPECTION OF HARDWARE

The hardware and/or parts (i.e. perishable goods, prototype, research, development) on this purchase order/contract are deemed "For Non-Production use". This hardware and/or parts do not require receiving inspection and certification packages.

Q 028 SOURCE PRODUCT INSPECTION, PROCESS VERIFICATION AND AUDITS

Source Product Inspection, Process Verification and Audits will be required at your plant. At any time, during the term of this purchase order/contract, ATK-MCS may notify the supplier of specific requests for on-site product inspection, product verification, and/or an audit function shall be accomplished by an authorized ATK – MCS Quality Assurance Representative. Product inspection may include selection of a random sample for independent inspection, re-inspection of your sample or witnessing of your inspection or test by an ATK –MCS Quality

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Representative. Process verification is to ensure product integrity is being maintained. The ATK -MCS Quality Representative may verify **each** process by use of the following:

- Product inspection at the process location.
- Time monitoring of the process.
- Mastering the process.
- Combination of the above.
- Other methods considered standard industry testing methods.

Audits may be performed on Product, Gaging or Test Equipment calibration, Special Processes, Procedures and Work Instructions covering the in-process activities at your plant. The supplier shall provide reasonable facilities, equipment, and assistance, including access to **all** quality records and related data for contracted goods shall be made available to the ATK -MCS Quality Representative.

Q 029 DELIVERY OF MEASURING AND TEST EQUIPMENT

Delivery of Measuring and Test equipment, provided by ATK-MCS does not relieve the vendor of responsibility of producing parts to print or any other specification imposed by this purchase order/contract. Compliance with ATK-MCS Form AT- 363, enclosed with the measuring and test equipment, provide instructions relative to the use of ATK-MCS supplied equipment. Compliance to AT-363 is mandatory.

Q 030 TEST EQUIPMENT AND GAGING

Parts, subassemblies, or assemblies furnished under this purchase order are certified as acceptable by your inspection department and are shipped to ATK-MCS stock as accepted material. You are authorized to use approved test equipment and gauging (TE&G). Deviation from approved TE&G will invalidate this certification. Control of material processing shall be per the ATK-MCS approved inspection plan. Deviation from the inspection plan will require prior approval from ATK-MCS. Inspection and test records shall be maintained for a period of three years after completion of this order unless otherwise specified in the purchase order. Certification and/or data records, if required by the P.O. and inspection plan, shall accompany **each** shipment. Acceptance of your product will be based on a complete data package when required with shipment. Mark the appropriate container "DATA ENCLOSED."

Q 031 STAMP OR ETCH GAGE

Stamp or etch **each** gage with the gage no. (When, such is shown), and with the nominal size(s) indicated on the order. In the case of thread gages,

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include Pitch Diameter values. **If the gage is too small or no places to put ID use the required calibration** standards traceable to i.e. NIST, international standards, etc. for marking.

Q 032 GAGE WEAR ALLOWANCE

Wear allowance, when specified, shall be applied plus (in addition to nominal size shown), to go plug gage members only, and minus (subtracted from nominal size shown) to go ring gages only.

Q 033 GAGE APPLIED TOLERANCES

Tolerances shall be applied **all** plus (over any wear allowance) on go plug gage members, and **all** minus on the no go members and shall be applied **all** minus (under any wear allowance) on go ring gages, and **all** plus on no go ring gages, unless otherwise specified.

Q 034 THREAD GAGES CONFORMING TO HANDBOOK H-28

All thread gages must conform to the dimensions and specifications as contained in the latest edition of Handbook H-28, and/or the latest supplement thereto, and must be full form metal lapped.

Q 035 THREAD - RING AND PLUG GAGES

Setting plugs, thread ring, shall be furnished with a truncated thread member at one end and a plain progressive member at the other end for ring minor DIA. Inspection. Progressive member to be made to class X tolerance applied plus to max. step and minus to min. step.

Q 036 GAGE MATERIAL

Material for **all** gages (excluding handle) shall be a high grade wear resistant type tool steel properly heat treated, unless indicated to be otherwise above.

Q 037 GAGE/TOOL/INSTRUMENT REPAIR

The above-listed items are to be repaired for defects as marked, or as otherwise necessary. Repair no item when the cost of such repair will exceed 50% of the replacement cost, without first obtaining authorization from the buyer.

Q 038 GAGE MEMBERS ORDER AS SEPARATE ITEMS

Gage members ordered as separate items shall have the size etched on a nonfunctional surface (size permitting), otherwise gum label or furnish in plainly marked containers.

Q 039 SPECIAL TOOLING REQUIREMENTS

All special tooling on this purchase order/contract shall be fabricated and inspected in compliance with the enclosed Tool Order, applicable Tooling

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Manual, and ATK - MCS Inspection Plan, if applicable. For **all** special tooling that will be retained by the supplier for the purpose of fabricating production parts for ATK, the supplier shall notify ATK - MCS Supply Chain Representative (buyer) one week prior to tool completion to schedule ATK - MCS Tool Quality Source Inspection.

This order includes special tooling that will remain the property of ATK - MCS or the U.S. Government. The referenced special tooling shall be stored at the supplier's location. The supplier shall take reasonable care of said tooling. The special tooling is not to be used for products not identified on this procurement without the written consent of ATK - MCS. Supplier shall not remove any markings from the property. Supplier agrees not to sell, assign, loan, lease, mortgage, borrow against, pledge, or otherwise create a legal or equitable interest in the special tooling or otherwise permit the tooling to be subject to any legal process. Supplier shall attach an ATK - MCS supplied property tag to the special tooling identified on this order. The supplier shall maintain inventory records for the identified item(s). Copies of such records shall be made available to ATK - MCS upon request.

Q 040 NEW OR MODIFY TOOLING REQUIREMENTS

As a requirement of this purchase order/contract you must submit a separate pilot lot or tool sample for preproduction acceptance of a new or modified tooling. The sample shall be representative of the intended production process. The sample is to be 100% inspected for **all** drawing dimensions. Your variable inspection data and required certifications shall be supplied with the preproduction sample. Approval of this lot is required before ATK - MCS inspection of any production lots. If you have supplied parts that have had tool sample approval from ATK - MCS, and the tooling has not been modified in any way, a new sample is not required.

