GLOBAL SUPPLIER QUALITY MANUAL

EITAN ADDENDUM

REVISION 1.3

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CONTENTS

1. INTRODUCTION

Thank you for taking time to review this Addendum. The content within is a compilation of key requirements to assist you in meeting Oshkosh expectations. As a Supplier / Partner your organization's Quality is directly related to the EITAN Supplier Quality Mission:

"To be a strategic advantage for our corporation and customers by empowering our suppliers to achieve more through mutually beneficial partnerships and by delivering components of the highest possible quality on time and at cost."

Please endeavor to communicate and apply these requirements throughout your enterprise and join Oshkosh Defense EITAN in Pursuing Quality Excellence

2. EITAN SEGMENT QUALITY ASSURANCE REQUIREMENTS

EITAN program suppliers are recommended to have a Quality Management System that is registered to ISO 9001: 2015. The 3rd party ISO registrar is to be accredited, bearing the accreditation mark of a recognized IAF MLA (International Accreditation Forum Multilateral Recognition Arrangement) member (A2LA, ANSI, and ANAB for example). For a listing of accredited ISO registrars, visit: https://www.iaf.nu

2.1. Supplier Audits

All suppliers shall have a quality management system that meets the requirements of the Oshkosh GSQM. Suppliers are subject to on-site audits, remote audits, or self-audits by Oshkosh Corporation to ensure that a documented quality system is in place, which includes development, implementation, and maintenance of Control Plans for all EITAN programs and products.

The product end-user is the Israeli Ministry of Defense (IMOD). IMOD reserves the right to review, inspect, or audit the production lines of all Oshkosh Defense subcontractors, should they choose to, provided they have appropriate authorization by the company (Oshkosh or any of its suppliers) and all necessary regulatory licensing agreements are in place. The IMOD reserves the right to inspect any part of the manufacturing processes. In cases where faults indicating QA failures are discovered, the IMOD, and/or Oshkosh, may carry out further reviews and require corrective actions to any audit or production review findings or concerns.

2.2. Maturity Assessment

There are a set of common practices and disciplines that characterize the most successful companies in the marketplace today. The following traits describe the Quality approach that Oshkosh Defense EITAN is fully pursuing, and we recommend you do the same. We are using a "Maturity Assessment" to practically evaluate the application of these traits within our organization, and it is available to use within yours also.

2.2.1. Statistical Process Control (SPC) - Real-time SPC is used with observed processes in statistical control. Proper specification limits are monitored to address outputs that fall outside of the control limits before producing non-conforming product.

2.2.2. Work Instructions and Training - Work instructions are up to date and readily available for assembly / operators. Work instructions are thorough, detailed, complete, and align with engineering specifications and the assembly process. Work instructions are linked to applicable tooling within station. Quality aids are posted within station. Training content addresses all required skills and is successfully completed by personnel before being permitted to manufacture product.

2.2.3. Error Proofing - Error proofing is commonly used, it is challenged to ensure it is effective, and cannot be defeated. It successfully detects a defect and does not permit it to leave the workstation before corrected.

2.2.4. Supply Chain Management - Parts used in production have been approved as conforming before assembly. The part approval process-documents are thorough and establishes that supplier processes

are capable to consistently produce conforming product. Supplier performance metrics are used to identify and mitigate risks to manufacturing conforming product.

2.2.5. Tooling / Calibration – Tooling is present within the applicable workstations, and is error proof enabled, and calibrated. There is alignment between the tooling and work instructions. A robust tooling tracking management system is used.

2.2.6. PFMEA / Control Plans - PFMEA / Control Plans exist for each unique assembly process / work cell content. They demonstrate comprehensive thought and consideration for likely failure modes and corresponding mitigating controls. PFMEA's demonstrate linkages to the applicable DFMEA's, engineering drawings, and engineering specifications. PFMEA's demonstrate robust failure mode documentation, proper severity, occurrence, and detection scoring, RPN assignment, proper special characteristic assignment, and failure mode mitigation actions. The post-improvement severity, occurrence, and detection scoring are captured. PFMEA's and Control Plans are observed to be living documents evidenced by updates due to engineering changes, lessons learned, and process improvements over time.

2.2.7. Production Traceability - Extensive use of product traceability captures raw material lots and sub-tier supplier components that is retained for future use and enables Oshkosh Defense EITAN to link your parts from specific PO’s and deliveries onto the finished vehicle serial number.

2.2.8. Control of non-conforming products and defects - The production process identifies and corrects defects in station and does not pass them downstream during the assembly process. There is no opportunity to mix non-conforming product with conforming product during the process. Production processing does not permit the release of product to the customer with defects present.

2.2.9. Control of Special Characteristics - All Special Characteristics are properly controlled using SPC data. SPC metrics demonstrate that the required Cpk is being achieved. All Special Characteristics are conforming prior to releasing product to the customer.

2.2.10. Production / Quality Metrics - Production processes use extensive metrics which drive process improvements back to the responsible work area. First Pass Yield Metrics or Defects per Unit for internal show evidence of continuous process improvement. Corrective Action Feedback demonstrates that corrective actions prevent issues from recurring.

2.2.11. In-process testing is robust and ensures product is conforming to specifications and is defect free prior to being released to the next operation. Testing is conducted frequently enough (with sufficient Cpk) to ensure conforming product is produced.

