

# Honeywell

## Aerospace

**Supplemental**

**Purchase**

**Order**

**Conditions**

**Manual**



This manual contains requirements that are applicable when invoked by Honeywell Aerospace Purchase Orders. Requirements include the mandatory use of this manual for Contract Review and Quality Planning activities.

**Effective May 3, 2017**

**Revision N**

## Notice:

The SPOC Manual is a controlled document. It is controlled in electronic format. If a hard copy version is utilized, it is considered to be a reference tool.

It is important to verify the currency of a hard copy by viewing the online electronic SPOC Manual. Internal Honeywell users may access the manual on the internal Honeywell Intranet:

<https://in.honeywell.com/sites/aero/ISC/Quality/Supplier%20Quality%20Links/Pages/supplierqualitydev.aspx>

Suppliers may access the manual via the Honeywell Aerospace Supplier Portal (HASP):

<https://scc.honeywell.com>

It is possible that an unincorporated change may be initiated during the current SPOC revision 'N' life cycle. If/when this were to occur, the change will be posted to the above locations only. Thus, it is important to routinely check for any such changes. Changes may be incorporated at the next general SPOC Manual revision/update.

*NOTE: If there are interpretation concerns needing clarification in the SPOC manual, please contact Supplier Performance Management (SPM) organization.*

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

### Table of Contents

Notes: Revised SPOCs are indicated by an asterisk (\*). New SPOCs are indicated by double asterisks (\*\*)

SECTION 1.0	GENERAL REQUIREMENTS *	5
SECTION 2.0	SPECIFICATIONS AND GENERAL INFORMATION *	11
SECTION 3.0	SPOC GROUPS – SPOC 001 THROUGH SPOC 009 DETAILS *	12
SPOC 100	– NOTIFICATION, CONTAINMENT, AND CORRECTIVE ACTION OF MATERIAL FOUND NONCONFORMING TO HONEYWELL PURCHASE ORDER REQUIREMENTS*	13
SPOC 106	– EYE EXAMINATIONS *	15
SPOC 110	– FIXED PROCESS REQUIREMENTS *	16
SPOC 118	– QUALITY REQUIREMENTS FOR HONEYWELL PARTNERS WITH FEDERAL AVIATION ADMINISTRATION (FAA) APPROVED PRODUCTION CERTIFICATES.....	17
SPOC 124	– FIRST ARTICLE INSPECTION (FAI) REQUIREMENTS*	17
SPOC 127	– CONTROL OF GOVERNMENT / CUSTOMER OR HONEYWELL OWNED PROPERTY AT SUPPLIERS* .....	21
SPOC 128	– CHARACTERISTIC ACCOUNTABILITY *	24
SPOC 129	– ACCEPTANCE TEST PROCEDURE (ATP) APPROVAL REQUIREMENTS* .....	25
SPOC 130	– SOFTWARE QUALITY ASSURANCE.....	27
SPOC 140	– CERTIFICATION OF CONFORMANCE / SHIPPING DECLARATION DOCUMENT / PACKING SLIP REQUIREMENTS *	27
SPOC 142	– CONTROL OF ITEMS WITH LIMITED SHELF-LIFE* .....	32
SPOC 149	– PRODUCT RELEASE PROCESS *	35
SPOC 154	– KEY CHARACTERISTICS (KC) MANAGEMENT *	36
SPOC 155	– TEMPORARY INSPECTION CHARACTERISTIC (TIC) AND PROCESS CAPABILITY DATA ACQUISITION**... ..	38
SPOC 159	– REPAIR AND OVERHAUL MAINTENANCE REQUIREMENTS *	38
SPOC 162	– ELECTRONIC AND ELECTRICAL COMPONENTS WITH LEAD (PB) AND PB-FREE FINISHES* .....	43
SPOC 163	– RESTRICTIONS FOR USE OF MERCURY AND OR MERCURY CONTAINING COMPONENTS .....	43
SPOC 165	– APPROVED SOURCES FOR CONTROLLED PROCESSES *	44
SPOC 172	– DOCUMENT SUBMITTAL REQUIRED .....	47
SPOC 179	– GOVERNMENT AND CUSTOMER DIRECTED SOURCE INSPECTION*.....	47
SPOC 180	– CRITICAL SAFETY ITEMS *	48
SPOC 182	– MARKING LHTEC PROGRAM.....	49
SPOC 200	– PART MARKING REQUIREMENTS *	49
SPOC 203	– DESIGN OF SPECIAL TOOLS AND GAGES* .....	54
SPOC 228	– SHIPMENTS FOR COST-REIMBURSABLE GOVERNMENT CONTRACTS .....	55
SPOC 235	– DROP SHIPMENT OF A HONEYWELL PURCHASE ORDER TO ANOTHER HONEYWELL SUPPLIER .....	55
SPOC 236	– DROP SHIPMENT FROM A SUB-TIER SUPPLIER TO HONEYWELL PAH SITES .....	56
SPOC 237	– RETURN OF SCRAP .....	56
SPOC 238	– MILITARY-TYPE SPECIFIC-APPLICATION AND MULTI-APPLICATION RE-USABLE CONTAINERS.....	57
SPOC 239	– PACKAGING AND PACKAGE IDENTIFICATION *	57
SPOC 241	– IDENTIFICATION OF SUBSTANTIATION TEST ITEMS .....	64
SPOC 246	– EXEMPTION OF SALES AND USE TAXES.....	64
SPOC 259	– FREIGHT TO BE PAID BY HONEYWELL.....	64
SPOC 260	– PRIORITY RATING .....	65
SPOC 267	– ELECTRONIC PART DEFINITION (SOLID MODEL)* .....	65
SPOC 270	– FAA CONFORMITY (OR CIVIL AVIATION AUTHORITY OF THE COUNTRY).....	65
SPOC 273	– NASA REQUIRED NOTIFICATION*.....	66
SPOC 276	– NASA PRODUCT REQUIREMENTS*.....	67
SPOC 277	– VERIFICATION OF HARDWARE*.....	67
SPOC 308	– DELETED .....	67
SPOC 309	– DELETED .....	68
SPOC 325	– ELECTRONICS SOLDER REQUIREMENTS.....	68
SPOC 326	– ELECTRONICS MARKING REQUIREMENTS .....	68
SPOC 329	– HARDNESS CRITICAL ITEM.....	69
SPOC 335	– TAPE AND REELED COMPONENTS .....	69
SPOC 349	– MATERIAL SAMPLES REQUIRED* .....	69

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

SPOC 354 – ELECTRO-STATIC DISCHARGE REQUIREMENT*	69
SPOC 385 – PRINTED CIRCUIT BOARD (PCB) TESTING	70
SPOC 406 – COMMERCIAL ITEMS USED IN GOVERNMENT CONTRACTS*	70
SPOC 407 – MILITARY CUSTOMER FIRST ARTICLE INSPECTION	70
SPOC 410 – PROCESS CONTROL	70
SPOC 418 – FOREIGN OBJECT DAMAGE (FOD) CONTROL*	71
SPOC 419 – SUPPLIER COUNTERFEIT PARTS PREVENTION REQUIREMENTS *	72
SPOC 420 – ADVANCED PRODUCT QUALITY PLANNING (APQP)	86
SPOC 500 – FAILURE ANALYSIS AND REPORTING PROCESS	86
SPOC 501 – SINGLE LOT REQUIREMENT	87
SPOC 502 – SINGLE RAW MATERIAL LOT	87
SPOC 503 – DELEGATION OF INSPECTION AUTHORITY	87
SPOC 504 – DELETED*	88
SPOC 505 – LOT TRAVELER REQUIREMENT*	88
SPOC 506 – PARTS LIST CONTROLLED ITEM	88
SPOC 507 – MANUFACTURING PLAN REQUIRED	88
SPOC 509 – MANUFACTURING READINESS REVIEW	89
SPOC 513 – DELETED	90
SPOC 527 – AIRWORTHINESS / SAFETY CRITICAL*	90
SPOC 528 – HOMOGENEOUS MATERIAL REQUIREMENT	91
SPOC 529 – DELEGATION OF MRB AUTHORITY	92
SPOC 530 – STANDARD REPAIRS OF PRINTED BOARD ASSEMBLIES (PBA)	92
SPOC 531 – OUTSOURCING APPROVAL REQUIRED*	92
SPOC 532 – COSMETIC PART – VISUAL INSPECTION REQUIREMENT	92
SPOC 534 – PAINT / PLATING THICKNESS TEST REQUIRED	92
SPOC 535 – TSO / PMA TAGS*	93
SPOC 536 – AIRBUS REQUIREMENTS – EQUIPMENT SUPPLIERS	93
SPOC 537 – AIRBUS REQUIREMENT – EQUIPMENT AND SYSTEMS SUPPLIERS	93
SPOC 538 – BOEING APPROVED SOURCE	93
SPOC 539 – REQUIRED SOURCES FOR JEWEL, MINIATURE AND INSTRUMENT BEARINGS	94
SPOC 540 – TEARDOWN ANALYSIS INSPECTION	94
SPOC 541 – INSULATION, ISOLATION, DIELECTRIC TESTING	94
SPOC 542 – DIODES – METALLURGICAL BOND	94
SPOC 544 – CCA REQUIREMENTS	94
SPOC 545 – DELETED*	94
SPOC 547 – SUMMARY REPORT REQUIREMENT	95
SPOC 548 – AUTOMATED OPTICAL INSPECTION (AOI)*	95
SPOC 549 – AXI (AUTOMATED X-RAY INSPECTION) OF CIRCUIT CARD ASSEMBLIES	95
SPOC 550 – PARTICLE IMPACT NOISE DETECTION (PIND) SCREENING*	95
SPOC 551 – PURCHASE AND FINISH PBA REQUIREMENT	96
SPOC 552 – AUTOMATIC INSERTION TUBES	96
SPOC 553 – DESTRUCTIVE PHYSICAL ANALYSIS (DPA) SAMPLES REQUIRED*	96
SPOC 557 – X-RAY FILM REQUIRED*	96
SPOC 558 – WORKMANSHIP STANDARD	97
SPOC 560 – INTEGRATED CIRCUIT (ICT) AND FLYING PROBE (FP) REQUIREMENTS	97
SPOC 561 – WORKMANSHIP STANDARD	97
SPOC 562 – COMPONENT TRACEABILITY	97
SPOC 563 – AIRBUS CONCESSION PROCESS FOR NOTIFICATION OF NONCONFORMING MATERIAL TO HONEYWELL PURCHASE ORDER REQUIREMENTS	98
SPOC 564 – FUNCTIONAL TEST	98

\*Revised / \*\*Added

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

### Section 1.0 General Requirements \*

#### 1.1 Preface

This manual contains requirements that are applicable when invoked by Honeywell Aerospace Purchase Orders. Requirements include the mandatory use of this manual for Contract Review and Quality Planning activities. Contents of Sections 1–3 shall be reviewed and complied with in conjunction with the purchase order flow down. The SPOC Manual is controlled in Electronic format as presented on the Supplier Portal. Paper copies, and electronic copies downloaded and saved to a local hard drive are Uncontrolled. Suppliers shall visit the manual online to check for changes that may be identified in the electronic Unincorporated change page at <https://scc.honeywell.com> HASP > Doc > Documents > SPOC.

If the Supplier is working to a Purchase Order pre-dating the most current SPOC Manual release date, the Supplier may request authorization to work to the most current SPOC manual revision by requesting a Purchase Order revision from the Honeywell Buyer.

#### 1.2 Applicability\*

The Honeywell Purchase Order is the official binding contract in the order of precedence described in the Terms & Conditions of Purchase. Requirements are specified on the Purchase Order by group or specific SPOC number(s) and/or text. If conflicts between flow down documents and the Purchase Order are detected, the Supplier shall immediately notify the Honeywell Buyer.

Handwritten, lined-out or initialed changes to purchase orders are not allowed. Handwritten, lined-out or initialed changes to engineering drawings/specification or technical data are not allowed, except where:

- provided for by Honeywell site procedure, **and**
- signed by an authorized Honeywell agent.

Verbal and/or email authorizations are not permitted.

##### 1.2.1 Subcontracting Policy

Honeywell suppliers shall ensure flow down to, and compliance with, all applicable Purchase Order and Engineering requirements to their sub-tier suppliers, including approved Special Process providers.