Q 041 CONTRACT KICK-OFF MEETING AT SUPPLIER'S FACILITY

The supplier shall host an ATK-MCS Contract Kick-Off Meeting prior to the supplier starting the manufacturing process for the items on this order. This meeting is held to ensure that the supplier understands all purchase order/contractual requirements including technical, quality assurance, and schedule expectations. ATK -MCS may provide representatives from any ATK -MCS function including Quality Assurance, Engineering, the Supply Chain Representative, and Technical Representatives as appropriate to ensure success of this meeting. Subjects to be covered may include, but are not limited to: Purchase Order/Contract review; Quality flow-down requirements; Drawing requirements; Statement of Work (SOW) review; Specifications applicability; Unit delivery schedule; Shipping requirements; Design/manufacturing baseline discussions; Sub-tier supplier identification;

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Special process controls; Configuration/document control; Inspection expectations.

Q 042 MANUFACTURING BASELINE REVIEW

Prior to the start of manufacturing of the item(s) on this order, the supplier shall submit to the ATK-MCS Supply Chain Representative (buyer) for review by Quality Assurance and Engineering a manufacturing baseline for the item(s) being supplied. The manufacturing baseline shall consist of a detailed flowchart identifying the sequence of the item's manufacturing operations to be performed, the manufacturing processes that are employed in the manufacture of the item, the methods for measuring manufacturing process performance (metrics), the points within the manufacturing sequence where inspection is to be performed, the type of each inspection specified, and, if applicable, the specifications that define each inspection requirement. The manufacturing processes includes all manufacturing procedures, work instructions, travelers, manufacturing process procedures and inspection and test procedures and shall be identified by the document title, number, and revision level. The baseline shall include similar data from sub-tier suppliers down to the lowest sub-assembly level. These documents shall be made available for ATK-MCS review at the supplier's facility upon request.

Q 043 APPROVAL OF CHANGES TO PROCESSES REQUIRED

The supplier shall notify ATK-MCS Quality Assurance via the ATK-MCS Supply Chain Representative (buyer) of any proposed or inadvertent changes to manufacturing procedures, work instructions, travelers, manufacturing process procedures, and inspection and test procedures identified in the Manufacturing Baseline (Q 042) prior to incorporation of such changes. The supplier shall not proceed without written approval from ATK-MCS Quality Assurance via the ATK-MCS Supply Chain Representative (buyer). The supplier shall ensure that these requirements are flowed down through the supply chains that support the item(s) on this order to the lowest subassembly level.

Q 044 ENGINEERING EVALUATIONS

The Supplier shall identify part(s) "FOR ENGINEERING EVALUATION ONLY" per OPS 8-5 Type I, Class 3, unless otherwise stated on the applicable drawing.

Q 045 ENSURING SOLDER INSPECTION TO IPC-A-610 (CLASS 3)

IPC-A-610 Class 3 requirements for solder inspection criteria on electrical and electronic assemblies apply to this purchase order/contract. These requirements are also applicable to sub-tier suppliers. ATK – MCS must

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audit compliance to this requirement prior to your company initiating any soldering operations for products on this purchase order/contract.

Q 046 DEVICES REQUIRING SOLDERABILITY TO MIL-STD-883

Solderability of the leads must meet the requirements of MIL-STD-883, Method 2003.

Q 047 DEVICES REQUIRING RESISTANCE TO SOLVENTS PER MIL-STD-883

A sample from **each** date code in the lot of parts supplied to this purchase order must have successfully passed all the resistance to solvent tests specified in MILSTD-883B, Method 2015.

Q 048 ENSURING SOLDERABILITY TO MIL-STD-883

Leads must be solderable per MIL-STD-883, method 2003 and be either tin-lead, hot-dipped, or electro-tin plated. The minimum plating thickness, if not tin-lead dipped, shall be 150 micro-inches.

Q 049 DEVICES REQUIRING SOLDERABILITY TO MIL-STD-750

Solderability of the leads must meet the requirements of MIL-STD-750, Method 2026.

Q 050 ENSURING SOLDERABILITY TO MIL-STD-750

Leads must be solderable per MIL-STD-750, method 2026 and be either tin-lead hot-dipped or electro-tin plated. The minimum plating thickness, if not tin-lead dipped, shall be 150 micro-inches.

Q 051 ENSURING SOLDERABILITY TO MIL-STD-202

Leads must be solderable per MIL-STD-202, method 208, and be either tin-lead hot-dipped or electro-tin plated. The minimum plating thickness, if not tin-lead dipped, shall be 150 micro-inches.

Q 052 ENSURING SOLDERABILITY TO MIL-STD-202 WITHOUT SPECIFYING PLATING TYPE OR PROCESS

Solderability of leads must meet the requirements of MIL-STD-202, Method 208

Q 053 SOLDER LEAD COATING IS REQUIRED

Each part shall have a lead finish consisting of hot-dip coating of tin-lead solder, 60 micro inches minimum thickness for round leads and 200 micro inches minimum thickness for **all** other shapes, applied over the base metal or initial finish. The solder coating shall consist of alloy Sn60 or Sn63 procured in accordance with QQS-571. The coating shall show no signs of flux residue; allowable dewetting/nonwetting shall be in accordance with the appropriate industry standard identified below.

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- **All** Leads must meet the solderability requirements of the appropriate spec.
- Upon receipt at ATK-MCS, a sample from **each** lot may be inspected for solderability per J-STD-002, Category 3 (8-hour Steam Aging)
- Any lot which fails solderability will be rejected.

Q 054 ENSURING SOLDER REQUIREMENTS PER J-STD-001

J-STD-001 (Class 3) requirements for soldering electrical and electronic assemblies apply to this purchase order/contract. These requirements are also applicable to sub-tier suppliers. ATK – MCS must audit compliance to this requirement prior to supplier initiating any soldering operations for products on this purchase order/contract.

Q 055 ENSURING SOLDERABILITY PER J-STD-002

Solderability of electronic and mechanical components and wires must the criteria of J-STD-002 Category 3.

Q 056 ENSURING SOLDERABILITY PER J-STD-003

Solderability of printed wiring boards must the criteria of J-STD-003 Category 3.