2.2.12. Change Control- is robustly managed with sufficient definition of what constitutes a process change and/or a product change. Change Control includes awareness to internal stakeholders that are responsible to communicate externally, and it is supported with documented procedures and systems-enabled checks and balances. Any change (except that which is already PPAP approved) that can have a potential downstream consequence to your customer and/or end users must begin with notification to Oshkosh Defense EITAN. See the section on Supplier Change Requests.

3. RECORD AND DOCUMENTATION RETENTION REQUIREMENTS

While in storage, records and documents shall be protected from damage, loss, and deterioration due to environmental conditions. Records shall be maintained for (5) years. At the end of (5) years, the Supplier shall provide Oshkosh Defense with the option of having the records forwarded to Oshkosh Defense for further retention, as required by the contract, or authorizing disposal of the records and documents at the Supplier's location. Production-related documents (PPAP or Certificates of Conformance) are required to be retained for Current Year (CY) plus 20 years. Disposition shall be done in a timely and appropriate manner. Oshkosh Defense shall be notified when disposition has taken place.

4. CERTIFICATE OF CONFORMANCE

The Supplier shall establish, implement, and maintain documented procedures, which ensure adherence to the Oshkosh Defense Certificate of Conformance requirement. The supplier shall have an authorized representative certify that the parts ordered have been processed to procedures that ensure the material is conforming and free of counterfeit material. The certificate of conformance will also acknowledge proper adherence to Purchase Orders, drawings, and contract requirements. Suppliers shall utilize the Oshkosh Certificate of Conformance form (QC-0899) located on http://osn.oshkoshcorp.com/ or another Certificate of Conformance form that at that location for 20 years. This document must be made available at the request of Oshkosh within 24 hours.

5. COMPONENT 100% INSPECTION REQUIREMENTS FOR PRE-SERIAL HULLS

The EITAN program will have (2) pre-serial production hulls manufactured to prove out planned production processes and hone them to ensure conforming hull production is achievable and repeatable.

Every part produced for pre-serial hull content shall have a full dimensional report provided for every part upon shipment of the parts to Oshkosh. Every dimension shown on the print must be accounted for, measured, and the variable data recorded within the dimensional report. Completed dimensional reports shall be labeled with the actual part the report is associated with (reference Part Marking Requirements below).

Example: If the PO indicates an order for 5 parts, then (5) Full dimensional reports shall be provided or 1 report that provides the dimensional results for all 5 parts.

Failure to meet this requirement will result in Oshkosh completing a full dimensional report on every part and debiting all associated costs.

The Full dimensional report(s) shall be provided in Excel format using Oshkosh's standard PPAP workbook. Reports shall be submitted into Reliance prior to shipping parts to Oshkosh. The dimensional results for each piece part shall be provided on a separate tab for each piece provided. A copy of the Certificate of Conformance shall be provided with the dimensional report.

Serial production components will <u>not</u> require 100% inspection from suppliers. First Article Inspection (FAI) execution and approval will validate the manufacturing process therefore demonstrating conforming production is achievable and repeatable. Refer to section 7 for further details on FAI. Note, Oshkosh may elect to conduct inspection of components upon receipt at Oshkosh for select components due to the part's relative criticality to the hull build. Refer to section 6 for additional details regarding inspection of serial components.

6. SERIAL HULL COMPONET INSPECTION

During production of serial hull components, the Supplier's manufacturing and associated processes, products, and inspection and/or test data are subject to review, verification, examination, test and/or analysis by authorized IMOD, IMOD designee, and/or Oshkosh representatives. This is provided they have appropriate authorization by the company (Oshkosh or any of its suppliers) and all necessary regulatory licensing agreements are in place.

Oshkosh may elect to conduct inspection of components upon receipt at Oshkosh for select components due to the component's relative criticality to the build of the hull. Oshkosh commits to conducting technical reviews with suppliers to ensure alignment with inspection methods conducted at Oshkosh.

Overall, Inspection methods and procedures will be defined by Oshkosh and suppliers (via the technical meetings indicated above) and provided to suppliers (to be used at their discretion), as common ground for inspection practices that will be conducted by Oshkosh. Should non-conforming product be discovered by Oshkosh during inspections, suppliers shall accept the result and react to contain suspect product and provide corrective action.

Upon identification of non-conforming product Oshkosh will reject product and return it to the suppliers for possible rework. In events where product can be reworked to conformance it shall be the responsibility of the supplier to provide rework to the respective component and resupply it to Oshkosh for evaluation. In events where rework cannot be performed, Oshkosh may choose to seek a deviation request with IMOD or the components may be returned to suppliers for credit (and then scrapped at the suppliers cost).

7. FIRST ARTICLE INSPECTION (FAI)

This program requires the execution of First Article Inspection (FAI) events to be conducted for all components. First Article Inspection (FAI) is a vital process to qualify manufacturing processes are producing product that conforms to all relevant requirements for serial production. Additionally, the purpose and execution of FAI aims to assess the ability for defined processes to consistently produce product that meets all relevant requirements and specifications.

The Eitan program is sequential in nature. Pre-serial hull approval at Oshkosh MUST be granted prior to the supplier starting the manufacturing of serial production components. Your respective GPSC Commodity Manager will communicate when pre-serial hull approval occurs and give you permission to start manufacturing your assigned components.