For Honeywell designed hardware, Supplier/subcontractor Purchase Orders to special processing providers must contain the following as a minimum:

- Reference to the applicable Honeywell CAGE Code, or request for material.
- Applicable SPOC number(s).
- Honeywell part number and nomenclature of subject part.
- Special Processes to be performed and the applicable specification(s), revision letter(s) including the type, class, or methods and testing that are required by drawing or specification.
- Any special drawing instructions/notes, as applicable; such as approved Materials Engineering Supplier Agreement, inspection class, inspection grade and inspection acceptance requirements, MOT's, MBP's, or special handling requirements not otherwise stated, etc.
- Fixed / Frozen process revision level and approval date. If not provided on the Honeywell purchase order, contact the Honeywell buyer for proper information to flow down.

#### 1.3 Quality Requirements\*

The core quality requirement is for all features to comply to specifications 100% for all parts produced and shipped. If the process is not capable of meeting 100% yield it is Honeywell's expectation that all suppliers pursue measurable continuous quality and delivery improvements.

On an annual basis, Honeywell defines the minimum performance expectation measured in conventional ways like Parts Per Million (PPM) for quality and Percent On Time To Requirements (OTTR) on a supplier level as well as on a part number level.

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

When a supplier does not meet these minimum performance levels, Honeywell reserves the right to require the supplier to engage in an aggressive improvement project – lead by the suppliers leadership as well as Honeywell Stakeholders. These projects will be focused on improving the supplier's Business Operating Systems that will result in the sustainable achievement of Honeywell's minimum performance expectation.

Honeywell's minimum performance expectation is:\*

Quality	100 PPM or lower based on a three Month Moving Average (3 MMA)
Delivery	98% On-Time to Requirements (OTTR)
Achieve	+95% RTY

### 1.4 Quality Alerts

Quality Alerts are issued as a means of notifying suppliers of potential problems, or clarifying policies, procedures, work instructions, or drawings. Alerts are issued for an interim period only. Open/active Supplier applicable Quality Alerts are located on the Honeywell Aerospace Supplier Portal at <https://scc.honeywell.com>, HASP > DOCS > Documents > Quality > Quality Alerts.

### 1.5 Audit Rights Reserved / Right of Entry

Honeywell, Honeywell Partnerships, Aircraft Manufacturers, customers and Regulatory Authorities reserve the right to perform audits and/or inspections at the Supplier's and/or supplier's subcontractor's facility on the manufactured and/or repaired parts. Supplier material, records, process and routing sheets, manufacturing, and test and inspection facilities are subject to review by Honeywell and/or Honeywell customers (Commercial, designated Government representatives, Regulatory authorities). When on-site verification of Contract / Purchase order conformance is required, the supplier shall provide the equipment, facilities, and personnel necessary for the Honeywell representatives to verify compliance.

### 1.6 Changes in Process, Design, Quality System, Facilities, Management or Ownership \*

- 1.6.1\* Suppliers shall comply with all contractual requirements, (including but not necessarily limited to Long Term Contract and general purchase order provisions agreed between the parties), for notification and approval of changes in design, material, manufacturing location, manufacturing equipment, production processes, and any other process related to the Goods in place as of the purchase order issuance date.
- 1.6.2\* In addition to the requirements imposed by Sec 1.6.1, Suppliers shall immediately notify the Honeywell Buyer, the Honeywell Quality Assurance Manager from procuring sites, and the assigned FQE, changes in quality leadership, scope, name, or address of Quality Management System registrations, or controlled processes certification status, including suspensions or disapprovals. Suppliers shall also notify the above parties in the event of complete company closure with no transition plan managed by its corporate office.
- 1.6.3\* Supplier notifications shall contain the following supplier information as a minimum:
  - Supplier ID/DUNS number, (if changing, provide old DUNS and new DUNS.)
  - Old data and new data (e.g. if address change, list the prior address and the new address)
  - Name of supplier quality contact
  - Phone number of supplier quality contact
  - email address of supplier quality contact.

### 1.7 Language Requirements

All quality records, data or correspondence to Honeywell Aerospace are required to be in the language of the Honeywell facility placing the purchase order, or in the English language, as agreed on between the supplier and the Honeywell facility. The Supplier shall maintain an English Language translation of its Quality Manual. Upon request, all supplier data related to furnished product must be translated to English and made available. If the supplier does not perform this service, translation fees will be debited to the Supplier.

### 1.8 Configuration Management

**UNCONTROLLED IN HARDCOPY**



## Supplemental Purchase Order Conditions (SPOC) Manual

The Supplier shall ensure that the current configuration of all drawings, specifications, and instructions required by the Contract / Purchase Order, as well as authorized changes, are used for manufacturing, inspecting, and testing. Current revisions of Honeywell detail drawings and specifications may be located using the applicable supplier configuration report or by selecting the Aerospace PDM Supplier Access link from the applications menu at the Honeywell Aero Supplier Portal, unless directed otherwise in Section 2.0 of this SPOC Manual. For sites not using the PDM system, contact the Honeywell buyer to obtain the latest revisions.

### 1.9 Notification of Design and Manufacturing Changes









Suppliers with design authority are required to notify Honeywell promptly, in writing, of any changes of fit, form or function, or safety of product and obtain approval prior to manufacture and delivery. Supplier shall submit proposed changes to the Buyer including but not limited to: process – material – design – software.

### 1.10 Source of Supply \*

When the source of supply is specified on a Honeywell drawing or specification invoked by purchase order in any manner (approved, may, suggested, recommended, trademarked, QPI, etc.), only those sources of supply shall be used. The use of any alternate sources not specifically listed on the drawing or its associated specs/databases is prohibited unless otherwise specified by site-specific requirements flowed on the Purchase Order.\*

#### 1.10.1 Authorized Use of the Honeywell Approved Manufacturer's Parts List (AMPL) for Procurement \*

This section (1.10.1) is only applicable for designs controlled by the following sites or vaults.\*

-  Olathe/Redmond Commercial (CAGE Codes 22373, 27914, 97896 & 99866)
-  Deer Valley (CAGE Codes 55939, 58960)
-  Tucson (CAGE Code 64547)
-  Torrance (CAGE Code 70210)
-  Morristown (CAGE Codes 017N4 & 56776)
-  Urbana (CAGE Code 72914)
-  Ottawa (CAGE Code 38473)
-  Norcross (CAGE Codes 5VWN5, 31395)


For designs controlled by the above specific sites or vaults, Honeywell Engineering approved manufacturers and manufacturer part numbers are available in the Honeywell webAMPL database. Access to the Honeywell webAMPL system is granted to contract manufacturers and distributors as needed. Buyers may also provide the Honeywell approved manufacturer information in webAMPL to all suppliers at the time of placement of purchase orders. If this information is missing or if further clarifications and access to webAMPL are required, suppliers shall contact their buyers for written authorization before using these components in Honeywell-designed hardware. The webAMPL database can be accessed through <https://webAMPL.honeywell.com/webAMPL/EntryHandler>.

When approved sources of supply are listed on both Honeywell part drawings and webAMPL, sources of supply listed in webAMPL shall take precedence over the original part drawing.

The supplier shall access the webAMPL through the supplier portal to determine the approved manufacturer name and approved manufacturer part number (if provided) associated with the Honeywell part number to be procured. The webAMPL is dynamic and updates are made frequently, so the webAMPL must be consulted prior to each procurement. As this tool contains data in many different Aerospace design vaults, the supplier must exercise care to use data from only the correct Aerospace vault. If the approved manufacturer part number is not available in AMPL, and sources of supply are not listed on the drawing, contact the Honeywell buyer for instructions.

#### 1.10.2 Authorized Use of the webAMPL for First Article Inspection and Procurement of Printed Boards

This section (1.10.2) is only applicable for designs controlled by the following sites or vaults.

-  Olathe (CAGE Codes 22373, 27914, 97896 & 99866)

For printed boards (PB), Honeywell provides a list of approved PB manufacturers through the webAMPL that the Contract Manufacturer can select in support of procurement requirements. The PB manufacturer

**UNCONTROLLED IN HARDCOPY**

**Supplemental Purchase Order Conditions (SPOC) Manual**









is approved based upon successful completion of a First Article Inspection (FAI) performed by the PB manufacturer, validated by the Contract Manufacturer, approved by Honeywell, subsequently added to the webAMPL data base and viewable through the webAMPL link noted above.

Other Honeywell designed products are approved based upon a successful First Article Inspection (FAI) performed by the supplier, reviewed and approved by Honeywell, subsequently added to the webAMPL data base and viewable through the webAMPL link noted above. To support this process, the supplier shall submit the FAI report to Honeywell for each part number prior to delivery of the first shipment.

**1.10.3 Material Code Index (MCI)\***

The MCI provides detailed material and sundry descriptions, specifications, qualified materials, approved manufacturers, and part number/material code numbers assigned to specific items which are used in Honeywell products.

The Material Code Index is applicable for designs controlled by the following Honeywell sites or vaults.

-  Deer Valley
-  Glendale
-  Albuquerque
-  Urbana
-  Redmond Commercial
-  Redmond Defense
-  Olathe
-  Clearwater

Please observe any location-specific restrictions as to applicability of the database information.

The Material Code Index database can be accessed on the Honeywell Aero Supplier Portal:

<https://scc.honeywell.com> HASP > Applications > MCI (Material Code Index).

Honeywell manufacturing sites, suppliers and distributors shall access the Honeywell Material Code Index to determine the approved material manufacturer and product associated with the Honeywell part number/material code number

When approved sources are listed on both drawings and the Honeywell MCI, sources listed in the Honeywell MCI shall take precedence over the original part drawing.

Honeywell Materials and Process Engineering (MPE) maintains information in the MCI.

**1.10.4 Urbana Code Book\***

The Urbana Code Book system has been superseded and shall no longer be used. The electrical components have been moved from the Code Books to the AMPL (see 1.10.1). All remaining materials have been moved from the Code Books to the Material Code Index (see 1.10.3).

**1.11 Quality Records****1.11.1 Access to Records**

Honeywell reserves the right to access records at the PO holder, or its sub-tiers involved in the manufacture of Honeywell product. The Supplier shall make the records available within 48 hours, or 2 business days, of the request for access.

**1.11.2 Records Storage**

Records must be stored in an area which meets all local Fire and Life Safety Codes that prevents loss, damage or deterioration. All data stored by electronic means shall be secure with back-up procedures, and audited to verify the integrity of the data.

**1.11.3 Disposition of Records**

The supplier shall contact the Honeywell Buyer for disposition of records upon termination of business activity.

**1.11.4 Corrections**

**UNCONTROLLED IN HARDCOPY**



## Supplemental Purchase Order Conditions (SPOC) Manual

Changes or corrections to records, regardless of the media, shall be made as follows: draw a single line through the old data, enter the correct data, date, and apply stamp or initials or signature of individual making the correction. No erasures, covering, or "white-out" allowed.

### 1.11.5 Record Retention

Records of product/material manufacture, test, inspection (including radiographic film), calibration and acceptance/certification, are considered quality records and shall be retained as follows:

Records in Support of	Minimum Retention Period <sup>1</sup>
Radiographic Film, Digitized Film or Digital Radiographs	11 years
Non-traceable, non-serialized parts	11 years
Traceable parts as identified on the Honeywell drawing or purchase order	Indefinitely <sup>2</sup>
Serialized parts as identified on the Honeywell drawing or purchase order	Indefinitely <sup>2</sup>
Critical parts as identified on the Honeywell drawing	Indefinitely <sup>2</sup>
Distributor standard off the shelf product	7 years

1. MINIMUM retention periods, beginning with the date the order was completed. In the case where a specification, contract or purchase order requires a greater retention period, the more stringent requirement will apply.
2. A lengthy period of time specified in the law that cannot be determined in advance. **Indefinitely** does not mean that the records must be retained permanently. Records having a retention period of "Indefinitely" should be reviewed periodically to determine if they have surpassed their useful legal and business life. Destruction of records with Indefinite retention period must be authorized by Honeywell.
3. Quality records shall be all records as defined within the AS9100 Standard, section 4.2.4.

### 1.12 Prohibited Practices

The following acts or practices are prohibited:

1. Unauthorized Repair - Repairs (by welding, brazing, soldering, or the use of adhesives) of parts damaged or found faulty in the fabrication process; repairing holes in castings, forgings or other materials by plugging or bushing without authorization from Buyer.
2. Unauthorized Processing - Addition, revision, or deletion of thermal, chemical, or electrochemical processes in manufacturing when processes are subject to specification control by Buyer.
3. Improper Material Submittal - Submission of material having known defects/problems to Buyer without notification.
4. Improper Material Re-submittal - Resubmission of material to Buyer without material being clearly identified as resubmitted material.
5. Unauthorized Material and Information Transfer – No supplier shall buy, sell, trade, or transfer Honeywell owned/supplied drawings, data, material, parts, devices, assemblies or end equipment for purposes other than the performance of Honeywell business, without prior written approval.
6. Reclaimed Material – No supplier shall use reclaimed material without prior written approval from the Buyer.