Q 057 MEETING J-STD-004 REQUIREMENTS

Fluxes shall meet the requirements of J-STD-004, Types RO, RE, or OR and activity levels L0 or L1.

Q 058 MEETING J-STD-004, J-STD-005, AND J-STD-006 REQUIREMENTS

Solder paste shall meet the requirements of J-STD-004, J-STD-005 and J-STD-006.

Q 059 MEETING J-STD-004 & J-STD-006 REQUIREMENTS

Solder wire shall meet the requirements of J-STD-004, and J-STD-006.

Q 060 MEETING J-STD-006 REQUIREMENTS

Solder bar shall meet the requirements of J-STD-006.

Q 061 PRINTED CIRCUIT INNER LAYER AND PRINTED CIRCUIT BOARDS REQUIREMENTS

For **all** Printed Circuit Inner layers and Printed Circuit Boards operations done by suppliers in support of ATK-MCS manufacturing of this purchase order/contract, any rework that was accomplished by the supplier must be documented and a copy of the documentation provided with the shipping documents package. Documentation includes, but is not limited to; the supplier's reject document, the supplier's rework routing that includes what requirements/specifications the rework complies to, and the documentation

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that the supplier accepted the rework process performed. Supplier is required to perform an engineering evaluation of Printed Circuit Inner layers by an ATK - MCS Representative is required prior to lamination. Printed circuit boards supplied under this purchase order/contract shall meet all requirements of Engineering Specification (ES) 8355. The revision in effect on the date of this order is applicable to this purchase order/contract. The supplier shall ensure that these requirements are flowed down through the supply chains to sub-tier suppliers that support the item(s) on this order.

Q 062 ENSURING SOLDER INSPECTION TO IPC-A-620 (CLASS 3)

IPC-A-620 Class 3 requirements for Acceptance of Cable and Wire Harness Assemblies apply to this purchase order/contract. These requirements are also applicable to sub-tier suppliers. ATK – MCS must audit compliance to this requirement prior to your company initiating any soldering operations for products on this purchase order/contract.

Q 063 ESD PRECAUTIONS REQUIRED

Items furnished on this order are considered to be Electrostatic Discharge (ESD) sensitive and shall be handled during manufacture, assembly, and transportation per the requirements of ANSI/ESD S20.20, MIL-STD-1686, or JESD625-A. The item(s) and its subassemblies and details shall be protected from ESD damage during the manufacture and delivery from sub-tier suppliers and packaged in conductive or static-dissipative packages, tubes, carriers, conductive bags, etc., as appropriate for the item(s) being delivered along the entire supply chain to ATK-MCS. The supplier shall ensure that these requirements are flowed down through the supply chains for ESD sensitive items to be used on this order. For shipment to ATK - MCS, parts of this type shall be packaged in such a manner that one of the following conditions exists:

- 1) **Each** part to be individually wrapped in a material with a surface resistivity of one tera ohm/square, maximum; or,
- 2) All parts to be packed so their exposed leads or pins are shorted together through a material whose surface resistivity is one tera ohm/square, maximum antistatic treated tubes are acceptable; or,
- 3) TO- and DO-style packages may be packed in quantities no greater than 250 in bags fabricated from material with a surface resistivity of one tera ohm/square, maximum. **All** part containers and lot associated paperwork shall indicate the ESD sensitivity of the supplied items. Packing shall provide the necessary protection during shipping.
- 4) At supplier's request, ATK - MCS can supply ESD precautionary labels for use on **all** containers and paperwork.

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Q 064 STATISTICAL PROCESS CONTROL

The use of Statistical Process Control (SPC) is a requirement of this order. The SPC techniques recommended for use are defined in the 1985 editions of the American National Standards Institute (ANSI) documents ANSI Z1.1, Z1.2, and Z1.3 and the American Society of Quality Control (ASQC) documents B.1, B.1, and B.3. By accepting this order, the supplier agrees to complete a Process Control Document (PCD). The supplier shall submit this document to ATK - MCS 30 days before the start of production. ATK - MCS will review the document and identify key process change control parameters and return a copy back to the supplier.

The supplier shall develop and maintain a disciplined process change management system for ensuring those processes that control key product characteristics identified by ATK - MCS as critical, major, and/or special plus those identified by the supplier as important are controlled and changed only after careful review by the supplier, and by ATK - MCS when required by the PCD.

The PCD shall consist of a flowchart and a Process Control Detail Plan (ATK - MCS Form AS-869 or equivalent). The Detail Plan must list all identified key characteristics and describe the control method for each characteristic. The flowchart must be of sufficient detail to show where in the process each key characteristic will be controlled. This may be accomplished by referencing the process operation or step number from the flowchart on the Detail Plan.

The supplier is required to utilize SPC to optimize key processes. When SPC is used, variable data is preferred. The PCD will be submitted to ATK - MCS for review. ATK - MCS will identify **all** process steps requiring ATK - MCS review before change. If a key process or process step is determined to be critical to safety or performance ATK - MCS will classify the process as class 1 and require **all** associated process documentation to be included in the PCD for change control purposes. **All** changes to class 1 process will require ATK - MCS review before implementation. For class 2 processes ATK - MCS will identify what process parameters will require ATK - MCS review before changes occur. Process steps identified as class 3 only require ATK - MCS notification prior to a change. Once reviewed by ATK - MCS and approved by the supplier, the PCD will become the controlling process document for the duration of the purchase order/contract.

The PCD must be submitted, reviewed, and returned before the supplier starts fabrication or production of the product. The supplier shall develop an SPC management plan which describes their policy and commitment regarding SPC, their organization relative to SPC, and which defines the following:

- Who performs SPC checks and who is responsible for corrective action;

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- which SPC charts are used; how sample sizes and frequency are determined;
- definitions of out-of-control conditions and how they are managed;
- how suspect material is disposition; what training is provided;
- the audit system for charting accuracy and;
- What system is used to flow-down SPC requirements to sub-tier suppliers.

If the elements of the SPC plan are described in existing supplier documentation it is acceptable for the supplier to document references to the elements in a matrix in lieu of a separate SPC Management Plan document. This plan shall be submitted to ATK - MCS if specifically requested in the purchase order. The supplier shall submit a Process Control detail plan as part of the PCD containing the following elements, as a minimum.