Oshkosh will be responsible to create FAI package documentation but will need supplier's support to develop FAI packages and to host on-site FAI events at suppliers facilities. The supplier's support shall include the following in order to fulfill FAI requirements:

1) Host FAI scheduled events at the manufacturing facility to include the review, inspection and/or audit of the related production lines and processes that produce Eitan components. Note- If appropriate regulatory licensing agreements are not in place to facilitate foreign visitors in the manufacturing portion of your facility, then manufacturing processes shall be demonstrated via other means. Other means could include some of or a combination of the following methods such as video capture, live stream, virtual process review, visuals, process flow diagrams, work instruction walk through etc. These types of demonstrations along with the remaining list shown below shall be executed via an on-site conference room meeting at minimum. Oshkosh personal (US citizens) shall have the right to audit presented manufacturing processes and have the right to witness production steps during the visit or at a later time. Manufacturing processes shall include all process steps executed to manufacture and provide product to Oshkosh. This includes steps such as material receipt/ incoming inspection, storage of raw material, manufacturing process steps (laser cutting, forming etc.), Inspection, packaging, and shipping.

2) Provide related manufacturing documentation as necessary to include items such as dimensional reports, COC's, material certifications, traceability to TEQA specifications, print requirements etc. needed to complete FAI documentation.

3) Provide a 3-piece part dimensional analysis to be included within the FAI package. Note, 1 piece of the 3 may be used to fulfill L2 PPAP requirements. FAI samples shall be produced using the planned long term or normal manufacturing process so FAI activities can qualify the manufacturing process. Normal manufacturing process shall be defined as the typical production process (planning, work instructions, materials, controls, fixturing, test equipment etc.) used to manufacture components, sub-weldments, weldments etc. Once the samples are selected, no repair, adjustment or modification is permitted.

4) Provide corrective action for any deficiencies noted or discovered during FAI execution or during the process of FAI approval by the program customer, the Israeli Ministry of Defense (IMOD).

If necessary licensing is not in place to conduct FAI events at suppliers, IMOD may choose to have FAI activities executed the Oshkosh Eitan production facility instead to fulfill FAI requirements.

FAI approval (First Article Approval, FAA) remains valid provided none of the following conditions are met unless approved by IMOD in writing:

• A break in continuous production (continuous production is defined production that has not had a break more than 1 year)

• A change in design, as mutually agreed upon, by IMOD and Oshkosh

• A change in manufacturing process, as mutually agreed upon, by IMOD and Oshkosh. A process change shall be a major change in the way a product is made to include different manufacturing methods, process steps or techniques. If a product is manufactured on a different machine using the same manufacturing process it does not require new FAI approval to manufacture products. If your uncertain if a process change would warrant a new FAI to be executed its up to the supplier to reach out to an Oshkosh quality representative to ask if the change warrants the need to re-execute FAI.

• A change in the hull manufacturing site location or relocation of an Oshkosh supplier. A location change notice must be submitted in writing with an explanation of the changes and Oshkosh's recommendation regarding if FAI retesting should be required. IMOD will inform the supplier, in writing, of their decision on if FAI re-testing will be required due to the change. After agreement with IMOD, the change can be completed.

• As mutually agreed upon, by IMOD and Oshkosh, a change in design, materials, the manufacturing or assembly process, or source of supply from a supplier to Oshkosh.

Refer to the EITAN QUALITY ASSURANCE PLAN for additional FAI requirements. The above is a summary of the supplier's responsibilities to support FAI.

8. SUPPLIER NON-CONFORMING MATERIAL

8.1. Rejected and suspect part concerns will be communicated to suppliers using the Reliance 8D process. Oshkosh Defense will provide the part number, name, mfg date/lot and the nature of the problem and pictures if necessary. Suppliers are expected to provide an initial response to acknowledge the issue within 24 hours. SAP and the supplier jointly decide whether the parts are going to be returned for analysis or scrapped locally. If the parts are returned for analysis, the supplier must submit an 8D within 1 week. If the supplier does not respond to the initial Reliance communication within 1 week, AND the cost of the part is $100 or less, each part will be scrapped, and the total cost will be charged to the supplier.

8.2. Suppliers are encouraged to immediately notify Oshkosh Defense EITAN Purchasing or Supplier Quality if non-conforming tickets are erroneously assigned to your organization. We strive to keep performance data accurate, and early notification helps to properly reflect your PPM (parts per million) metric.

9. OSHKOSH/ CUSTOMER RETURNED PARTS

When a customer owned vehicle experiences component failure, these components may be returned for analysis. Oshkosh will receive failure notification from the customer with a Report Control Number (RCN). Oshkosh will then contact the applicable supplier requesting their Return Goods Authorization number (RGA). The supplier shall reference the RCN and their RGA with assurance that parts will not be discarded until authorized by Oshkosh. The supplier shall conduct and submit a root cause analysis and corrective action to Oshkosh Defense in a timely manner. The 8D format is preferred but not required. It is advisable to include evidence(s) of process improvement(s) to substantiate the corrective actions taken.

10. QUALITY ISSUE CONTAINMENT

10.1. If the supplier has a quality issue that requires containment on-site, the preferred method is for the supplier to send their own employee to Oshkosh Defense facilities to sort and repair/rework if necessary. Initial containment to keep the line stocked with certified parts will be done by Oshkosh personnel if necessary. This cost for material handling, sorting and repair/rework will be billed back to the supplier.