### 1.13 General Quality System Requirements

Suppliers and supplier sub-tiers providing product, are responsible for maintaining Quality Systems that are compliant to applicable Honeywell Quality System Requirements. Suppliers shall be third-party registered and receive periodic system audits, or be subject to periodic compliance audits by Honeywell. Suppliers assume the cost of systems audits. Honeywell's preferred Quality Systems levels are as follows:\*

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

- ☐ **Manufacturing with Design Authority:** AS/EN/JISQ 9100; design must be included in scope of registration, and suppliers may not exclude design portions of the Standard.
- ☐ **Manufacturing without Design Authority / Special Processes:** AS/EN/JISQ 9100
- ☐ **Repair and Overhaul:** National Aviation Authority (NAA) Certification (local and/or international regulatory agency) and/or AS9100 or AS9110
- ☐ **Special Processors (non-manufacturing):** AS9003 or satisfactory audit to Nadcap (AC7004)
- ☐ **Materials Laboratories and NDT Laboratories:** ISO 17025, or AS9003, or satisfactory audit to Nadcap (AC7004)
- ☐ **Distribution and Brokers:** AS/EN/JISQ 9120
- ☐ **Calibration Laboratories:** ISO 17025
- ☐ **Software Suppliers:** AS/EN/JISQ 9100 and AS9115

Alternate Quality System standards which do not meet the above requirements must be approved by the Supplier Quality Manager (or designee) of the Honeywell site issuing the PO.

The supplier shall provide evidence of a certificate of registration from an organization accredited by a member of international accreditation forum (IAF) to the industry standard listed above, or successfully pass a compliance audit conducted by Honeywell or Honeywell's approved designee.

### 1.13.1 Evaluation

Honeywell Technical Services Inc. (HTSI), and/or the Honeywell purchasing sites, shall perform periodic evaluations on external suppliers. Failure to provide proof of compliance may result in a Quality System compliance audit being launched at the Supplier's expense.

### 1.14 Obsolescence

For component parts (COTS) or Honeywell designed parts or assemblies, the Supplier shall notify the Honeywell Buyer regarding part or material obsolescence as soon as the information becomes available, with an expectation to provide notification at least six months prior to the last date an order will be accepted. Honeywell requires sub-tier/subcontract suppliers to manage obsolescence on the assemblies where they own the design.

For products where the Supplier has design responsibility, the Supplier shall develop and implement a Part Obsolescence Management Process. This Process shall include the following elements at a minimum:

- Annual assessment of Product Bill of Material(s) (BOMs) to identify any obsolescence that will potentially impact delivery of product to Honeywell.
- Proactive identification and detection of part, material or manufacturing/test equipment obsolescence issues
- Action Plan to resolve each obsolescence issue, including forecast analysis and product support decision(s) (i.e. Life Time Buy, redesign or product sunset)
- Life Time Buy inventory management plan to ensure long term ability to produce product
- Advanced notification to the Honeywell buyer of any potential interruption in the ability to meet Honeywell forecasted demand due to an obsolescence issue.

### 1.15 Honeywell-Consigned Material

The Supplier shall not return unused consigned material without authorization from the Honeywell Buyer.

#### 1.15.1 Nonconforming Consigned Material

If authorized for return, the material shall be labeled "Return of Consigned Materials, Do Not Route to Stores" on the outside of the shipping container (BARCODE LABELS ARE NOT TO BE USED).

The Supplier shall identify part number and dash number, and the reason for return on the packing slip.

### 1.16 Business Continuity Management

The Supplier shall ensure their Company has robust Business Continuity Management (BCM) processes in place that include disaster recovery and preparedness.

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

**1.16.1 Business Continuity Plan**

The Supplier shall document a Business Continuity Plan which details what the Company would do in the event that key People, Processes or Technology was to become unavailable. This Business Continuity Plan shall be applicable, including but not limited to, natural disasters, labor disputes, lockouts, evictions, power or systems failures, hazardous spills, fire, floods, explosions, sabotage, riots, war or other civil disturbances, and voluntary or involuntary compliance with any laws, regulations, or requirements of any government authorities.

General information regarding how to develop a Business Continuity Plan can be found on the internet. Some helpful website links are listed below:

<http://www.disaster-recovery-guide.com/>

[http://www.disasterrecovery.org/disaster\\_recovery.html](http://www.disasterrecovery.org/disaster_recovery.html)

**1.16.1.1 Sub-Tiers**

The Supplier's BCM Plan should also include planned actions to mitigate any disruptions in supply from critical sub-tiers.

**1.16.2 Audit Rights**

Honeywell reserves the right to review the Supplier's BCM Plan at any time to assess their maturity and continued development.

**1.17 Crisis Management****1.17.1 Notification**

The Supplier must use best efforts to notify Honeywell Commodity Manager or Buyer within 24hrs if they experience an incident, including but not limited to those listed in 1.16.1 above that may impact their ability to make their scheduled shipments to Honeywell.

**1.17.1.1 Sub-Tiers**

Supplier must notify Honeywell Commodity Manager or Buyer within 24hrs of receiving notification that any of their critical sub-tiers have experienced an incident, including but not limited to those listed in 1.16.1 above, that may impact their ability to provide materials or components to the Supplier that are required in the manufacture or assembly of Honeywell product.

**1.17.2 Disaster Recovery**

In the event of a supply interruption, Honeywell may engage the Supplier to collaborate on recovery. Supplier is expected to fully support any such engagement until the delivery schedule to Honeywell is recovered.

**1.18 Non-Contact 3D Inspection Systems \*****1.18.1 Any inspection method used to accept Honeywell product must be proven capable and accurate for the intended purpose.**

The supplier shall obtain approval of such measurement methods in accordance with supplier procedure SI-1.1 Requirements available on the Honeywell Aerospace Supplier Portal at <https://scc.honeywell.com> HASP>DOCS>Documents>Quality>SPOC>Supporting Documents\*

**Revisions:** Paragraphs 1.2.1 Yeovil, 1.10.3 and 1.10.4 Rewritten to clarify. 1.15.1.1 Phoenix Engines, Site Specific deleted. Paragraphs 1.3, 1.6, 1.10, 1.10.1, 1.10.18, and 1.18 Rewritten to clarify.

\*Revised / \*\*Added

**Section 2.0 Specifications and General Information \*****2.1 General Requirements- Specifications\***

Suppliers are required to identify and work to Government, Industry, and Honeywell specification

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

revisions as follows.

**When a specification revision is listed on an engineering drawing, only that specification and revision shall be used.**

- When no specification revision is listed on an engineering drawing, suppliers are required to identify the current specification and revision using Aerospace Specification Index (ASI) and to work to that specification and revision. ASI is available to authorized Honeywell suppliers located on the Honeywell Aero Supplier Portal: <https://scc.honeywell.com>, HASP > Applications > ASI
- The applicable revision shall be the revision in effect on the date of the Purchase Order except that new specification changes shall be implemented within 60 days of specification revision date.
- Parts on existing contracts that are processed before the specification change are acceptable unless otherwise specified in the specification revision document.

### 2.2 General Requirements- Alternate Materials\*

Material substitutions are not allowed without written Engineering approval, with exceptions provided in some site-specific alternate material substitution documents. Refer to the Aero Spec Index Must Read Instructions for further information.

**Revisions:** Paragraphs 2.1 and 2.2 Rewritten to clarify. Paragraph 2.3 Site Specific Details Removed

\*Revised / \*\*Added

## Section 3.0 SPOC Groups – SPOC 001 through SPOC 009 Details \*

### 3.1 Group Requirements\*

In all cases, contents of SPOC Manual Sections 1.0–General Requirements, and Section 2.0–Specifications and General Information, shall be reviewed and complied with in conjunction with the purchase order flow down of specific Group SPOCs, or individual SPOCs.

SPOC Group Number	Individual SPOCs Invoked by SPOC Group
SPOC 001 Manufacturer with Design Authority	Sections 1.0 and 2.0, 100, 106, 124, 127, 128, 129, 130, 140, 142, 149, 154, 165, 200, 239, 267, 354, 418, 419, 420
SPOC 002 Manufacturer without Design Authority (may include Specification Control drawings that call out specific dimensions, processing methods, etc.)	Sections 1.0 and 2.0, 100, 106, 124, 127, 128, 129, 130, 140, 142, 149, 154, 165, 200, 239, 267, 354, 418, 419, 420
SPOC 003 Standard and/or Catalog Hardware	Sections 1.0 and 2.0, 100, 106, 140, 142, 200, 239, 267, 354, 418, 419
SPOC 004 Industrial Programs	Sections 1.0 and 2.0, 100, 140, 267, 354, 418, 419
SPOC 005 Shop Overload or Spot Operations	Sections 1.0 and 2.0, 100, 106, 127, 128, 140, 154, 159.1.1, 165, 200, 239, 267, 354, 418, 419
SPOC 006 Repair & Overhaul	Sections 1.0 and 2.0, 100, 110, 127, 140, 142, 159, 239, 267, 354, 418, 419
SPOC 007 Ground Support Equipment	Sections 1.0 and 2.0, 100, 127, 130, 140, 142, 179, 267, 354, 418, 419
SPOC 008* Honeywell Aerospace Intra-Site Transactions:	Process product/material in accordance with AP-1064 – section 3.6 “Authorizing Traceability Documentation” and AP-1517, Requirements for Transactions between Honeywell Aerospace Sites.

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

SPOC Group Number	Individual SPOCs Invoked by SPOC Group
SPOC 009 Printed Board Assemblies	Sections 1.0 and 2.0, 100, 106, 124, 127, 128.4, 140, 142, 149, 162, 165, 200, 239, 354, 418, 419, 420, 548, 549, 560

**Note:** Individual SPOC's may have multiple sections, the supplier is responsible to understand applicability or request clarification.

**Revisions:** SPOC 008 Restated.

\*Revised / \*\*Added

### **SPOC 100 – Notification, Containment, and Corrective Action of Material Found Nonconforming to Honeywell Purchase Order Requirements \***

#### **100.1 Scope**

Material that departs from drawing, specification or maintenance requirements shall be identified and controlled to prevent unauthorized use or delivery to Honeywell or other designated destinations. The Supplier shall provide prompt, (ordinarily within 24 hours), written notification on supplier letterhead to both the Honeywell Buyer, Field Quality Engineer, and site Supplier Quality Manager if nonconforming product or process escapes are identified after shipment to Honeywell has taken place.

#### **100.2 Material Review Authority**

The Supplier shall not exercise Material Review authority without written approval by Honeywell's Quality Organization. This applies to material that is Honeywell designed and/or designs controlled to Honeywell specifications or other OEM designed hardware. Honeywell reserves the right to reject the decision of the Supplier Material Review Board (MRB).

Action shall not be taken on any nonconformance which could affect safety of personnel; adversely affect performance, durability, interchangeability or reliability; materially affect weight; or otherwise result in failure of the end article to perform its intended function. All doubtful cases shall be submitted to Honeywell Material Review Engineering on the appropriate form.

Honeywell reserves the right to reject the decision of the Supplier Material Review Board (MRB).

#### **100.3 Request for Material Review Action\***

The Supplier may request consideration for nonconforming material that cannot be reworked to fully conform to drawing specifications, aftermarket maintenance technical data, or purchase order requirements. Requests for Material Review Action shall be submitted using the online electronic eCATS system.

The supplier must comply with the requirements outlined in SPOC 100.3.1 prior to submitting the RMRA to the site.

Requests for Material Review Action shall be submitted on the appropriate nonconforming material document (e.g., Request for Material Review Action [RMRA], Quality Notifications [QN], eCATS RMRA or equivalent as applicable to the Honeywell site).

The forms and instructions are located in the eCATS application located at <https://ecats.honeywell.com/login.jsp>, or by contacting the Honeywell buyer.

Nonconforming articles shall be retained by the Supplier until disposition of ACCEPT in eCATS by Honeywell site MRB.

**Note:** Honeywell reserves the right to subtract monies from the purchase order or debit the supplier, for Honeywell incurred costs related to supplier responsible RMRAs.