- A completed ATK - MCS PC detail plan (Form number AS-869 or an ATK - MCS approved equivalent).
- A description of the system to be used for identifying out-of-control conditions to ATK - MCS and for the submittal of a corrective action plan to remove such conditions.
- A listing of implementation/improvement milestones for achieving the ATK - MCS recommended minimum capability ratio (Cpk) of 1.33 for major and special characteristics and 2.0 for critical characteristics and KEY Characteristics.

If SPC is not used for required critical, major, or special characteristics, the supplier shall identify those characteristics and the alternate method of control in the PCD and detail plan (column I on Form AS-869). The supplier shall not submit SPC data with this order unless specifically requested to do so in the purchase order/contract. ATK - MCS reserves the right to monitor the supplier's SPC program/performance at the supplier's facility via surveillance or audit for those processes or characteristics controlled by SPC.

Q 065 DELIVERY HOLD - UNRELEASED PRODUCT DEFINITION

Supplier shall not allow delivery of the item(s) listed in this order to ATK-MCS until this order has been revised and updated deleting this text. This order is being placed prior to **all** of the technical requirements being defined, approved, and documented within ATK-MCS internal design, configuration management, and procurement processes. The item(s) on this order are being initiated using preliminary, un-released product definition sometimes referred to as "red-lined drawings" to allow initial actions in support of unique program requirements. Therefore, the supplier shall not use the

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technical data requirements provided in this order for final product acceptance.

Q 066 PROCESS CONTROL DOCUMENT

The use of a documented Process Control is a requirement of this purchase order/contract. By accepting this purchase order/contract, the supplier agrees to complete a Process Control Document (PCD). The supplier shall submit this document to ATK - MCS 30 days before the start of production. ATK - MCS will review the PCD and identify key process change control parameters and return a copy back to the supplier. The supplier shall develop and maintain a disciplined process change management system for ensuring those processes that control key product characteristics identified by ATK - MCS as critical, major, and/or special plus those identified by the supplier as important are controlled and changed only after careful review by the supplier, and by ATK-MCS when required by the PCD. The PCD shall consist of a flowchart and a Process Control Detail Plan (ATK - MCS form AS-869 or equivalent). The Detail Plan must list **all** identified key characteristics and describe the control method for **each** characteristic. The flowchart must be of sufficient detail to show where in the process **each** key characteristic will be controlled. This may be accomplished by referencing the process operation or step number from the flowchart on the Detail Plan. The supplier is encouraged to utilize SPC to optimize key processes. When SPC is used, variable data is preferred. The PCD will be submitted to ATK-MCS for review. ATK - MCS will identify **all** process steps requiring ATK - MCS review before change. If a key process or process step is determined to be critical to safety or performance ATK - MCS will classify the process as class 1 and require all associated process documentation to be included in the PCD for change control purposes. All changes to class 1 process will require ATK - MCS review before implementation. For class 2 processes ATK - MCS will identify what process parameters will require ATK-MCS review before changes occur. Process steps identified as class 3 only require ATK-MCS notification prior to a change. *Changes requiring ATK-MCS review will utilize ATK-MCS form GS627 or equivalent.* Once reviewed by ATK-MCS and approved by the supplier, the PCD will become the controlling process document for the duration of the purchase order/contract. The PCD must be submitted, reviewed, and returned before the supplier starts fabrication or production of the product.

Q 067 SUB-TIER SUPPLIER LIST SUBMITTAL

For supplier's procurements other than standard hardware, raw materials, non-metallic packaged commodities, or those items procured from a distribution facility, supplier shall submit for review to ATK-MCS Quality Assurance via ATK-MCS Supply Chain Representative (buyer) a statement listing all sub-tier suppliers used and/or planned in support of this order. The

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list shall contain the name, location, and products/services provided of each sub-tier supplier listed. Any change to this list requires re-submittal of the list to ATK-MCS Quality Assurance.

Q 068 CONTROL CONFIGURATIONS

The Supplier shall assure that the current configuration of all drawings, specifications, and instructions required by the purchase order/ contract, as well as authorized changes, are used for manufacturing, inspecting, and testing. Supplier's configuration management system will control **all** elements of the supplier's and sub-tier suppliers' design, design changes, manufacturing and process procedures, manufacturing and process procedure changes, test procedures, and test procedure changes of the items on this purchase order/contract. The devices in this order may require new interfix number assignment and/or first article qualification prior to implementation if:

- A) The contractor's manufacturing techniques or process controls which affect the form, fit, function, or internal geometry of the device are revised by either the contractor or one of his subcontractors supplying parts or assemblies.
- B) The contractor relocates his assembly facility, or any part thereof.
- C) A major change in material used for the device process or assembly which may affect performance, quality, reliability, or interchangeability is made. Device qualification and interfix assignment shall be determined by ATK-MCS after analysis of each proposed change. ATK-MCS will not accept any lots with mixed or intermixed interfix numbers. **All** lots are to be homogeneous.

Q 069 FIRMWARE/SOFTWARE CONFIGURATION

By accepting this purchase order/contract the supplier agrees to maintain an archived version of the baseline firmware/software specified in this purchase order/contract. The supplier agrees to notify ATK-MCS Supply Chain Representative (buyer) prior to revising the firmware/software from the specified version. ATK-MCS reserves the right to deny accepting a revised version without prior notification of the revision and may continue to order the original version of firmware/software as specified in this purchase order/contract for the period of time as specified in the contract. This requirement shall be flowed down to those subcontractors (and any lower level subcontractors) which provide firmware and/or software to the supplier. The firmware/software supplied to this order which performs any date and/or time data recognition function, calculation, or sequencing, will be expected to support a four-digit year format and will provide accurate date/time data and leap year calculations on and after December 31, 1999.