10.2. If the supplier is sending their own people for the sort activity, they must arrive within 24 hours of the incident being reported to the supplier. These resources will stay on-site until all suspect stock has been certified. This would include any stock that is in transit. The Oshkosh Defense Quality Department will advise the supplier on when their resources are no longer required.

10.3. Should the supplier not be able to send their own people to sort/rework, there will be one authorized third-party supplier to perform on-site sort, rework/repair, and onsite representation. The supplier will engage the third-party sort company, communicate the issue and quantities to the on-site lead. The supplier will provide the sorting and rework/repair instructions to the third party. The supplier will pay the cost for the third-party inspection/sorting directly to the third-party.

11. PACKAGING AND SHIPPING

The Supplier shall provide for adequate facilities and instructions for handling, packaging, and shipping to preserve the products and prevent damage during storage and transit. See Section 23 from the Global Supplier Quality Manual and Section J of the Supplier Standards Guide for more detail.

For part-specific labeling requirements listed on drawings refer to Part Identification Requirements see applicable technical requirements drawing. Section J labeling does not take the place of any other required labels, and each label requirement must be individual and exclusive.

12. SURFACE PREPARATION, PAINTING, AND FINISHING

The Supplier must comply with the Oshkosh finish requirement specified on the drawing. When finish requirements are “silent”, suppliers shall reference the Oshkosh Defense EITAN Finish Requirements technical drawing. Work with the Buyer or AQE to ensure current reference drawings requested in part drawings are current.

It remains the responsibility of the tier 1 supplier to ensure that finish requirements are upheld by the sub tier finish suppliers. Additionally, it is highly recommended that tier 1 suppliers mitigate risks by requiring sub tier suppliers to document process flows, Process FMEA, and Process Control Plans in accordance with Oshkosh PPAP format.

Note: Become familiar with and enforce these flow-down requirements to prevent product recalls and product rework. Costs resulting from Supplier product recall and/or rework shall be borne by the Supplier.

Note: The purchase order may contain specific instructions regarding paint applications to facilitate subsequent operations.

As referenced in Section D.32 of the Oshkosh Supplier Standards Guide, the use of any pretreatment, plating, painting, or coating of any kind that contains Hexavalent Chrome is strictly prohibited. Any supplier to Oshkosh Corporation shall have systems in place to monitor and control the coating processes used by upstream suppliers when plating requirements are not strictly defined within the Oshkosh design record. Hexavalent Chrome can appear in several forms and can be known by many several nomenclatures. Regardless of the specific nomenclature referenced on the coating certification, usage is strictly prohibited.

Different ways of representing Hexavalent chromium are given below:

- Hexavalent chromium
- Hexavalent chrome
- Hex chrome

Different plating specifications that may contain Hex Chrome (the specifications below may be prohibited. Due diligence is required to verify conformance).

- ASTM B633 (Standard for Electro deposited coatings of Zinc on Iron and Steel)
- ASTM B633 (Coating thickness) Type II
- ASTM B633 (Coating thickness) Type III
- Zn/Fe SC (Coating thickness in micrometers) Type II
- Zn/Fe SC (Coating thickness in micrometers) Type III
- Zinc Yellow
- Zinc Clear
- Chromate
- Chromate conversion coating
- Zinc chromate
- Zinc Dichromate

In addition, Dacromet is not specifically a chromate coating, but a type of Zinc-Rich paint which contains Hex chrome.

The majority of supplied components for the EITAN Hull program do not have finish requirements placed on component level print thus shall be provide in a raw state. The proper storage of raw material is very important to ensure components are not corroded while waiting to be consumed by the manufacturing process. Its Oshkosh standard practice (as noted in the defense addendum) that “raw” (unfinished state) material shall be provided in accordance with Oshkosh’s standard “FM100, section R20”.

This standard indicates that any raw armor material provided by suppliers to Oshkosh shall provide “Prevox 505” rust inhibitor to armor should it be welded after the inhibitor is applied. In fact, that is the only rust inhibitor permitted, by Oshkosh standards, to be used on armor if welding will occur as it has been proven to not impact weld quality. Prevox 505 is a synthetic corrosion inhibitor intended for sort term indoor corrosion protection of ferrous surfaces (were welding applications are required). Refer to Oshkosh’s standard “FM100, section R20” on the OSN website for further detail. Prevox 505 corrosion inhibitor provides a minimum of 3 months (90 days) protection against corrosion. Completed piece parts are procured or received in a “just in time” approach with some safety stock but its not anticipated on hand inventory will exceed 90 days in storage.

13. PART MARKING / IDENTIFICATION AND TRACEABILITY

Components (parts) shall be identified via print note requirements. This typically includes armor traceability, stamping, engraving or similar. Refer to the print for part marking requirements.

In addition to above components shall be marked in the following manner to allow for better tracking in cases of quality spills.

Each part provided shall be marked in the following manner: PO Number-Part number. Example: If the PO number is 1234567, and the order is for 5 parts, then parts shall be marked as follows:

Part 1: 1234567-1

Part 2: 1234567-2

Part 3: 1234567-3

Etc.

Marking shall be conducted with a water-soluble paint pen.