Suppliers shall not request RMRAs unless hardware is manufactured with open Purchase Order(s) in place. RMRAs shall not be requested to start fabrication of known or potential non-conforming product and are only applicable to the product on purchase orders(s) identified on the specific approved RMRA.\*

**UNCONTROLLED IN HARDCOPY**

**Supplemental Purchase Order Conditions (SPOC) Manual****100.3.1 Process Action Steps and Follow-up Process**

Suppliers must perform these Process Action Steps prior to submittal of all RMRA's to Honeywell:

- Evaluate submitted (RMRA) dimensional discrepancies against the current DIP / QATP IAW SPOC 128.
- Revise the DIP / QATP to 100% inspection in conjunction with the dimensional discrepancies noted in the submitted (RMRA).
- Supply evidence of Root Cause and Corrective Action to prevent recurrence.

Supplier On-Going Follow-up process:

- Continue to monitor manufacturing and inspection process on those dimensional discrepancies noted in any or all RMRA submittals.
- 100% inspection until the IRR has been re-established IAW SPOC 128 to applicable Honeywell site requirements.

**100.4 Material Discovered Nonconforming after Shipment**

The Supplier shall promptly notify Honeywell when nonconforming product has been shipped. The notification shall include part numbers, design activity, CAGE code or Current Design Activity (CDA) code, traceability (lot, serial, and manufacturer numbers), ship dates, quantities, and a description of the nonconformance. This applies to any nonconformance that departs from drawing, specifications, aftermarket maintenance technical data or purchase order requirements.

The Supplier shall send written notification, referencing the site-assigned supplier code, to the attention of

- The Honeywell Buyer, **and**
- Site Quality Assurance management at the issuing PO Honeywell site, **and**
- Supplier's assigned Field Quality Engineer.

The supplier shall promptly perform internal RCCA to assure full containment is in effect, and document all nonconformance causes and actions to prevent recurrence. Records of these actions shall be retained in accordance with Section 1.11 in this Manual and be available to Honeywell on demand.

For confirmed supplier disclosure escapes, a formal corrective action request will be made to the supplier using the Honeywell E-CATS system. All suppliers are required to have an active eCATS account.

Product found to be nonconforming, and shipped in partial shipments, requires that the Supplier repeat the source inspection on the unshipped product per SPOC 149 requirements. A new Partial Shipment Release Sheet shall be generated per SPOC 140 if the remaining product is then found acceptable.

**100.5 Containment of Nonconforming Material**

When a nonconformance is discovered, or the Supplier is notified of a discrepancy, the Supplier must take immediate action to determine if the condition exists on any other work-in-process, in all inventory locations at the Supplier's facility, or in prior shipments. Containment action must be taken and documented prior to the next shipment of the part number involved.

Containment activities taken and/or planned shall be communicated to the Honeywell Aerospace site within 48 hours when formally requested through Quality Notification, RMRA (in eCATS), HASP or other documented notification/discovery of nonconforming shipment. The supplier shall perform internal RCCA when any nonconformance has been positively identified as a result of one or more of these actions. Records of these actions shall be retained in accordance with Section 1.11 in this Manual and be available to Honeywell on demand. Honeywell may not decide to issue a corrective action request through our eCATS system, this does not preclude the supplier from documenting their corrective actions. It is highly recommended that for all Honeywell issues the suppliers' corrective actions include all the elements present in the eCATS format.

Product identified on a Partial Shipment Release Sheet as source inspection accepted shall be re-inspected prior to shipment.

The Supplier shall not wait for the discrepant hardware to be returned to begin an investigation.

**UNCONTROLLED IN HARDCOPY**



## Supplemental Purchase Order Conditions (SPOC) Manual

**100.6 Corrective Action**

The Supplier is responsible for prompt replies to Honeywell requests for containment and corrective action using eCATS, an electronic corrective action tracking system. All suppliers are responsible for registering for eCATS access located at <https://ecats.honeywell.com/login.jsp>.

**100.7 Request for Reversals**

Rejects identified as supplier's responsibility are documented on the supplier scorecard available on the Supplier Portal. If the supplier's investigation of the reject concludes that the nonconformance should not be charged to the supplier's responsibility, then a request to reverse the responsibility must be submitted by the supplier in eCATS. Reversal requests should be submitted within 30 days of notification of nonconformance. Any reject listing on a supplier's scorecard constitutes notification whether or not the part is returned. All eCATS reversal requests submitted shall provide detailed justification information. Instructions on how to submit a reversal request are located on the Honeywell Aero Supplier Portal in the SPOC-Supporting Documents area.

Requests for reversal submitted later than 90 days after nonconformance notification may not receive consideration from the Honeywell site.

**100.8 Return Purchase Orders for Replacement, Reworked or Repaired Parts**

Any part being supplied to Honeywell on a return purchase order must conform to drawing, specifications, aftermarket maintenance technical data or purchase order or have Honeywell MRB disposition for any repairs. Under no circumstances are parts known to be used or overhauled to be sent as a replacement for an OEM part. For parts that cannot be reworked to full drawing compliance economically or where repair authorization will not be granted, parts are to be scrapped at the suppliers' facility. Supplier shall contact the Honeywell Purchasing agent prior to scrapping these parts, and Honeywell reserved the right to witness the scrapping activity.

**100.9 Failure Reporting**

Honeywell reserves the right to request failure analysis on nonconforming hardware submitted from the Supplier.

Failure analysis reports may contain:

- A process map identifying key inputs and outputs of each affected manufacturing step.
- A product/process Failure Mode Effects Analysis (FMEA) tied to the process map identifying the failures or risks associated to the known nonconformance.
- A control plan developed from process map and FMEA identifying how the Supplier shall monitor those known nonconforming characteristics on future lots to prevent re-submittal of nonconforming product.

Note: Refer to SPOC 128 for information and benefits on implementing Control Plans.

**100.9.1 Failure Reporting Applicability**

Upon request, the Supplier shall submit failure analysis, a short term customer escape prevention plan, and a permanent corrective action plan, focusing on the root cause of the discrepancy. Reports shall be submitted within 30 calendar days of request unless otherwise specified.

Honeywell reserves the right to issue a Supplier Corrective Action Request (SCAR) requiring completion of a part number specific Honeywell PCPX project with the on-site assistance of Supplier Development Engineering. Reference SI-100.9 located on the Honeywell Aero Supplier Portal: <https://scc.honeywell.com> HASP > Docs > Documents > Quality > PCPX).

**Revisions:** Paragraph 100.3. Note revised. Paragraph 100.10 Removed

*\*Revised / \*\*Added*

**SPOC 106 – Eye Examinations\*****106.1 General Vision Requirements\***

Individuals who inspect material for final acceptance must have:

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

Color Vision Eye Examination every 12 months

Near-Vision Eye Examination every 12 months

The Individual(s) must meet the minimum standards in one eye, corrected with glasses or not corrected:

### Color Vision Eye Examination

Examples of acceptable testing methods include: Pseudochromatic plates, Dvorine, Ishihara, Richmond, Farnsworth lantern, Keystone Orthoscope, Titmus vision tester, Titmus II Vision Tester, Titmus 2 Vision Tester. There are standard definitions of what is a pass/fail on these tests that should be followed.

### Near-Vision Eye Examination

Examples of acceptable testing methods include: , 'E' eye examination chart or international equivalent, Snellen 14/18 or better, 20/25 or better, Jaeger type 1, Ortho-Rated 8 or equivalent method.\*

A medical professional must perform the eye examinations (eye clinic, occupational health clinic, onsite health clinic or medical department).

**Note:** \*\* For any the personnel who fail the eye exam, the following criteria applies:

- 1) Any individual failing any of the passing criteria of the color vision or near vision testing defined herein may not approve final acceptance of Honeywell products.
- 2) Any individual failing any portion of the eye exam may take action to correct the vision problem, and may repeat the eye examination.
- 3) Individuals who, after taking action to correct a vision problem, and subsequently failing the exam 2 additional times (failed 3 times sequentially) may not repeat the test, and may not approve Honeywell products.

### **106.2 NDT Requirements**

Refer to the requirements of Supplier Instructions 165.7 as referenced in SPOC 165

### **106.3 Chemical Processing Requirements\*\***

Must be in accordance with paragraph 106.1 except for etch inspection personnel (Nital, Blue Etch, White Spot etc...) near vision shall be Jaeger type 2 minimum or Ortho-Rated 8 at 12 inches (305 mm) or 20/30 Snellen, in one eye minimum. The use of the Tumbling E near vision acuity test in accordance with ISO 18490 is considered acceptable as well.

### **106.4 Welding Requirements\*\***

Shall be in accordance with paragraph 106.1 except near vision shall be in accordance with the requirements of AWS D17.1 and be administered by a medically qualified facility

### **106.5 Record Requirements**

The records of the eye examinations shall be maintained by the Supplier.

**Revisions:** Note added to 106.1. Previous paragraph, 106.3 Record Requirements, moved to 106.5. Added paragraphs, 160.3 Chemical Processing Requirements and 106.4 Welding Requirements.

*\*Revised / \*\*Added*

## **SPOC 110 – Fixed Process Requirements \***

### **110.1 Scope**

Parts under Fixed Process Control require written manufacturing process procedure approval prior to the production of parts. Any subsequent changes to the Fixed Process also require Honeywell approval (prior to implementation). Fixed Processes shall be performed only by approved supplier. Pre-production parts, shipped on development purchase orders, shall be uniquely identified and traceable.

### **110.2 How to Obtain Approval for a Fixed Process or a Change to a Fixed Process**

**Step 1.** Obtain the current Fixed Process Forms located on the Honeywell Aero Supplier Portal:

<https://scc.honeywell.com>, from the HASP menu, select > Docs > Documents > Site Specific, OR contact the site

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

Honeywell Buyer.

**Step 2.** Verify all Fixed Processes and sub-tiered Fixed Processes are performed by Suppliers with a Honeywell Aerospace vendor code and acceptable quality system.

**Step 3.** Send the completed Forms, with applicable substantiation documentation and articles, to the applicable site Honeywell buyer.

### 110.3 Phoenix Engines and Greer Orders Only

General EO#77, "System Changes Applicable to Part Marking and Engineering Source Approval Requirements" is required. It is an attachment to the Drawing Interpretation Specs, SC6500 and E1000, both of which are available on the Honeywell Supplier Portal. Route to the Substantiation Core Team ([fixedprocess.phx@honeywell.com](mailto:fixedprocess.phx@honeywell.com)) to obtain necessary approvals.

### 110.4 Site Specific Documents

For site specific fixed process requirements, refer to Site Specific documents in HASP by selecting > Docs > Documents > Site Specific

**Revisions:** Site Specific Paragraphs 110.4 Rewritten to clarify. Paragraphs 110.5 through 7 removed.

*\*Revised / \*\*Added*

## SPOC 118 – Quality Requirements for Honeywell Partners with Federal Aviation Administration (FAA) Approved Production Certificates

### 118.1 Scope

Articles supplied under this order are furnished by a partner of Honeywell holding a FAA Production Certificate, as specified by Federal Aviation Regulations (FAR) Sub-Part G, paragraph 21.132. Inspection and acceptance is delegated to the partnering Supplier in accordance with Federal Aviation Regulation (FAR) 21.146.

### 118.2 Documentation Requirements

Certification is required with each shipment stating that the articles supplied were produced in accordance with a quality system approved by the FAA.

**Revisions:** No changes

*\*Revised / \*\*Added*

## SPOC 124 – First Article Inspection (FAI) Requirements \*

### 124.1 Scope\*

The Supplier holding the Honeywell Purchase Order is responsible for assuring completion of the First Article Inspection Report (FAIR) per AS9102 and this SPOC for all Honeywell design characteristics generated by the supplier or their sub-tiers. In the event of any conflict between this SPOC, AS9102, and the current revision of the Supplier NI Instruction, the order of precedence shall be 1) the text of this SPOC, 2) instructions in the current revision of the Supplier NI Instruction (ref 124.2/124.6), 3) AS9102.\*

The FAI requirement applies to each bill of material or parts list item with a Honeywell part number that is invoked in the product design, including lower level Honeywell detailed drawings identified on top level assembly drawing(s), and each cavity or tool serial number for products whose dimensions are controlled by the tool. FAIRs may be required on Customer or Supplier Drawings that are non-Honeywell designs or CAGE codes if specified on the Purchase Order. Suppliers may offer an alternate FAI plan to meet the requirements of this SPOC. Use of form AF-0685 is required for proposing any alternate to this SPOC. Approval to operate under this alternate FAIR plan shall only be authorized in writing by Honeywell Site Quality management. If the supplier has an alternate plan that was approved by an authorized site quality representative in writing prior to implementation of Form AF-0685 that plan is still acceptable unless it has been revoked by the issuing site. Form AF-0685 is

**UNCONTROLLED IN HARDCOPY**

**Supplemental Purchase Order Conditions (SPOC) Manual**

located on the Honeywell Aero Supplier Portal: <https://scc.honeywell.com>, from the HASP menu, select > Docs > Documents > Quality > SPOC > SPOC Forms.\*

Honeywell or Customer FAIR approval does not relieve the supplier of the responsibility and/or liability for full compliance with all contract requirements.