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Q 070 OVERHAUL, CONFIGURATION UPGRADE, REWORK OR REPAIR ORDER

This item shall be overhauled, upgraded, reworked or repaired to the condition identified in this purchase order. If the work includes processing, material or a standard part from an ATK - MCS specification that requires an approved source, see note below. If the work entails a configuration upgrade/part number change, a supplemental first article inspection shall be completed. Line items on this purchase order/contract that are replaced instead of reworked/repaired will have production quality requirements required in lieu of this requirement. Supplier shall contact ATK-MCS Supply Chain Representative (buyer) prior to replacing items to obtain production quality requirements. If the Supplier can not confirm/duplicate the nonconformance cited on the Product Assurance Record (PAR), the Supplier must contact ATK-MCS Supply Chain Representative (buyer) in writing. The written correspondence must include the PAR serial number, the reason for the request, and corroborating documentation such as test data, inspection results, etc. Product shall not be returned to ATK-MCS until the Supplier has received direction via instructions contained on the revised PAR.

NOTE: The face of this purchase order/contract lists the Internet addresses for; PAR revision process, ATK - MCS approved process sources, and for approved sources for ATK – MCS Material Specifications and Standard Part Specifications. For **all** other ATK - MCS Standard Parts and ATK – MCS Material sources, reference the specification.

SHIPMENT DOCUMENTATION:

1. **Each** shipment shall be accompanied by a certification identifying the ATK - MCS approved processing source and the specification performed.
2. Statement of work accomplished -- Supplier shall reference the PAR number (as applicable) and state what action was performed on the product, i.e. overhaul, configuration upgrade, reworked, repaired, or replaced.
3. If the Supplier cannot confirm/duplicate the nonconformance, documentation referencing the revised PAR number and stating "CAN NOT CONFIRM/DUPLICATE" shall be included with the shipment.

Q 071 REQUIREMENTS FOR REWORK

The supplier shall submit a rework procedure along with the associated inspection procedures for this item to the ATK-MCS Supply Chain Representative (buyer) for review and approval by ATK-MCS Quality Assurance prior to reworking any materials. ATK-MCS approval will be

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provided via the Product Assurance Record (PAR) (in electronic format this record is an EPAR) or Material Assurance Record (MAR) from the ATK-MCS Supply Chain Representative (buyer). ATK - MCS will determine whether the material can be reworked to meet print tolerances. Supplier shall provide objective evidence of Root Cause and Corrective Action will accompany the PAR or MAR to ATK - MCS. The Supplier shall not assume non-conforming materials are rework-able; disposition of the anomaly is the responsibility of ATK - MCS.

The rework must be documented and a copy of the documentation provided with the shipping documents package. Documentation includes, but is not limited to;

- (PAR) or (MAR),
- the supplier's reject document,
- the supplier's rework routing that includes what requirements and/or specifications the rework complies to, and
- the documentation that the supplier accepted the rework performed.

Q 072 SUPPLIER DRAWING

Supplier shall provide a complete set of the drawings or a 3D CAD Models where applicable that define the item in this purchase order/subcontract to the ATK-MCS Supply Chain Representative (buyer). The set of drawings shall include all drawings from the end item assembly drawings down to the lowest assembly level. All drawings shall be forwarded to the ATK-MCS address listed on this order and to the attention of the Supply Chain Representative (buyer) listed herein.

Q 073 PARTS LIST REQUIRED

The supplier shall submit to ATK-MCS Quality Assurance, via the ATK-MCS Supply Chain Representative (buyer), a parts list for all assemblies and subassemblies for the item(s) on this purchase order/contract down to the lowest subassembly level. In addition, any alternate parts lists that may apply to the item(s) shall also be submitted. This requirement includes parts lists and alternate parts lists for assemblies and subassemblies from sub-tier suppliers. If any of the parts identified on the listings are supplier or sub-tier source control drawings, the parts lists of the source control drawings shall also be included.

Q 074 INSPECTION DATA

Supplier shall provide with **each** shipment an inspection plan/report results recorded either on ATK-MCS supplied data record form or supplier's own form at the time of delivery for item(s) on this purchase order. Suppliers shall identify, in writing, the methodology for controlling and recording

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inspection of **all** design characteristics. The inspection plan/report shall be documented to record the inspection plan for a part to ensure that **all** engineering drawing characteristics and notes are subject to inspection or control by the appropriate methods.

The inspection plan/report shall show the quantitative measurement results and tolerance(s) for values measured and shall include information to demonstrate conformance to the requirements of the engineering drawing/procurement specification or purchase order. The inspection/report shall include: the test and/or inspection procedure document number and revision level; part number inspected; serial, lot, batch, or date code numbers, as applicable; identification of each inspection point (characteristics); the results of **each** inspection point; sample size, number found defective, process reference (i.e., ASTMXXXX, MIL-STD-XXXX, or industry standard XXX), the lot size and the identification of the person performing the inspection. Results shall be recorded as actual or ranges of data if taken with a variable gage, or attribute if taken with an attribute gage (attribute gaging may be used when variable gaging is not feasible). Characteristics that are subject to change after in-process acceptance (e.g., growth, shrinkage, and/or distortion) must be re-inspected prior to final acceptance.

Inspection results outside of the required limits that have been accepted shall reference the ATK-MCS Product Assurance Record (PAR) by which the departure was accepted. The supplier shall ensure that these requirements are flowed down through the supply chains that support the item(s) on this order. Suppliers and sub-tier suppliers shall maintain the inspection records for their respective first-tier suppliers. When equipment is listed as mandatory on the Classification of Characteristics you must use it.

Note: Your inspection data must include ATK_MCS purchase order number/contract. Mark the appropriate container "Data Enclosed."
Acceptance of your product will be based on inspection at ATK-MCS unless otherwise stated in this purchase order/contract.

Q 075 AMMO DATA CARD

Supplier shall submit an "Ammo Data Card" in accordance with MIL-STD-1168 current revision with **each** shipment of material furnished under this purchase order. Interpretation of specific questions should be clarified by the Government Representative servicing your facility or contact the ATK-MCS Supply Chain Representative (buyer) administering the purchase order/contract.

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Q 076 TEST DATA REPORT

The supplier shall submit an entire test data report for this item upon successful completion of the item's acceptance testing. The test report shall include:

- the ATK - MCS Purchase Order/Contract number
- Listing the characteristics inspected, product serial number (if applicable), sample and lot size, actual measurement(s), and number found defective.
- all recorded test results used during all phases of the item's testing through final acceptance testing showing quantitative measurement results and tolerance(s) for values measured including all special testing performed on the item, any noteworthy observations, anomalies, or unexpected events.
- Serial numbers, lot numbers, date codes, and all other identifications used to track the item tested.
- Test data annotated with appropriate test operator and quality inspector signatures and/or stamps applied.
- Copies of **all** major and minor nonconformance's and test failure reports with root cause and corrective action and
- Information to demonstrate conformance to the requirements of the engineering drawing/procurement specification or purchase order/contract.