14. CASTINGS

All armor castings shall be manufactured in accordance with the standard TEQA 2030-05 as described within document "Cast Armor Steel Products 2030-05", unless specified otherwise.

All Non-armor castings shall be manufactured in accordance with the standard TEQA 2035 as described within document "Automotive Cast Steel Product 2035-00", unless specified otherwise.

The above standards prescribe inspection methods, inspection frequency, specific requirements, repair procedures, related certifications, and associated tests to qualify suppliers of castings.

All aspects of the casting drawing, TEQA 2030-05 or TEQA 2035 shall be met.

15. WELDING PROCEDURE INTRODUCTION

The Supplier shall conform to requirements stated in EITAN technical requirements drawings. Oshkosh specification DVQS-0001 will be referenced.

16. SUPPLIER CHANGE REQUESTS

Notifying and attaining authorization for proposed changes is of the highest importance. Suppliers (Tier 1 and Tier 2 suppliers) must notify Oshkosh Defense program of any proposed changes in processing or product modifications for any reasons such as to help reduce cost, improve quality, alleviate constraints, increase reliability, and process capability of the product.

ALL proposed design changes or modifications, whether permanent or temporary and including proprietary designs, MUST be approved in writing by Oshkosh Defense prior to implementing.

The supplier must communicate all change requests using the Reliance Change Management (RCM) process within the Oshkosh Supplier Portal at the link below. This should be submitted at least 12 weeks prior to the planned change implementation.

Suppliers shall have a documented procedure that requires all temporary and/or permanent process or product changes to be communicated and approved by their customer prior to implementation.

Once the RCM approval is granted, the supplier shall submit a corresponding PPAP for Oshkosh Defense approval.

There are four types of Change Requests:

1. Temporary Process Change – A change to the current PPAP approved process such as a tooling move, plant move, improved/new tooling, etc., however it may be functionally acceptable temporarily.
   Example: You / Your sub-tier supplier wants to use different equipment or parts from another facility to process the product

2. Temporary Product Change – A change to the current PPAP approved product such as part geometry / dimensions, design intent, material change, etc. however it may be functionally acceptable temporarily.
   Example: You / Your sub-tier supplier wants to use an alternate material due to a supply chain issue

3. Permanent Process Change – A change to the current PPAP approved process, tooling move, plant move, improved/new tooling etc. on a permanent basis.
   Example: You / Your sub-tier supplier is moving their processing facility to a different state

4. Permanent Product Change – A change to the current product or design such that it meets the current design intent and requires a design change.
   Example: You / Your supplier have a product Improvement proposal

17. PPAP REQUIREMENT OVERVIEW

The EITAN PPAP requirements are primarily based upon the AIAG PPAP Manual 4th edition and Appendix H. Exceptions to AIAG are referenced within this manual, the PPAP workbook (OSK F2000), and the PPAP procedure (OSK P2000). In the event of a conflict, the text of this document and the references cited herein takes precedence. It is expected that Oshkosh Defense EITAN Quality requirements flow down to the sub tier suppliers to fully support PPAP fulfillment.

Suppliers shall manage the completion, and submittal of Level 2 PPAP's before product shipment. All EITAN components supplied shall have Level 2 PPAP's submitted upon first time supplying components to Oshkosh. Note due to potential changes in product, Level 2 PPAP's are required for both pre-serial and serial production hulls. Timeliness and thoroughness of the PPAP submittals will impact the supplier PPAP First Pass Yield metric that guides business decisions.

EITAN PPAP's are considered "living documents" and are expected to be maintained to represent the current production process.

PPAP re-submittals are required when; a part drawing is revised, a supplier process change is made (and approved), or a lapse in order fulfillment occurs. In these instances, the supplier is required to re-submit a completed PPAP (and not the delta information only). Legacy elements of the original PPAP may be utilized, but the PPAP in general needs to be representative of the process and be updated (current material certifications for example).

Oshkosh's P2000 PPAP Instructions Manual and F2000 PPAP Workbook (located at http://osn.oshkoshcorp.com) must be adhered to for Approval status to be granted.

Interim Approval (for incomplete level 2 PPAP's) will not be granted for this program.

17.1. QC-112 PPAP CHECK LIST

The supplier shall complete and submit the PPAP check list with every level 2 PPAP. This document will assist in ensuring all elements are present and complete.

17.2. COMMERCIAL OFF THE SHELF (COTS)

Commercial off the Shelf (COTS) Components are items sold in the commercial marketplace. These parts are commercially available (and at times procured through distributors). They cannot be modified, combined, evolved, or "of-a-type" commercial items. They must truly be "as-is". For further definition, refer to FAR 2.101.

When providing a PPAP for COTS parts, Oshkosh's suppliers are expected to submit all 18 elements of PPAP. At times, due to the nature of COTS parts, Oshkosh's suppliers may be unable to obtain all data for all 18 elements for a level 2 PPAP. In these cases, the supplier is expected to demonstrate / affirm conformance with supporting PPAP documents or Certificates of Conformance by supplying the following minimum PPAP elements:

- Design Record (Bubble Print)
- Engineering Change Documents (If applicable)
- Customer Engineering Approval (If applicable)
- Dimensional Results / Print Notes Verification
- Sample Production Parts
- Master Sample Photos
- Customer Specific Requirements (CFAT- if applicable)
- Parts Submission Warrant
- Catalog Page or equivalent from OEM to demonstrate commerciality (if available)

When the supplier cannot attain all PPAP elements, a Certificate of Conformance (C of C) will be required in addition to the above elements. The C of C letter shall:

- Confirm the article is commercially available.