The following items are exempt from the requirements of this SPOC or Identify Honeywell Site Specific Requirements:

- Bar and sheet stock.
- Unaltered material consigned by or purchased from Honeywell Aerospace or its authorized distributors.
- Honeywell vendor item drawings including, specification-controlled, 10- or 11-digit drawings and S-numbered drawings. While these drawings do not require a detailed FAIR, they shall be documented on form 1 of AS9102 for all assemblies and/or lower level FAIRs where they form part of the top level assembly part number.
- Discrepant hardware either returned to the manufacturing supplier or sent to an alternate supplier and dispositioned rework or repair.
- Nonfunctional hardware (protective covers, shipping hardware, etc.), unless otherwise specified.
- Off the shelf sheet stock, unless post-milled processed.

**124.2 Net Inspect First Article System Usage \***

When a FAIR is required per Tables 1 or 2, a Honeywell Field Quality Engineer (or a Honeywell-delegated authorized agent) is required to review FAIRs prior to hardware release. **First Article Planning is critical.** Supplier shall notify Honeywell Field Quality Engineer (FQE) at least two (2) weeks prior to the anticipated completion of the FAIR(s) for effective FAI scheduling.

Reference On-Line First Article Instructions located on the Supplier Portal <https://www.net-inspect.com>

Contact buyer as needed to determine assigned FQE.\*

**124.3 Periodic/Repeat FAIs**

Honeywell reserves the right to exercise the requirement of additional and/or periodic/repeat FAI requirement on a part number basis to assure continued product conformity. Also, HON reserves the right to validate multiple production lots if needed to determine overall process capability. FAI requirements are governed by SPOC 124 (Event Tables).

**124.4 Additional Requirements\***

Parts defined as data sets shall use Electronic Part Definition (Solid Model) to substantiate the dimensional requirements in accordance with SPOC 267.

For United States-initiated Purchase Orders, when a first time FAIR is being conducted by a Supplier located outside of the United States, the Supplier shall notify the Honeywell Buyer to assure that proper notification is made to the FAA prior to FAIR completion.

Honeywell provides supplemental FAIR checklists for specific commodities. During FAIR preparation, suppliers are strongly encouraged to download and execute the checklist which is appropriate to the commodity being fabricated. The checklists are located on the Honeywell Aero Supplier Portal: <https://scc.honeywell.com>, from the HASP menu, select > Docs > Documents > Quality > SPOC > SPOC Forms, and find the checklist that is appropriate for the type of commodity. Completed checklists should be attached to the electronic FAIR. Contact your assigned FQE for further information or guidance.

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

Table 1 – FAIR Event Table\*

Event Description	FAIR type due	On-line First Article System	Honeywell / Customer FAIR Review Required	Note
New base part number or first time supplied by source	FULL	All	YES	
New dash number(s) issued and manufactured. See note *	FULL	All	YES	Consult FQE to request partial FAIR per AS9102 If Honeywell approved Full / Baseline FAIR on other dash number(s)
Current FAIR conditionally accepted based on Deviation, RMRA, Case Record, MRB or Manufacturing Revision authorizing rework or requirement modification	PARTIAL FAIR due on next lot manufactured or expiration of deviation / waiver	All	YES	
A change in process, material, tooling, or inspection method that can potentially affect form, fit, or function. This includes changes in Approved Sources For Controlled Processes since last approved Honeywell FAI, Reference SPOC 165.*	PARTIAL	All	YES	SPOCs 110, 180 and/or Spec. may contain additional requirements
Change in SPOC 165 Special Process source since last Honeywell approved First Article.**	PARTIAL	All	YES	SPOCs 110, 180 and/or Spec. may contain additional requirements
A change in manufacturing source or location of manufacturing equipment, including tooling transferred from another Supplier or division of the same supplier	FULL	All	YES	Consult FQE to request partial FAIR per AS9102
Two year (2) lapse in production *	FULL	All	YES	Reference Table 1 Notes 1, 2, 3
Casting tool reaches Table 2 usage levels	FULL	All	YES	See 124.3

**NOTES (Table 1):\***

1. The 1<sup>st</sup> tier supplier holding the Honeywell Purchase Order shall have the responsibility of assuring hardware manufactured internally and/or procured from their suppliers are maintained and are in compliance with the Two Year (2) lapse in production requirement in accordance with AS9102. Evidence of continued manufacturing may be requested by Honeywell either at the 1st tier Purchase Order Holders facility or at their sub-tier suppliers as applicable.

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

2. For Stock / Inventory hardware that was manufactured and placed in inventory/stock at a supplier BEFORE the two year lapse in production (and which was covered by a Honeywell-approved FAIR at time of manufacture), a full FAIR with FQE approval will be required for the next lot manufactured.

3. Unless otherwise specified by the Honeywell procuring site Quality Department or by specific purchase order text, a 2-year lapse in casting production will require the casting supplier to create a casting level partial FAIR. AS9102 forms 1 and 2 shall be fully completed forms with all supporting certifications attached—the same as if the supplier were executing a new FAIR. Form 3 needs to report only design characteristics that are not a direct product of the casting tool/pattern.\* Some examples are: dimensions which are straightened, added part marking, machining or targeting, gating removal, welding, or other features which were altered in the casting manufacturer’s process. The partial casting FAIR Package shall be subject to approval by Honeywell FQE or authorized agent as defined elsewhere in SPOC 124.\*

**Table 2 – Casting Tool Life Management**

Part Type / Process / Pattern	Frequency of FAIR based on number of pieces <u>produced</u> by tool since date of last full FAIR
Solid Blades / Vanes / Investment	50,000
Cored Blades / Investment	25,000
Die Casting	25,000
Nozzle Segment / Investment	10,000
Small Structure / Investment (NO dim/dia. OVER 19.999 inches)	10,000
Wheels / Investment	5,000
360 Nozzles / Investment	5,000
Large Structure / Investment (ANY dim/dia. 20.000 inches or over)	2,000
Metal / Sand	1,000
P-Mold	1,000
Plastic / Sand <i>Note: Tooling made from combined materials default to plastic frequency.</i>	800
Wood / Sand	350

Additional Casting Requirements Frequency of FAIR is based on the number of production pieces since the last approved FAIR. The Supplier shall assure that all Event Table 1 conditions have been satisfied prior to usage of the Casting Tool Life Management Table below. Frequencies are, at a minimum, tracked by the Supplier/Manufacturer and do not relieve the Supplier of the responsibility/liability to meet the drawing and/or authorized deviation. The Supplier is required to establish and maintain written procedures to assure compliance with these frequencies.

### 124.5 Approvals\*

When a FAIR is required per Tables 1 or 2, a Honeywell Field Quality Engineer (or a Honeywell-delegated authorized agent) is required to review FAIRs prior to hardware release. **First Article Planning is critical.** The Supplier shall notify a Honeywell Field Quality Engineer (FQE) at least two (2) weeks prior to the anticipated completion of the FAIR for effective FAI scheduling. \*

Contact buyer as needed to determine assigned FQE.

Note: All Yeovil & Bournemouth FAIRs to be provided and maintained using the Net Inspect UK site - <https://uk.net-inspect.com>

### 124.6 Documentation and Records\*

Unless otherwise specified by the procuring site, a Honeywell-stamped FAIR approval form (AF 0113 or equivalent) shall be retained by the Supplier with the FAI documentation. FAIR's submitted using the Net Inspect system meet this requirement. For FAIRs that do not require customer review the supplier-approved AS9102

**UNCONTROLLED IN HARDCOPY**



## Supplemental Purchase Order Conditions (SPOC) Manual

forms shall be retained. All documents used to support the review and approval of a FAIR are considered part of the FAIR package and shall be retained by the supplier per Quality Records defined in Section 1.

Retention of FAIR Records Exception: FAIR records may not be discarded as long as active shipments of the respective product are being made with ties/accountability back to that specific FAIR record. Retention of records using the Net Inspect system is considered to be an acceptable alternative.

Honeywell reserves the right to request the FAI package at any time. When requested, the Supplier shall ensure that FAI documentation is provided within the time frame listed below.

USA, Canada, Mexico or UK – 2 business days

Outside of USA, Canada, Mexico or UK – 5 business days

FAIRs shall be compliant with AS9102 and On-line First Article (Net Inspect) Instructions.

Actual Results for Basic Dimensions, shall be recorded per instructions in the Net Inspect Supplier user guide (see FAQ for Form 3).\*

### 124.7 Last Article Inspection Report

In cases where a process or product is to be discontinued at a supplier, Honeywell may require a Last Article Inspection Report (LAIR) from the current supplier. This report is identical to a First Article Inspection Report (FAIR), and is provided by the supplier for one of their last production runs, or processing runs. Honeywell's designated electronic FAIR system is used for reporting, and the LAIR must be approved on site by a FQE or designee just as would a typical AS9102 First Article. Full or partial LAIR depends upon whether part of a production process, part of a set of processing operations, or a complete product is being moved. LAIR requirement will be communicated to the supplier via Honeywell PO. The LAIR will be reported in the Honeywell electronic FAIR system as a normal full FAIR (there is no LAIR designation).

**Revisions:** First paragraph of 124.1 Rewritten to clarify, Site Specific Removed. Paragraphs 124.2, 124.4 Table 1 Note 3, 124.5 and 124.6 Rewritten to clarify.

\*Revised / \*\*Added

## SPOC 127 – Control of Government / Customer or Honeywell Owned Property at Suppliers\*

### 127.1 Scope

Government, customer or Honeywell owned acquired/furnished property is:

- Tooling, test equipment and material supplied by Honeywell for use in the performance of this purchase order.
- Tooling, test equipment and material made by the Supplier and paid for by Honeywell in the performance of a purchase order. The Seller is responsible for such property in accordance with the General Terms and Conditions clause of this Order and this Government/Customer or Honeywell Owned property clause.
- The Supplier's Property Management System to control, use, preserve, protect, repair and maintain such property shall be reviewed and approved by Honeywell. Documentation should be submitted to the buyer for approval.

### 127.2 U.S. Government owned Contracts

U.S. Government owned, acquired or furnished property supplied by Honeywell is Government Property and subject to the provisions of the Federal Acquisition Regulation (FAR) 52.245-2 (FP) or 52.245-5 (CP), or 52.245-1 for purchase orders placed after June 2007.

### 127.3 Lead or Kirksite Tooling

For Lead or Kirksite tooling or dies procured with government funds, the supplier shall:

**UNCONTROLLED IN HARD COPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

- Charge only for the exclusive use of the tooling or dies unless modified by customer contract or Purchase Order.
- Obtain written approval from the Honeywell Buyer before the destruction or re-use of the Lead or Kirksite metal.

### 127.4 Control of Government / Customer or Honeywell Owned Property

The Supplier shall:

Have a system, which includes written procedures for control of all tooling, test equipment and material. Procedures shall be in accordance with the controls specified within the terms and conditions and this SPOC.

#### Receiving and Identification

Each individual piece of test equipment and tooling acquired under this order shall be marked in a permanent manner with the appropriate identification number and ownership as provided by the Buyer. See marking instructions on the GP7-06 Supplier Asset Identification Tag(s) Certification to be provided by the Buyer. Unless otherwise directed by Honeywell, Supplier will make use of Honeywell's numbering system for all items of tooling and test equipment acquired hereunder. General purpose equipment type components of test equipment which are incorporated in a manner that makes removal and reutilization feasible and economical will be physically identified if the acquisition cost is \$5,000 (\$1,000 if contract is for NASA) or more.

Upon receipt or fabrication, of tools and test equipment, complete and return the GP7-06 Supplier Asset Identification Tag(s) Certification and photos of the tools or test equipment that clearly illustrate the permanent mark or tag, to the Buyer.

If not otherwise specified, all equipment that is used to determine acceptance of material will be subject to, as a minimum, an initial inspection and calibration, and a re-inspection and re-calibration every 6 months thereafter.