SHIPMENT DOCUMENTATION: Each shipment shall include a copy of the inspection plan/report for delivered product using an ATK - MCS supplied data inspection plan/report (if mandated) or on your own form for the product features identified. Mark the appropriate container "Data Enclosed." Acceptance of your product will be based on inspection at ATK - MCS unless otherwise stated in this Purchase Order/Contract.

Q 077 CERTIFIED MATERIAL TEST REPORT

Certified Material Test Reports are required for **each** lot shipped against this purchase order/contract including First Article Inspection (FAI). The certification must contain actual test results demonstrating that the material (coating, sealant, metal, plastic, etc.) complies with the requirements of applicable drawings and specifications. **All** test data certifications are to include the following as a minimum:

- Name and address of supplier.
- ATK-MCS purchase order number.
- Identification of material specification, revision, amendment and dates, together with type, grade, size, etc.

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- Total quantity of material/parts shipped.
- Test results (actual) identified by reference to the applicable requirements (Chemical, Physical and Mechanical).
- Quantity tested, sample size, and specimen type as applicable.
- Date, Signature and Title of the authorized representative of the Supplier that is attesting to the accuracy and validity of test report content.

Q 078 RECORDS RETENTION REQUIREMENTS

Quality records generated as the results of performance to an ATK -MCS issued purchase order/contract shall be maintained and preserved as legible for a period of seven (7) years and available for review by authorized ATK -MCS representatives, ATK -MCS customers, and/or Government representatives. Additionally, distributors shall assure that manufacturers maintain quality assurance/inspection records and that these records are also available upon request. These records shall include, but are not limited to, receiving, in-process, and final inspection records, Certificates of Conformance, raw material Mill certifications, test results, documented non-conformances and corrective actions, and Measuring and Test Equipment calibration documentation etc..

After this retention period, ATK-MCS shall be notified of the intent to dispose of any records and shall be given the opportunity for further retention at ATK-MCS facility.

Q 079 RUBBER CURE

This product shall be marked with the cure date in accordance with the engineering drawing or MIL-STD-129 when not defined by the drawing. Assemblies, which contain synthetic rubber/elastomeric parts, shall have the cure date of the oldest part permanently marked on the assembly.

Q 080 MATERIAL SOURCES AND/OR LOT CONTROLLED

Material supplied on this purchase order/contract must be source and date/lot controlled. The date/lot code shall identify either the date of manufacture of the item(s) or the manufacturing lot from which the item(s) originated, or both. If a date code is used, the date code shall identify the date(s) of manufacture in a method that prevents ambiguity and provides positive identification of a date or range of dates that include a year identifier. The date/lot code shall be physically marked on each item or on the item's bag, package, container, or strip mount. The quantity and date/lot code shall be individually listed on the packing slip or certification document.

Supplier is required to include with **each** shipment to ATK - MCS, a written certification stating the name and address of the material source, the material specification name and number, and the material lot number or

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date code. Objective evidence to substantiate this statement must be on file and available for review. Mark the appropriate container "Data Enclosed."

Q081 DATE/LOT CODE PART IDENTIFICATION REQUIRED

Supplier shall assure items on this purchase order are identified with the manufacturer's date/lot code. The date/lot code shall identify either the date of manufacture of the item(s) or the manufacturing lot from which the item(s) originated, or both. If a date code is used, the date code shall identify the date(s) of manufacture in a method that prevents ambiguity and provides positive identification of a date or range of dates that include a year identifier. The date/lot code shall be physically marked on **each** item or on the item's bag, package, container, or strip mount. The quantity and date/lot code shall be individually listed on the packing slip or certification document. No more than one date code per line item schedule and no partial shipments are acceptable. If this is not possible, prior written concurrence from the ATK-MCS Supply Chain Representative (buyer) is required.

Q 082 SHELF LIFE REQUIREMENTS

Product supplied, or any product used in a part or assembly supplied under this purchase order/contract, is considered age sensitive by the product's manufacturer, the shipping documents shall state the shelf life and any unique environmental storage conditions required. The supplier shall assure that a minimum of 75% of the shelf life is remaining at time of shipment to ATK-MCS. If the product requires unique environmental storage conditions, the exterior package shall be prominently marked indicating the type of storage required. The date of manufacturer and expiration date must appear on a certificate supplied with the material. Mark the appropriate container with "Data Enclosed."

Q 083 AGE CONTROL AND LIFE LIMITATIONS REQUIREMENTS

The items supplied under this order are subject to age limitations. The date of manufacturer and expiration date must appear on a certificate supplied with the material. Age control & life limited products shall be identified with the date of manufacture, test time or cycle at which useful life will be expended. (i.e. shelf life or cycle life). Products supplied to ATK-MCS, shall have a minimum of 75% of its life expectancy remaining. Mark the appropriate container with "Data Enclosed".

Q 084 IDENTIFICATION TRACEABILITY REQUIREMENTS

The supplier shall provide and maintain a system to identify the manufacturer of the item(s) on this purchase order/contract to support material traceability by Material Control (MC) number (MC number shall be marked on the material) and item identification/traceability as specified on the engineering drawing or specification. The supplier shall maintain

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traceability data for parts, materials, and assemblies from procurement through fabrication, assembly, test and delivery. The traceability data shall provide for the ready identification of suspect lots when individual items are found discrepant. When identification is not specified on the engineering drawing or specification, the product shall be identified with the part number specified on the purchase order/contract. When items are too small to easily identify, they may be bagged and tagged. This identification/traceability shall be noted in the supplier's shipping documentation package such as on the supplier's Certificate of Conformance or packing/shipping document.