- Be on the supplier's company letterhead.
- Include the Oshkosh part number.
- Include the part revision level,
- Be signed by a representative within the contractor's organization that has decision making authority.
- Positively affirm that the part meets the requirements within the print.

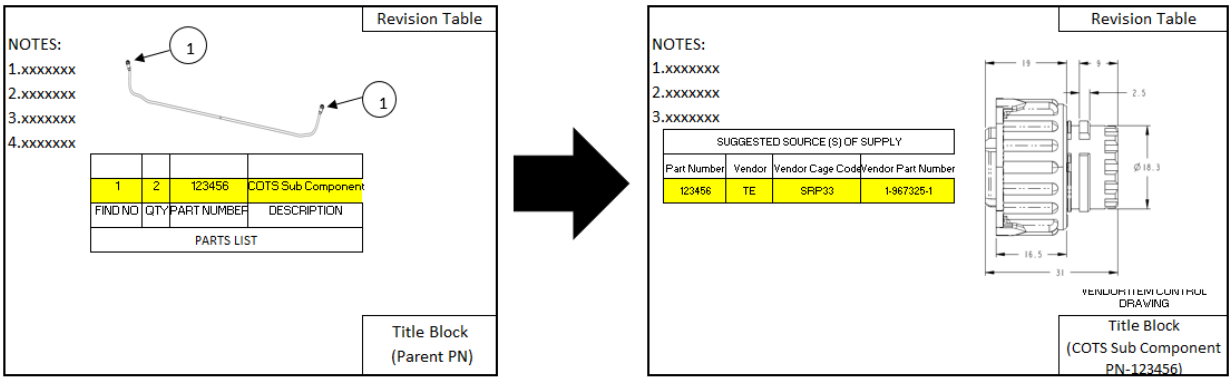
17.2.1. "COTS PLUS"

Parts that are Commercial Off the Shelf (as defined above) but have additional print or performance requirements that Oshkosh has deemed important (because of the part's application). If the OEM catalog page or product data sheet that does not include all Oshkosh Defense EITAN print specifications, the supplier is responsible to provide objective evidence that the part meets the requirement within the Oshkosh Defense EITAN print and a L2 PPAP is required.

NOTE: Caution is needed when a COTS component is "modified" with additional specifications. Modifications to COTS parts re-classify it as a COTS Plus part. If a modification alters the original specifications, re-testing the part in its entirety is required to demonstrate that no unintended performance shortcoming will occur because of the modification.

17.2.2. COTS SUBCOMPONENTS

For COTS subcomponents within the Purchased Part Level (Parent), only the certificate of conformance and design record are required if COTS Vendor Part Number specified by subcomponent drawing is used. If no Vendor Part Number is specified, a one-piece dimensional result, print note verification, design record, and Supplier Change Request (if applicable) are required.



18. DESIGN RECORD (AIAG PPAP 2.2.1)

The Supplier shall comply with the Oshkosh Defense EITAN Design Record for the product/part referenced on the Purchase Order. This includes sub-components (drawings) associated with Purchased product/part. Where the Design Record is in electronic format, the Supplier shall produce a hard copy. Examples include, but are not limited to pictorial of the parts, GD&T sheets, drawings, and identifications of measurements taken. Engineering Drawings (Balloon Prints) shall accompany each PPAP submittal.

Best Practice: *Layout the balloon print so the numbering of all features is formatted sequentially in a left-to-right, clockwise pattern on the first page of the drawing, and continues sequentially and clockwise for pages, 2, 3, … when design records have multiple pages. This* pattern expedites the review and approval process.

If the product drawing (composites, castings, etc.) relies upon the 3D CAD model to fully define the part, the PPAP shall include evidence that all measured samples conform to the geometry and associated GD&T requirements defined by the 3D CAD model. In all cases where the 2D drawing provides sizing, tolerancing or defines characteristics of the part, it shall take precedence over model dimensions. 3D solid models shall be used for reference only and all components produced shall meet print specifications (nominals and applied tolerancing).

The supplier shall:

a) assure that the correct 3D solid mode and print revision level is utilized.
b) assure that proper tolerances have been applied.
c) assure that the parts surface profile adheres to the model.

The supplier shall provide Oshkosh Defense EITAN the 3D Model C of C (certificate of conformance) with their PPAP submittal (provided within the Oshkosh Defense EITAN PPAP workbook). Including an excerpt of the actual scanned part as an overlay to the 3D model is recommended as supportive documentation.

19. AUTHORIZED ENGINEERING CHANGE DOCUMENTS (AIAG PPAP 2.2.2)

Only production-released / approved drawings shall be utilized for PPAP submittals.

The Supplier shall maintain copies of any authorized engineering change documents for those changes not yet recorded in the Design Record but incorporated in the product, part, or tooling. Marked drawings are acceptable for PPAP submission when a released drawing is not available due to timeline constraints. Any marked drawings from Oshkosh Defense EITAN must be signed and approved by Oshkosh Design Engineering, and a copy of the approved Oshkosh Defense EITAN Supplier Change Request (RCM) must accompany the PPAP submittal.