#### Records

The supplier shall maintain a record of all Government/customer and Honeywell owned property. The list shall include:

- Description and gage/tool name
- Honeywell identification number (applicable to equipment, tooling, test equipment, gages, etc.)
- Part Number (applicable to material)
- Honeywell Purchase Order number, contract or equivalent code
- Part numbers used to manufacture
- Unit of measure (material)
- Quantity (if other than 1)
- Unit price

The list may also include (when applicable):

- Weight,
- Material content (wood, steel, aluminum, etc.),
- Supplier name,
- Signature of the company's approved representative,
- Date of certification,
- Program name (if supplied),
- Honeywell Purchase Order site supplier code

When the property is transferred to another supplier or returned to Honeywell, supplier is required to maintain the records of the move for 5 years.

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

### Physical Inventory

Seller is required to perform a physical inventory of all of the Government/customer or Honeywell owned property acquired/furnished against this Purchase Order upon request from Buyer. A copy of the Seller's Inventory reconciliation and Honeywell's GP7-01 Survey of Supplier's Property Management System and Physical Inventory Certification must be submitted to the Buyer, unless otherwise specified.

### Maintenance

Maintain the calibration on all the gages as shown in ISO10012-1 or ANSIZ540.

Maintain, protect and preserve tooling and test equipment.

### Disposition

Retain all Government/customer or Honeywell owned property at its expense until disposition directions are received from the Buyer.

Seller is required to report immediately to the Buyer any loss, theft or destruction of, or damage to, the Government/customer or Honeywell owned property while in its possession.

### Utilization

Utilization of Government acquired/furnished material, test equipment or tooling under this order on other orders is prohibited. Through the Buyer, authorization will only be granted if utilization of the property can be accomplished on a non-interference basis with orders received from the Buyer. Segregate Government or Honeywell owned special tooling and special test equipment when not in use.

No modifications or changes to any of the test equipment or tooling are permitted without prior Honeywell approval.

Contact the Honeywell Buyer before the transfer of test equipment, or tooling between supplier facilities (address location) or to other suppliers.

Report to Honeywell any acquired/ furnished property that becomes excess to the needs of the purchase order.

### 127.5 Furnished Property Provided on an "As Is" Basis

All Government/customer or Honeywell owned property authorized for is provided on an "as is" basis subject to the following:

Buyer and the Government/customer make no warranty whatsoever with respect to the property authorized for use "as is".

The seller may repair any Government/Customer or Honeywell property made available on an "as is" basis. Such repair will be at the seller's expense except as otherwise provided in this clause. Such property may be modified at the Seller's expense, but only with the written permission of Buyer. Any repair or modification of such property furnished "as is" shall not affect the title of the Government/customer or Honeywell.

### 127.6 Payment for Special Tooling

To obtain payment, the supplier shall send the signed GP7-06 Supplier Asset Identification Tag(s) Certification and photos to the Honeywell Buyer. Buyer will clear line item from Purchase Order which allows Supplier to be paid.

### 127.7 Shipment to Honeywell

Supplier should contact the applicable Honeywell buyer to determine proper address to return Honeywell or Customer owned gages. The shipment shall conform to SPOC 239.

### 127.8 Phoenix Engines Orders Only

Honeywell shall perform required recalibration of the following gages. Curvic Masters, Bevel Gear Masters, Thread Ring Gages, Spline Ring Gages, Serration Ring Gages and Special Air Gages.

**Revisions:** No Changes.

\*Revised / \*\*Added

**UNCONTROLLED IN HARDCOPY**

**Supplemental Purchase Order Conditions (SPOC) Manual****SPOC 128 – Characteristic Accountability \*****128.1 Scope**

Suppliers shall have a verifiable methodology for controlling and recording inspection of all design characteristics, as well as a method of validating received components from sub-tiers.

**128.2 Detailed Inspection Plans**

A Detail Inspection Plan (DIP) documents the inspection plan for a part to ensure that all engineering drawing characteristics and notes are inspected and/or controlled by appropriate methods. DIPs shall be documented in a manner that meets the intent of the sample Honeywell DIP/FAIR form (located on the Honeywell Aero Supplier Portal: <https://scc.honeywell.com>, from the HASP menu, select > Docs > Documents > Quality > SPOC > SPOC Forms).

A DIP may be used as a record, or may reference supporting records such as routings, receiving or in-process inspection sheets, final test/inspection reports, or statistical data as long as the DIP and/or supporting records is complete, accurate and reproducible. The DIP shall define the manufacturing operation at which the characteristic is inspected and the inspection method used, including the type of tooling/gauging instrumentation used. 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.

DIPs which contain characteristics which are “tool controlled” (castings, molded parts, etc) may contain less than 100% of the Honeywell drawing characteristics provided the following conditions are met:

A number of characteristics shall be selected as “control” dimensions. Control dimensions shall be of quantity and type such that inspection of these characteristics will give the supplier enough information (based on tool construction, assembly, process variation, and drawing tolerance) to assure that all other drawing characteristics are in conformance.

The supplier shall maintain a plan which clearly documents the control dimensions for all design characteristics.

DIPs are not applicable to Standard, Commercial and Catalog hardware identified as Honeywell Vendor Items, Specification Controlled, 10 or 11 digit and S-Number drawings, Industry / commercially available hardware AN, MS or AS and other lower level hardware or details, that if procured directly would be classified as SPOC 003 ( Standard and/or Catalog Hardware).

**128.3 Sampling of Characteristics \***

The supplier shall inspect all design characteristics per the Aerospace Common Sampling Plan located on the Honeywell Aero Supplier Portal: <https://scc.honeywell.com>, from the HASP menu, select > Docs > Documents > Quality > SPOC > SPOC Supporting Documents > SPOC 128-Aerospace Common Sampling Plan. Suppliers shall not implement any other alternate sampling plans unless provided by specification, MESA (Material Engineering Supplier Agreement), or with written approval obtained from the Quality Management or QA/PE Engineering of the Site issuing the PO.

\*\*Suppliers are required to submit Form AF-0685 and a data packet as outlined in SAE industry specification AS13002 - Requirements for the Determination and Control of Inspection Frequency.

If the supplier has an alternate plan that was approved by an authorized site quality representative in writing prior to implementation of Form AF-0685 that plan is still acceptable unless it has been revoked by the issuing site.

Form AF-0685 is located on the Honeywell Aero Supplier Portal: <https://scc.honeywell.com>, from the HASP menu, select > Docs > Documents > Quality > SPOC > SPOC Forms.\*

The SAE specification can be obtained here <http://standards.sae.org/as13002/>

**128.4 Circuit Card Assemblies (CCA's), Printed Wiring Board Assemblies\***

In addition to other requirements contained in this SPOC:

This DIP plan requirement will be in effect with any new delta or first time FAI's as they are accomplished.

The supplier shall conduct a complete review of the requirements of each CCA/PBA and make provisions for the special controls, processes, inspection and test equipment, fixtures, tooling and skills required for assuring all parts conform to the Purchase Order Flow Down, Drawings, and specifications. The supplier shall formulate a

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

Quality Assurance / Inspection / and Test Plan (QATP) for each Honeywell part number. This plan shall be made available for review, and is subject to verification of conformance.

The QATP shall include: all planned inspection points, characteristics to be inspected, accept/reject criteria, inspection documentation requirements and location of inspection records. Any procedures used in inspection/test may be subject to approval of buyer/FQE.

Detailed Inspection Plans for CCA's (Circuit Card Assemblies) / PBA's (Printed Wiring Board Assemblies) shall include the following:

1. A Receiving Inspection Component/Material Validation Plan (All received material must be validated to the Honeywell BOM definition)
2. A Master Traveler Manufacturing Plan must be created for each individual Part Number including all process steps. This traveler must be revision controlled to the Honeywell part drawing revision.
3. Each Process Step must have a process control plan – including equipment control, operator control, and a fully documented work instruction.
4. Each piece of processing equipment must have a calibration plan, maintenance plan, and a part processing control plan by CCA/PBA part number.
5. Special process steps such as conformal coat, bonding, and engineering change order incorporation (i.e., dead bugs, cuts and jumps, magnet wiring) must have process control plans unique to the requirements flowed down.
6. The Hand adds or the Final Assembly process must be fully defined with a work instruction.
7. Each CCA/PBA Master Traveler Manufacturing Plan must incorporate an AOI, AXI, and ICT / Flying Probe test plan that validates component placement, solder joint integrity, and basic component functionality limited by ICT approach capability and CCA/PBA design layout. This test plan should be aligned to the complexity of the CCA/PBA.
8. There should be a final inspection process that validates all drawing characteristics (i.e. but not limited to, max height requirement, lead length, or keep out area) are met that are deemed to impact form, fit, or function.

### 128.5 Engines Product Orders Only (Phoenix, Greer, HCMO) \*

All Detailed Inspection Plan proposals for rotating airfoil castings, stator/airfoil castings with internal cooling passages, bladed ring castings, and all rotor disk castings must be approved by Engines Engineering or Honeywell site quality before use—including DIPS containing sampling based on tool-controlled features. Suppliers shall submit their Detailed Inspection Plans for approval on form AF-0685. Form must be submitted 30 days prior to FAIR. Approval of the supplier's Detailed Inspection Plan by site engineering or site quality is a prerequisite to FAIR submittal and approval. Existing DIPS in production are acceptable until the next full FAIR.

**Revisions:** Paragraph 128.3 and 128.5 Rewritten to clarify. Changed sub-title of 128.4. Site Specific Paragraphs 128.6 through 128.10 Removed.

\*Revised / \*\*Added

## SPOC 129 – Acceptance Test Procedure (ATP) Approval Requirements

### 129.1 Scope

Where required by Honeywell Engineering Drawing, Procurement Specification Control (PSC), ATP, or Test Requirements Document (TRD), the Supplier shall submit for approval the test Procedure, test characteristics and test set-up to comply with the test requirements.

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

Honeywell Engineering may, at their discretion, approve test documents and plans containing less information than required by this SPOC. In such cases, those documents shall take precedence over the requirements of this SPOC.

### 129.2 Test Procedure

The Supplier provided Test Procedure shall cover:

- Supplier Acceptance Test Procedures (SATP)
- Qualification Test Procedures (QTP)
- Lot Acceptance Test Procedures (LATP)
- Functional Test Procedures (FTP)

The minimum information required includes:

- Nomenclature
- Honeywell and Supplier part number (including dash number), and the Supplier code assigned by Honeywell, Manufacturing Process Rev number, if applicable.
- Procurement Specification Control (PSC) number, if any, including revision letter.

**Note:** An Engineering Statement of Work may be referenced for research and development articles

- Supplier Test Number, revision letter, and date.
- Equipment type, range, accuracy level, and frequency of calibration.
  - o Special test equipment must reference the drawing number and revision letter.
  - o If software is used to control an automated test stand, the software number and revision designator must be referenced.
  - o One copy of the special test equipment drawing and software must be provided.
  - o Commercial executive software for control of a computer need not be referenced or provided.
- Complete description of test performed (inclusive of all parameters and schematic of test set-up) in sufficient detail to permit a duplication of the test.
  - o Out-of-tolerance is cause for rejection.
  - o If the Test Procedure does not test the article while it is exposed to the full ambient temperature range of the PSC, the tolerance of each tested parameter must be reduced, at ambient, to help ensure the PSC requirements are met over the full temperature range (this normalized tolerance range does not substitute for any requirement to environmentally qualify or substantiate the specified part).
  - o The Supplier shall determine the tolerance, which is subject to approval by Honeywell.
- Sampling Plan (if used) must include specific item or portion of test parameter sampled.
- Supplier Acceptance stamp, if any, to accept test results.
- When a Supplier receives a new or repeat Purchase Order for a product that does not have an approved Test Procedure, the Supplier must submit a copy for approval.

### 129.3 Data Submittal

The Supplier shall submit a copy of the proposed test procedure to the Honeywell Buyer, who will forward to the appropriate Engineering or Quality group for review and approval. Test plans, data sheet format and contents are subject to Honeywell approval prior to manufacture and shipment of production parts. The document must be submitted 60 days prior to scheduled delivery of production or development articles. Shipments shall not be made until this approval has been obtained. Objective evidence of Honeywell approval shall be maintained by the Supplier.

### 129.4 Change Control

Changes to a Honeywell approved Test Procedure require re-approval prior to implementation, and the changes may not be incorporated until receipt of written approval from Honeywell.

Test procedures that have been approved with comments may be corrected at the next required revision.

**UNCONTROLLED IN HARDCOPY**



## Supplemental Purchase Order Conditions (SPOC) Manual

**Note:** Honeywell approval of the Supplier Test Procedures does not relieve the Supplier of the responsibility for determining that the product complies with the requirements of the Purchase Order, engineering drawings, and applicable specifications.