Q 085 REQUIRED LOT NUMBER GENERATION FOR AMMUNITION

Supplier is required to perform ammunition lotting in accordance with MIL-STD-1168 current revision. The ammunition lot number shall consist of a manufacturer's identification symbol, a numeric code showing the year of production, an alpha code representing the month of production, a lot interfix number followed by a hyphen, a lot sequence number when necessary, an alpha character used as ammunition lot suffix to denote a reworked lot. The ammunition lot number will not exceed 14 characters in length and no characters will be separated by spaces. The minimum number of characters used will be 13. If a one- or two-character manufacturer's identification code is used, the remaining positions of the 3-character field will be filled by dashes (-), e.g., C--, CA-, etc. The following illustrates the construction of an ammunition lot number: AMC75D018-124B.

AMC = Manufacturer's identification symbol

75 = two digit numeric code identifying the year of production

D = A single alpha code signifying the month of production

018 = Lot interfix number

124 = Lot sequence number

B = Ammunition lot suffix (the alpha suffix)

Q 086 HOMOGENEOUS SUPPLIED MATERIALS

All material supplied under this order shall be homogeneous as defined below. Homogeneous supplies are defined as material which is produced:

- A. To the same design as defined by ATK - MCS and suppliers' documentation.
- B. From the same material as defined by the applicable material specification. When alternate materials are allowed by the purchase order and associated documents, the supplier must certify to a specific alternate. After material has been submitted to ATK – MCS, the supplier may not change alternates without prior written approval from ATK - MCS.

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- C. By the same manufacturing process as defined by the supplier's manufacturing plan.

Changes in manufacturing location or production discontinuities of one month or more violate this requirement. **All** manufacturing process sheets shall have a revision date not later than the date of initial shipment of supplies to ATK - MCS and the process used to manufacture the initial product shipment and all shipments thereafter. Departure from these requirements must be approved in writing by ATK – MCS MQE/QE prior to departure. Changes initiated by ATK - MCS do not void this requirement.

Q 087 REQUIREMENTS FOR CALIBRATION SERVICES

Items supplied on this purchase order/contract require a calibration service and shall be calibrated by an organization whose system is in compliance with Calibration System Requirements; ISO 10012-1, Metrological confirmation system for measuring equipment; ISO/IEC 17025 using standards traceable to the National Institute of Standards and Technology (NIST), or ANSI/NCSL Z540-1, Calibration Laboratories and Measuring and Test Equipment—General Requirements.

The Supplier shall provide a calibration certificate for each unit or item delivered shall also have a data sheet attesting to the actual measurements for **each** ATK - MCS identified characteristic of calibration **each** item specified on the ATK - MCS purchase order/ contract. **Each** unit or item delivered shall also have a data sheet attesting to the actual measurements for **each** ATK - MCS identified feature of calibration. The data sheet shall include a list of the actual results for **all** the characteristics including tolerances as specified by ATK - MCS. **All** certifications and supporting data shall be included in the shipping documentation package.

During the performance of this order, your calibration system and manufacturing processes are subject to review, analysis, and verification by ATK –MCS Quality Assurance Representative.

Note: Contact ATK Quality department for questions regarding calibration dimensions and for approval of the Calibration Certificate prior to shipment.

SHIPMENT DOCUMENTATION:

1. A Calibration Certificate shall be sent stating the identification of the item, reference to the calibration standards used, date calibration was performed, environmental conditions, measurement traceability (i.e.; traceable to NIST, international standards, etc.) and a statement referencing the calibration or quality system used by the Seller or company performing the calibration certification.
2. **Each** Shipment shall include a copy of the calibration inspection data sheet/report for each delivered product (Using either an ATK-Mesa

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supplied data calibration inspection data sheet/report or on your own form) for the product features identified.

Q 088 GOVERNMENT PROPERTY

Item(s) furnished to the supplier in conjunction with this order are the property of the U.S. Government. The supplier assumes total responsibility for care and maintenance of said property unless otherwise agreed to in this purchase order/contract. The supplier shall maintain accurate inventory and use records for the property and provide this information to ATK-MCS upon request. The property is not to be used for products not identified on this procurement without the written consent of ATK-MCS. Supplier shall not remove any markings or tags from the property. Supplier agrees not to sell, assign, loan, lease, mortgage, borrow against, pledge, or otherwise create a legal or equitable interest in the item(s) or otherwise permit the item(s) to be subject to any legal process. The supplier shall use form DD1149 when transporting government property back to ATK-MCS.

Q 089 ATK-MCS PROPERTY

Item(s) furnished to the supplier in conjunction with this order are the property of ATK-MCS or ATK-MCS customer. The supplier assumes total responsibility for care and maintenance of said property unless otherwise agreed to in this purchase order/contract. The supplier shall maintain accurate inventory and use records for the property and provide this information to ATK-MCS upon request. The property is not to be used for products not identified on this procurement without the written consent of ATK-MCS. Supplier shall not remove any markings or tags from the property. Supplier agrees not to sell, assign, loan, lease, mortgage, borrow against, pledge, or otherwise create a legal or equitable interest in the item(s) or otherwise permit the item(s) to be subject to any legal process.

Q 090 FURNISHED MATERIALS, ATK - MCS OR GOVERNMENT

The Supplier is required to use the ATK - MCS or Government supplied material in the performance of this purchase order and delivers a product containing material supplied to the Supplier by ATK - MCS or the Government.

SHIPMENT DOCUMENTATION:

Written documentation or an ATK - MCS shipper shall be provided identifying (by material specification number/part number) that material furnished by ATK - MCS or the Government is contained within the delivered product.

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Q 091 PACKAGING REQUIREMENTS FOR ELECTROSTATIC DISCHARGE (ESD) SENSITIVE ITEM SHIPMENTS

Items furnished on this order are Electrostatic Discharge (ESD) sensitive and shall be handled per the requirements of ANSI/ESD S20.20, MIL-STD-1686, or JESD625-A. The item(s) on this order shall be protected from damage during delivery and packaged in conductive or static-dissipative packages, tubes, carriers, conductive bags, etc., as appropriate for the item(s), for shipment. The packaging for the item(s) on this order must be clearly labeled to indicate that it contains electrostatic sensitive goods.

Q 092 HARDWARE PACKAGING

Hardware, such as washers, nuts, screws, etc. furnished with this purchase order/contract is not to be delivered bulk packaged. **Each** item on this purchase order shall be packaged so that individual packages shall contain **all** necessary hardware.