20. CUSTOMER ENGINEERING APPROVAL (AIAG PPAP 2.2.3)

Where specified by the customer, the organization shall have evidence of customer engineering approval.

21. DIMENSIONAL RESULTS (AIAG PPAP 2.2.9)

100%-dimensional inspection is required for one (1) part for each Level 2 PPAP submittal.

Dimensional results for PPAP must be taken from production parts. For production parts that are produced from more than one die, mold, tooling, pattern, cavity or production process, the Supplier shall complete full dimensional layouts from each.

Note- beyond 100% inspection for (1) piece to satisfy Level 2 PPAP requirements, FAI execution will require an additional 2 part to be 100% inspected to print specifications upon execution of the FAI event.

Measuring equipment should have a discrimination of at least one-tenth of the total tolerance being measured (AIAG MSA, chapter 1 sect. E)

1. ***Best Practice:*** *it is permissible to add additional tabs to the Excel PPAP workbook to facilitate better organization of the PPAP submittal. Example- separate dimensions and print notes worksheets preceded by the applicable bubbled print for multiple components of an assembly / weldment. Be careful that the embedded formulas also are copied if you add worksheets.*

2. ***Best Practice:*** *True Position specifications. To facilitate better understanding, and standardize documentation, it is recommended to list both the "x" and "y" basic dimensions, the hole/feature size, and true position tolerance zone as shown below. Also, express "Bonus Tolerances" as a separate line item within the dimensional PPAP worksheet. The example below expresses the allowable bonus tolerance that can be added to the True Position feature frame when a maximum material condition (MMC) exists.*

ITEM	DIMENSION / SPECIFICATION	TOLERANCE		SPECIFICATION / LIMITS		GAGE TYPE*	QTY. TESTED	ORGANIZATION MEASUREMENT RESULTS (DATA)			OK	NOT OK
		-	+	MIN	MAX			Piece 1	Piece 2	Piece 3		
88	60.33	Basic		Basic	Basic	Basic	CMM	1	60.266			X	
89	22.23	Basic		Basic	Basic	Basic	CMM	1	22.220			X	
90	9.53	0.500		0.500	9.030	10.030	CMM	1	9.526			X	
91	⌖ Ø0.5Ⓜ A B C	GD&T		GD&T	0	0.500	CMM	1	0.130			X	
	Bonus Tol	GD&T		GD&T	GD&T	GD&T	CMM	1	0.496			X	

22. RAW MATERIAL SOURCING

All armor plate material shall be purchased from approved US manufacturers according TEQA Qualified Armor Manufacturer's List as shown below. All armor material shall meet TEQA specifications S-603.

	Manufacturer	Principal Approval for Manufacturer	Spec.	H.H. Steels			Spec.	R.H.A Steels	Spec.	300 mm	Specification	R.H.A Clad Steels
USA	MITTAL (AMUSA)	V	S-605 appendix 01\05	2-4.9 mm	5-25 mm	25.1-55 mm	S-603 appendix 01\05	Up to 160 mm	S-91-604	Does not manufacture	S-97-606 Appendix 1\97	Approved
				Does not manufacture	Approved			Approved for 2.5-160 mm				
	EVRAZ	V	S-605 appendix 01\05	2-4.9 mm	4-55 mm		S-603 appendix 01\05	Up to 74.9 mm	X	Does not manufacture	X	Does not manufacture
				-	Approved			Approved for 2.5-60 mm				

Note- It has been validated by IMOD, that MITTAL (AMUSA) no longer exists, and Cleveland Cliffs has been validated as an approved vendor in place of MITTAL (AMUSA) for the materials as noted above.

All non-armor material shall be sourced by suppliers ensuring it meets required specifications listed on the print.

23. RECORDS OF MATERIAL / PERFORMANCE TEST RESULTS (AIAG PPAP 2.2.10)

23.1. Material Test Results

It is the Supplier's responsibility to confirm the conformance of their material to applicable standards for PPAP submission. The Supplier shall perform all chemical, physical, metallurgical, or mechanical property tests for all parts and product materials when chemical, physical, metallurgical, or mechanical property requirements are specified by the Design Record or TEQA specifications listed.

Examples of Material Test Results that are required for all PPAP submittals include: raw material certifications, painting, plating, heat-treating, welding (documentation necessary to demonstrate conformance to specified weld requirements such as Weld Procedure Qualification Requirements), etc.

When the supplier maintains "design record authority" for the part (and sub-component parts), and material details are not documented on the design record, Oshkosh Defense EITAN requires all material test results (with Qualified Lab documentation) to be maintained by the supplier and made available to Oshkosh Defense upon request.

Material test results may be presented on any AIAG compliant form (the Oshkosh Defense PPAP workbook also includes a template). Raw material composition results are to be presented in a Certificate of Analysis (COA) form. Qualified Lab documentation must accompany each material test result form (reference the Qualified Lab Documents section of this Addendum).