### 129.5 Test Data Sheet Requirements

When required, Test Data Sheets shall be enclosed in a data sheet envelope and attached to each individual unit.

Each ATP data sheet shall include the following:

- Supplier name
- Date of testing
- Signature or stamp of individual performing the test
- Honeywell assigned supplier code
- Test procedure document number and revision letter
- Honeywell part number, including the dash number
- Minimum and maximum test limits
- The actual numerical test results
- Any serial number of the unit tested, such that the result for each serial number is known.

The Supplier shall maintain documentation that demonstrates the adequacy of the testing procedure. The documents shall be stored at the Supplier facility.

**Revisions:** Paragraph 129.6 Site Specific deleted.

*\*Revised / \*\*Added*

## SPOC 130 – Software Quality Assurance

---

### 130.1 General Requirements

The supplier and sub-tiers shall comply with the appropriate version of RTCA-DO-178, "Software Considerations in Airborne Systems and Equipment Certification", and DOD-STD-2168.

### 130.2 Deliverable Software DO 178/Mil-Standard

Any software, including non-deliverable software, used to create or revise Deliverable Software shall be categorized as Deliverable Software.

**Revisions:** No Changes.

*\*Revised / \*\*Added*

## SPOC 140 – Certification of Conformance / Shipping Declaration Document / Packing Slip Requirements \*

---

### 140.1 Scope

The Supplier is responsible for maintaining and supplying accurate and legible certification documentation as objective evidence of meeting drawing, specification, technical data, or purchase order requirements.

### 140.2 Certification of Conformance / Shipping Declaration Document / Packing Slip Requirements

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

A Certificate of Conformance (C of C) shall be provided with each shipment. The C of C can be a separate document, or it can be included as part of the shipping declaration/packing slip text. The following tables list the C of C data/information requirements for each group SPOC. The "X" under the SPOC indicates that requirement applies, and shall be included on each C of C from the supplier holding a direct PO from Honeywell.

Country of Origin (COO) information may be included on Certificate of Conformance to meet COO requirements defined by General Purchase Order Terms & Conditions. Other methods of reporting COO are specified in General Purchase Order Terms & Conditions.

**Table I \***

Requirement	SPOC 001	SPOC 002	SPOC 003	SPOC 004	SPOC 005	SPOC 006	SPOC 007	SPOC 009
1. Supplier Name and Address <sup>4</sup>	X	X	X	X	X	X	X	X
2. Statement that parts conform to the requirements <sup>4, 9</sup>	X	X	X	X	X	X	X	X
3. P.O. and line item number <sup>4</sup>	X	X	X	X	X	X	X	X
4. Original Manufacturer' name and part number (when source of supply is a requirement) <sup>4</sup>	X	X	X			X	X	X
5. Honeywell part number and as applicable, part revision and/or BOM revision level <sup>4*</sup>	X	X	X	X	X	X	X	X
6. Quantity shipped (listed quantities to be broken out by lot, and also totaled) <sup>4</sup>	X	X	X	X	X	X	X	X
7. Date and identity (hand signature or electronic 'signature') of quality representative or company official	X	X	X	X	X	X	X	X
8. Evidence of Source Acceptance or Self Release <sup>4</sup>	X	X						X
9. Maintenance performed <sup>4</sup>						X	X	
10. Supplier work order						X	X	
11. Technical data and revision						X	X	
12. When required by drawing or technical data:*								
Lot numbers <sup>4</sup>	X	X	X	X		X	X	X
Serial numbers <sup>4</sup>	X	X	X	X	X	X	X	X
Date code <sup>1</sup>	X	X	X	X	X	X	X	X
13. MRB (RMRA) number, as applicable*	X	X	X	X	X			X
14. Honeywell shipper number (as applicable for consigned material) <sup>4*</sup>	X	X			X			
15. Date of shipment <sup>4*</sup>	X	X	X	X	X	X	X	X
16. For returned parts, the supplier shall indicate if parts are reworked or replacements on the COC.*	X	X	X	X	X	X	X	X

### 140.3 Shelf Life Limited

The following information shall be included on each C of C for shelf life limited product or material as applicable to the specification.

**Table II**

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

Requirement	SPOC 001	SPOC 002	SPOC 003	SPOC 004	SPOC 005	SPOC 006	SPOC 007	SPOC 009
1. Manufacturers name	X	X	X	X	X	X	X	X
2. Environmental storage conditions	X	X	X	X	X	X	X	X
3. Date of manufacture and/or cure date (month/year or quarter/year)	X	X	X	X	X	X	X	X
4. Date of shipment	X	X	X	X	X	X	X	X
5. Lot number, or batch number and compound number (as applicable)	X	X	X	X	X	X	X	X
6. Shelf life expiration date (MM/YY) If there is no Expiration Date or Shelf Life required, indicate such (examples include "None", "No Expiration Date", etc.)	X	X	X	X	X	X	X	X

### 140.4 Certification Package Requirements\*

The following items, when applicable to the drawing, specifications, technical data or purchase order, shall be maintained and made available by the supplier unless otherwise specified on the purchase order to submit with shipment. Consult SPOC 419.3.4 for additional certification requirements for SPOC 419 products.

Table III

Requirement	SPOC 001	SPOC 002	SPOC 003	SPOC 004	SPOC 005	SPOC 006	SPOC 007	SPOC 009
1. Fixed process certification	X	X			X			
2. Device Test traveler and Assembly record cards	X	X						X
3. Regulatory Airworthiness Forms						X		
4. Material certifications <sup>2</sup>	X	X	X		X		X	X
5. Controlled process certification <sup>2</sup>	X	X			X	X	X	X
6. Test Reports or Functional Test Data sheets	X	X	X		X	X	X	X
7. FAIR Package	X	X			X			X
8. Log maintenance cards						X		
9. Discrepant material report <sup>5</sup>						X		
10. Inspection results or report						X		
11. Rework route tag or equivalent						X		
12. Teardown or findings report						X		
13. Honeywell shipper	X	X			X			X
14. Manufacturer's Certificate of Conformance <sup>6</sup>	X	X	X				X	X
15. RMRA (Request for Material Review Action, or similar vehicles such as Concession/Waiver/Production permit number, per the Honeywell site requirement)	X	X	X	X	X	X	X	X
16. When material is consigned by, or purchased from, Honeywell Aerospace or a licensed distributor of Honeywell Aerospace, the supplier shall retain a copy of the Procurement Shipping Order (PSO), Honeywell Shipper, or licensed	X	X	X	X	X	X	X	X

**UNCONTROLLED IN HARD COPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

Requirement	SPOC 001	SPOC 002	SPOC 003	SPOC 004	SPOC 005	SPOC 006	SPOC 007	SPOC 009
distributor's Certificate of Conformance for the material and treat such items as customer supplied material. <sup>4</sup>								
17. Required hardness values <sup>3</sup>	X	X			X			X
18. Physical and Chemical Analysis certified by an independent laboratory, if applicable <sup>2</sup>	X	X	X	X	X	X	X	

**Notes:\***

1. Each inspection lot must be listed as a separate line item along with evidence of electrical testing to the applicable specification as required. All required documentation shall be completely legible, and reproducible.

2. Certifications shall include name of process source, specifications and revision letters used. The actual physical and chemical process and heat numbers as applicable shall be indicated. Certifications of Conformance (C of C) must clearly state conformance to all specifications in their entirety, including type, class and grade and material hardness values exactly as described from the drawing or BOM note, embedded specifications that contain specific acceptance testing criteria, additional processing requirements, and/or any specific requirements that pertain to hardware approval or acceptance.

Test reports shall be verified 100% against sellers' requirements and applicable recommendations; suppliers shall maintain evidence of this review. \*\*

NOTE that various Honeywell sites may identify Grade and Class using abbreviations. These must be clearly understood before certifying compliance. Any confusion or questions shall be directed to the buyer.

3. Hardness shall be re-validated through a secondary test from a representative sample – one piece from each raw material heat lot (if no further heat treatment operations are performed) or for each subsequent heat treatment lot when a hardness value is specified on the engineering drawing, material specification, or heat treatment requirement that is contained in any Honeywell, Government, or Industry material specifications (AMS, ASTM, etc. The re-validation (second hardness verification) shall be performed prior to shipment to Honeywell and documented by the supplier by qualified personnel - impartial and independent of the original verification. A test coupon may be used for this testing.\*

Note: This is required to substantiate that raw material and /or final product has achieved the FINAL hardness or temper as specified on the engineering drawing or referenced specifications, before delivery of the product to Honeywell. If no further heat treat is required per the engineering drawing or material specification, then the raw material specification hardness requirement must be re-verified.

Secondary Hardness verification is not applicable on Standard or Catalog Hardware; Carburized, Nitrided, Core or Case hardened materials. This includes non-metallic materials such as Rubber, Elastomeric, Plastic, and Composite materials. Honeywell Vendor Item, Honeywell Specification Control, industry or commercially-available hardware (AN, MS, AS, etc) and other non-Honeywell-designed lower level hardware or details are also exempt.

4. Required information to be listed on the shipping declaration and/or packing slip, if not part of the C of C.

5. Airworthiness certification for TSO/PMA/AMS and/or material tests to be conducted by an independent laboratory.

6. If controlled drawing, a hard copy and an email copy of the Verification Report with each UID (Unique Identification) shipment.

7. For R&O orders, COC compliant to table is required per SPOC 159 provisions.

8. Applicable to SPOC 003 only when specifically called out in the purchase order text.

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

9. Requirements of the statement of conformance include flowdown from the purchase order. Exact verbiage is supplier option.

### 140.5 Partial Shipment and Source Inspection for use on future purchase orders.\*

In the event that the supplier has more assemblies completed than they currently have orders for, the source inspector and supplier shall use the "source inspection bank" located in HASP to track and assign inspected quantities to POs as they become available.\*

### 140.6 Bulk Raw Materials

Unless otherwise specified, purchased bulk raw material (sheet, strip, plate, wire, rod, bar, tubing, solder, powder, paint, oil, fluids, etc.) shall be supplied to the latest procurement specification issue. Material certified to a previous specification issue and of the proper type, grade, or class called for by the engineering drawing or technical data, may be used until depleted, unless restricted by the superseding specification revision. Certifications for material shall include specification number and revision letter applicable to each lot of material.

### 140.7 Evidence of Source Approval

A Honeywell Source Acceptance Stamp (or facsimile) shall be placed on the shipping documentation (packing slip and/or C of C) for Purchase orders requiring SPOC 149. A Source Acceptance stamp is independent of the Certificate of Conformance signature requirements. C of C required signature and date should not be placed in the Source Acceptance Stamp area.

The individual performing the Source Inspection is responsible for providing the Stamp Impression and Date. This may be a Honeywell approved Source Inspector or it may be a Self Release Approved Supplier representative, whichever is appropriate.

Example of Source Acceptance Stamp:

<b>Honeywell Source Accepted:</b>
Stamp Impression _____
Date _____

A signature is acceptable in lieu of a stamp impression for an Approved Self Release Supplier representative in organizations that do not issue internal employee acceptance stamps and control electronic approval within their Quality Management System.

Note: If applicable, Request for Material Review Authorization number (shall be referenced under the "Honeywell Source Accepted" stamp.

Note: If acceptance stamp is too large, it is permissible to write in the stamp number on the stamp Impression line.

Note: Source Accepted stamp is not required if an HTSI source inspect at site authorization is included with the shipper/cert/pack slip.

### 140.8 Certificates of Conformance for Kits

For materials supplied as a kit, a top level certification of conformance, subject to the documentation requirements above, will be accepted for the entire lot or receipt of kit(s) as long as:

- Manufacturing and procurement traceability and configuration management for every component part in the kit is maintained
- Associated data such as procurement certificates of conformance, test data, first article inspection reports, etc. are maintained and available upon request.

### 140.9 FAA Tags

In addition to the certifications required in Table 1, Suppliers holding an FAA production approval shall ship parts with 8130-3 tags reflecting newly manufactured certification and not returned to service or repaired status to all Honeywell OEM sites. This requirement applies to both new shipments and parts that may have been rejected or returned by Honeywell or from a Honeywell customer location. Suppliers shall contact buyers if there are any

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

questions in issuing new 8130-3 tags as Honeywell OEM sites can only return parts to suppliers requiring Part 21 type rework and have not been used in revenue flights.