Q 093 DROP SHIPMENTS (DD 250)

When DD250 drop shipments are authorized by this purchase order/contract, the first drop shipment of **each** item for **each** contract must be authorized through the ATK – MCS Supply Chain Representative (buyer) by ATK – MCS Production Control Representative to ensure contractual authority for the shipment.

Q 094 RAW MATERIAL SPECIAL PACKING INSTRUCTIONS – BILLETS / CASTINGS / FORGINGS

This special provision will take precedence over any conflicting packaging instructions contained herein. Package per applicable ATK - MCS material handling instructions:

- OMH-0001 – Raw Material Special Packing Instructions
 1. **All** large billets, castings and forgings must be palletized and bound to the pallet with steel banding or equivalent method to constrain material. Parts shall not be mixed and conform to part dimensions with minimum overhang.
 2. **All** small and medium size billets, castings and forgings must be contained using either wood or corrugated material depending upon material characteristics. Parts with critical surfaces must be individually packaged.
 3. **Each** heat lot must be packaged separately.

Q 095 WARRANTY RETURN, ALL PREVIOUS QUALITY REQUIREMENTS APPLY

This is a warranty return of an item previously delivered to ATK-MCS. If the item is to be returned to ATK - MCS, or if a replacement item is to be

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delivered to ATK-MCS, in addition to any quality requirements that may be stated in this order, all quality requirements stated in the item's original order apply unless otherwise specified in this order or amended by the conditions of the warranty. Supplier Quality requirements that continue to be applicable for this order may have previously been stated in Supplier Quality requirements, Statements of Work (SOWs), drawing definition documentation, General Terms and Conditions, and/or purchase order/contractual requirements of the original order. All deliveries to ATK-MCS of items or documentation pertaining to this order must reference ATK-MCS purchase document number for this warranty return.

Q 096 DELIVERY OF EXPLOSIVE MATERIAL

This order requires the inner packaging of explosive items to be non-countermining, also termed non-propagating, and each section will have a Maximum Creditable Event (MCE) of 3.0 grams of Department of Defense (DoD) Class 1.1 explosive material.

Q 097 ENVIRONMENTAL EFFECTS CONTROL PLAN

The vendor shall develop and maintain a disciplined Environmental Effects Control (EEC) Plan in accordance with ATK-MCS Environmental Effects Control Template (WI 7.5.5-1) available from ATK-MCS Supply Chain Representative (Buyer). The supplier's documentation shall address Corrosion Prevention and Control (CPC) and any other product specific environmental concerns. This shall be submitted to ATK-MCS Buyer for approval 30 days prior to the start of production. The Plan shall utilize administrative and/or engineering controls to minimize exposure or eliminate corrosive contaminants in process and/or finished parts. The process should avoid exposure to extreme temperature and humidity as well as contaminants that may come in contact with parts that will affect form, fit, or function as used in the final configuration. Corrosion control keeps to a minimum the effects of electrochemical or chemical attack on materials by the environment. The supplier shall ensure that these requirements are flowed down through the supply chains that support the item(s) on this order. The planning includes:

1. Establishing a Corrosion Prevention Advisory Team (CPAT)
2. Establishing a Contractor Corrosion Team (CCT)
3. Corrosion control by design and materials selection
4. Use of cathodic protection to eliminate electrochemical reactions (corrosion).
5. Use of industrial water treatment to reduce corrosion, scale-forming deposits, and biological growths in heating and cooling systems.

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6. Use of protective coatings to reduce atmospheric corrosion or cathodic protection current requirements.
7. Analysis of logs and records for failure prediction and selection of corrective actions.
8. Incorporation of corrective actions in repair and construction projects when corrosion, scale, or material deterioration occurs due to materials, design, construction, operation, or the environment.

Q 098 LABELING OF OZONE DEPLETING SUBSTANCES REQUIRED

Supplier shall comply with 40 CFR Part 82.100-124, protection of stratospheric ozone; labeling in the performance of this order. The regulation applies to:

- (1) products manufactured with a process using a Class I substance,
- (2) products that contain a Class I substance, and/or
- (3) containers containing a Class I or Class II substance. It also applies to products manufactured by ATK-MCS or another supplier that will be provided to supplier as furnished property for processing.

**Q 099 CHEMICAL INVENTORY FOR AIR POLLUTION REPORTING
(MARICOPA COUNTY)**

Q 100 WELDING VERIFICATION

The supplier shall provide verification that welding is performed by employees that are certified to weld in accordance with applicable specification and/or drawings. The supplier shall prepare a Certification/Data report and submit at time of audit. ATK – MCS must audit compliance to this requirement prior to supplier initiating any Welding operations for products on this purchase order/contract. These requirements are also applicable to sub-tier suppliers.

**Q 101 Welding to US Army Tank-Automotive and Armament Command
Ground Combat Vehicle Welding Code**

All welding to be done to US Army Tank-Automotive and Armaments Command Ground Combat Vehicle Welding Code – Steel 12479550. Welder Qualifications, and written procedures regarding weld inspection and rework, shall be submitted to and approved by ATK-MCS Supplier Quality Assurance representative prior to processing welded items.

Once approved, supplier will not deviate from the welding procedures or materials without ATK-MCS approval. All welds shall be inspected by a Certified Welding Inspector and all certifications of conformance shall bear the inspectors AWS CWI stamp.

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Q 102 CARC Coating per MIL-DTL-53072

This item requires CARC coating per MIL-DTL-53072. Suppliers are required to submit and have approved by ATK-MCS Supplier Quality Assurance representative a CARC Process Plan / Procedure prior to delivery of first item. At a minimum, this Plan / Procedure shall delineate the cleaning, painting, and test requirements of the applicable specifications and how the supplier will implement them. Once approved, supplier will not deviate from the CARC Plan without ATK-MCS approval.

6. Records

All records will be maintained per ATK Record Retention Schedule

7. Forms

a) 7.4.1-2-1 Quality Code Cross Reference Matrix

8. References

N/A

9. Description of Change

- a) Split Quality Code Q019 into Q019A and Q019B.
- b) Added Quality Codes Q101 and Q102