Materials test results shall indicate and include:

- The design record change level of the parts tested.
- Any authorized engineering changes that have not yet been incorporated into the design record (if applicable)
- The number, date, and change level of the specifications to which the part was tested.
- The date on which the testing took place (rule of thumb is </= 18 months old)
- The quantity tested.
- The specified parameters and actual results
- The material supplier's name
- Shall be signed by an authorized company person or supplier representative for Quality Assurance
- Documentation for all required processes

23.2. PERFORMANCE TEST RESULTS

The Supplier shall perform tests for all part(s) or product material(s) when performance or functional requirements are specified by the Design Record. A performance test (unlike in-process checks, which do not require qualified laboratory

documentation) is the process of verifying the functionality of the Product (Finished Part) when exposed to the conditions that they will be used in.
The Supplier shall use the performance test form provided in the Oshkosh Defense PPAP workbook to document and submit the performance test results. Qualified Lab documentation must accompany each performance test result form (reference the Qualified Lab Documents section of this Addendum)

Performance test results shall indicate and include the following:

- The design record change level of the parts tested.
- Any authorized engineering changes that have not yet been incorporated into the design record (if applicable)
- The number, date, and change level of the specifications to which the part was tested.
- The date on which the testing took place.
- The quantity tested.
- The specified parameters and actual results

24. QUALIFIED LABORATORY DOCUMENTATION (AIAG PPAP 2.2.12)
Material or Performance Tests for PPAP shall be performed by a qualified laboratory.

After Market (GIPS) order quantities of </= 2 within a calendar year will require Material / Performance Certifications, but will not require Qualified Laboratory Documents

If Material or Performance Tests are performed by an Internal or External Lab that:

IS NOT accredited: the Supplier must provide:

- The name of the laboratory that performed the test.
- Documentation (work instruction) for each type of test conducted.
- Training records / certifications of personnel who performed the testing (to show competency
- List of all test equipment used to perform testing.
- Calibration records of all test equipment used.
- The date on which the testing took place.

IS ACCREDITED: the Supplier shall submit the test results on the laboratory letterhead or in the normal laboratory report format. The laboratory report must include:

- The name of the laboratory that performed the test.
- The laboratory's accreditation standard (and accreditation number and/or name of the 3rd party organization that provided accreditation) *Note: Oshkosh Defense expects that all accredited labs be accredited to a known lab accreditation standard such as ISO 17025*
- List of standards used for testing.
- The date on which the testing took place.

25. SAMPLE PRODUCTION PARTS (AIAG PPAP 2.2.14)

The Supplier shall ensure that the "PPAP Parts Label" is filled out and attached appropriately to the outside of each package. Label should be in plain view of a forklift / material handler / operator. In the event parts are "Loose" shipped, a label should be placed on each part (this would also apply to parts lying on pallets). Label on a painted part must be wire tied or attached in a way such that the painted surface is protected from label adhesion.

26. MASTER SAMPLE (AIAG PPAP 2.2.15)

A master sample is not required to be retained by the supplier unless specifically requested by Oshkosh Defense, however, the Supplier is required to photo document a Master Sample for all PPAP submittals. Photo documentation should illustrate how the parts will look like in the final state in which they are provided to Oshkosh. Specific focus of photo documentation should be on part labeling (to include any date codes, vendor codes, etc. if applicable), no paint zones if applicable.

27. CHECKING AIDS (AIAG PPAP 2.2.16)

Checking aids include all dedicated instruments, templates, attribute and variable gages, fixtures, or jigs that are used to determine acceptance/rejection of a product characteristic.

- If a device is specifically made for the part being verified, and the part is not available as a catalog item, it is a "checking aid".
- The Supplier shall certify that all aspects of the checking aid agree with part dimensional requirements.
- The supplier shall document all released engineering design changes that have been incorporated in the checking aid at the time of PPAP submission.
- The supplier shall provide for preventative maintenance of any checking aids for the life of the part.

28. PART SUBMISSION WARRANT (PSW) (AIAG PPAP 2.2.18)

PSW's are required for all PPAP submissions. It is recommended that suppliers utilize the Oshkosh Defense version of the PSW. Equivalent forms may be considered.

29. L1 CODE FOR C OF C SUBMISSIONS

30. REVISION CONTROL TABLE

Version	Change Detail	Changed By	Change Date
1.1	Revised revision date for document and updated Section 2.1 and 6 including regulatory licensing clause, revised section 5 to be pre-serial hull focused, removed section 6 "3D SOLID MODEL SPECIFICATIONS" as it was combined with section 18 "design record", added FAI section (#7), and updated section 6 to include Oshkosh inspection of serial production components/technical reviews of inspection process.	Benjamin Pritchert	1/10/2024
1.2	Updated section 12 to include raw material clause as stated in the QAP to ensure its well communicated to suppliers Rust prevention shall be applied to raw components. Updated section 13 to include not regarding print marking requirements must be met as well, updated section 17 to be more accurate to EITAN and level 2 PPAP requirements. Updated section 18 to include drawing vs 3D model precedence noting all components shall meet drawing specifications (nominal and applied tolerancing). Removed all section 21 (FMEA), section 22 (MSA), section 26 (Initial process studies), section 28 (appearance approval report), and section 33 (L1 code for C of C) as they don't apply to Level 2 PPAPs. Revised section 23 (records of materials) and section 27 (checking aids) to remove unrelated content. Revised Table of contents page numbers.	Benjamin Pritchert	1/11/2024
1.3	Updated section 7 (FAI) to add clarity.	Benjamin Pritchert	2/8/2024