**Revisions:** Paragraph 140.2 Table 1, renumbered. Paragraphs 140.4, Note 2 and 3, and 140.5 Rewritten to clarify.

\*Revised / \*\*Added

### SPOC 142 – Control of Items with Limited Shelf-Life\*

#### 142.1 Scope\*

This SPOC defines remaining life requirements and the communication of date control information on items that require shelf life control per their product specification. Typical commodities that require shelf life controls are:

- Uncured compounds (for example: paint, adhesives, curing agents, primers, film adhesive, varnishes, elastomeric molding compounds, pressure sensitive adhesives, Prepregs, sealants, inks etc.)

*NOTE: Items such as tapes and labels which have pressure sensitive adhesive (PSA) back are categorized under uncured compounds. This includes metal nameplates with PSA backing applied.\*\**

- Cured Elastomers (for example: O-rings, gaskets, plate seals, molded shapes etc.)
- Electronic Components\*\*
- Applied Bearing Lubricants, Grease\*\*
- Applied Bearing Preservatives\*\*
- 

#### 142.2 System for Shelf Life and Storage Life Control\*

The supplier shall maintain a documented system for using, storing and controlling items with limited shelf or storage life. The system shall include a method of identifying and controlling such items to ensure expired items were not used in products shipped to Honeywell and that items shipped met remaining life requirements.\*

Shelf life shall apply per manufacturer expiry date or “use-by” date but not supersede applicable specs.\*\*

#### 142.3. Requirement \*

Item	Percentage of Shelf Life required to be remaining upon receipt by Honeywell (unless otherwise specified by Honeywell, Military, or Industry product specification or PO line item flowdown)	Data Requirements	Identification Requirements
Uncured Compounds	33% Minimum but not less than 6 months	See SPOC 140	Traceability of expiration date to unit container marking. (i.e. via lot, batch, PO, or direct marking of expiration date).
Cured Elastomers-Uninstalled	33% minimum of life as defined by ARP5316	See SPOC 140	Cure date and/or Storage Life expiration date on the part or container as defined by applicable specification or flowed by customer
Cured Elastomers-Installed	N/A	Supplier to retain evidence of Storage Life compliance	Assembly Date marking if required by assembly design requirements

**UNCONTROLLED IN HARDCOPY**



## Supplemental Purchase Order Conditions (SPOC) Manual

Applied Bearing/Assembly Preservative Fluid (Installed)	Unless otherwise required by specification, items lubricated with preservative compounds shall be inspected for corrosion prior to shipping if more than 5 years from the application date.	See SPOC 140	Lubricant application date on unit package in addition to marking required by specification
Lubricants/Grease (Containers)*	33% minimum of life as defined by material manufacturer but not less than 18 months	See SPOC 140	Traceability of expiration date to unit container marking. (i.e. via lot, batch, PO, or direct marking of expiration date).
Installed Greases	N/A	Supplier to retain evidence of Storage Life compliance	Assembly Date marking if required by assembly design requirements
Applied Bearing Operating Lubricant Installed	Bearings that are lubricated for use shall be shipped to Honeywell less than 18 months from the lube application date.	Expiration date (as required by applicable specification) on Certification.	Traceability of expiration date to unit container marking. (i.e. via Lot, batch, PO, or direct marking of expiration date)

### 142.4 Cure Date Identification for Storage Life Controlled Elastomers

Elastomeric parts shall be identified by marking the cure date (quarter and year) on the part or container.

The year shall be divided into quarters as follows:

1st quarter: January, February, March

2nd quarter: April, May, June

3rd quarter: July, August, September

4th quarter: October, November, December

The cure date shall show the applicable quarter of the year by number, the letter "Q", and the last two digits of the applicable year. Example: May 2008 would be designated by 2Q08.

An elastomeric part cured during any given quarter is not considered one quarter old until the end of the succeeding quarter.

### 142.5 Certification Requirements

When shipping shelf-life controlled compounds and storage-life controlled elastomers, the supplier shall include the following additional information on the Certification of Conformance:

- Date of manufacture for shelf-life controlled compounds
- Cure date (QQ/YY) for storage-life controlled elastomers
- Shelf-life expiration date (MMYY) for shelf-life controlled compounds
- Storage life expiration date (QQ/YY) for storage-life controlled elastomers
- Batch and or lot number as applicable
- Date of shipment
- Manufacturer's name

### 142.6 Shelf Life of Uncured Compounds Shipped to Honeywell

Items that have exceeded their expiration date shall be removed from the supplier's inventory and conspicuously identified as scrap to preclude inadvertent use. All lots must be segregated and identified to maintain batch and/or lot number and cure date.

Shelf life of any uncured material as certified to by the material manufacturer will not be extended unless authorized either by the material manufacturer, or by Honeywell.

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

Expiration date of Pressure Sensitive Adhesive (PSA) used on name plates shall be identified in the Certificate of Conformance. This expiration date shall be stamped on each container of name plates shipped to Honeywell. Expiration date of the adhesive also applies to the name plate to which the adhesive is applied.

In any case of conflict between documented expiration dates, the Honeywell receiving site reserves the right to return the material to the supplier, or resolve the conflict internally via Honeywell M&PE.

On the shipment date, uncured items/compounds must have 25% or greater shelf life remaining, but not less than 6 months unless otherwise approved by the procuring site. Exceptions are noted below.

### 142.7 Shelf Life of Cured Elastomers Shipped to Honeywell

On the shipment date, unless otherwise specified or required by drawing or specification, elastomers which have a storage life control in accordance with ARP5316 for elastomer seals must have 50% or greater storage life remaining. Elastomeric hoses which have a storage life control in accordance with AS1933 must have 75% or greater storage life remaining.

Where no storage life information is available consult the procuring Honeywell site for direction.

All separate lots and/or batches of shelf-life controlled elastomers shall be segregated and identified to maintain lot and/or batch number and cure date.

### 142.8 Bearing Lubrication

Unless otherwise required by specification: Bearings that are lubricated for use shall be shipped to Honeywell less than 18 months from the lube application date. Bearings lubricated with preservative compounds shall be inspected for corrosion prior to shipping if more than 5 years from the application date.

### 142.9 Refrigerated, Frozen or Cryogenically-Stored Item

If the Purchase Order specifies Refrigerated, Frozen or Cryogenic, the items shall be shipped under these temperature conditions:

Refrigerated - less than 40° F (4.4° C)

Frozen - less than 10° F ( -12.2° C)

Cryogenic - less than -40° F ( -40° C)

A temperature indicator shall be included in the shipping container and a Refrigerate/Frozen/Cryogenic sticker as applicable is required on the outside of the shipping container. Packaging shall conform to SPOC 239 requirements for Refrigerated, Frozen or Cryogenically-stored items.

### 142.10 Shelf Life of Compounds Applied to Products

The supplier shall maintain a documented system for identification and control of limited shelf life compounds so that compounds that had expired shelf life were not used on product shipped to Honeywell. (Examples of limited shelf life compounds are adhesives and paints).

### 142.11 Exceptions

#### 142.11.1 Yeovil Site Only – Marking, Storage, Lifting and Re-Lifting of Rubber Components

##### 142.11.1.1 Storage life is to be measured from the cure date.

GROUP	STORAGE	EXTENSION
A	5 YEARS	2 YEARS
B	7 YEARS	3 YEARS
X	20 YEARS	N/A

##### 142.11.1.2 Deliveries of Natural or Synthetic rubber items shall be:

Group A\* items, within 2 years of cure date

Group B\* items, within 3 Years of cure date

Group X\* items, Must have minimum of 75% life remaining

\*Items as per BS 3F68

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

**Revisions:** Paragraph 142.1, and 142.2 Rewritten to clarify, 142.3 Requirements Table added. Paragraphs 142.6.1 through 142.6.3 Site Specific Removed. Previous paragraph 142.11 deleted, and renumbered remaining paragraphs.

\*Revised / \*\*Added

### SPOC 149 – Product Release Process \*

#### 149.1 Scope\*

Honeywell product may only be released for shipment from the supplier by either of these methods:

- After Source Inspection by the supplier's approved Self Release (SR) supplier program and delegate.
  - After HTSI (Honeywell) Source Inspection by a Honeywell Approved Source Inspection Agent.\*
  - Before HTSI (Honeywell) Source Inspection services to be performed at the Honeywell site per the direction of HTSI. This method requires the inclusion of a shipment-specific HTSI authorization with the shipper/cert/pack slip.

Self-Release authorization is awarded to those Honeywell Aerospace Suppliers that maintain or exceed program requirements and have proven ability to sustain highest quality standards. If unable to achieve Self Release authority, source inspection services are required at the supplier's cost.

Honeywell or Customer Source Inspection approval does not relieve the supplier of the responsibility and/or liability for full compliance with all purchase order/contract requirements.

#### 149.2 Penalties / Fees

Failure to comply with Product Release requirements may result in a receiving inspection fee per shipment received (based on Honeywell incurred costs – minimum \$500 U.S.), and may incur additional product rejection charges.

#### 149.3 Self Release Requirements\*

The requirements for Self Release program eligibility, and the responsibilities of the supplier when releasing product under the Self Release program, are located on the Honeywell Aero Supplier Portal: <https://scc.honeywell.com>, from the HASP menu, select > Docs > Documents > Quality > Self Release > SI 149 > SI-149-01 Supplier Instruction and change form.\*

#### 149.4 Self-Release Change of Status\*

Approval for Self Release is in effect once the status change reflects on the Supplier Scorecard in the Honeywell Supplier Portal location at (<https://www.supplier.honeywell.com>), or when notified in writing by authorized Honeywell Aerospace Self Release administrator.\*

Disapproval or revocation of Self Release authority shall be in effect upon official written notification by an authorized Honeywell Aerospace Self Release representative. Once revocation occurs, all products require source inspection prior to shipment to Honeywell, including parts from finish stores that were accepted by the supplier SDR prior to revocation.\*

#### 149.5 Source Inspection\*

Suppliers who are not approved to release product shall request source inspection services. The process for requesting source inspection is located on the Honeywell Aero Supplier Portal: <https://scc.honeywell.com>, from the HASP menu, select > Docs > Documents > Quality > Self Release by Part Number > SI-149 > SI-149-02 Rev 10-13-13.\*

**Revisions:** All paragraphs rewritten to clarify.

\* Revised / \*\*Added

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

### SPOC 154 – Key Characteristics (KC) Management \*

The Honeywell Purchase Order holder is responsible for review of, and compliance to, all Special Characteristic management requirements on all drawing levels of items sold to Honeywell including those generated by sub-tier suppliers.\*

#### 154.1 Identification of Special Characteristics\*

Key characteristics (KCs) and Critical characteristics (CCs) shall be those special characteristics identified as such by symbol or note on Honeywell engineering drawings and specifications.

NOTE: The former Honeywell KC Database is no longer required after January 1, 2017. KCs established within the KCDB are migrating to drawing-based characteristic classifications. Suppliers must ensure drawing rev changes are identified and incorporated on all levels of drawings prior to initiating new production/procurement.\*

#### 154.2 Requirements for Control of CCs\*

Where required by specification, producer is required to develop, adhere to, and retain an inspection plan to assure each feature designated CC conforms to specified requirements. The inspection plan shall be submitted to the owning Honeywell design activity for review, and approval shall be obtained prior to any shipment of parts. Owing Honeywell design activity requires review and approval of any changes to the approved inspection plan.\*

#### 154.3 Requirements for Control of KCs

##### 154.3.1 Legacy Considerations for data collection, retention, and analysis of KC inspection results:

Characteristic Assigned as Key via:	Collect data, retain/submit data, as follows:
Drawing w/ legacy control spec	Follow legacy specification. Unless otherwise specified, use NetInspect for any required Capability studies until required Cpk is established then use SPOC 128- 100% inspection or Sampling Plan Section 7- Statistical Process Control method. Where conflict exists between SPOC 128 SPC capability requirements and the drawing-imposed capability requirements, the latter shall take precedence. A new capability study is required for process change, configuration change, or escape (Internal/Customer)
Drawing w/ HGS1021 callout	Follow HGS1021, use NetInspect for Capability studies until acceptable Cpk is established then use SPOC 128 100% inspection or Sampling Plan Section 7- Statistical Process Control method. Where conflict exists between SPOC 128 SPC capability requirements and HGS1021 imposed capability requirements, the latter shall take precedence. A new capability study is required for process change, configuration change, or escape (Internal/Customer)

##### 154.3.2 Production and Process Control of KCs\*

Production and process control of KCs shall be in accordance with the product tolerance. The engineering KC control requirements invoked by the engineering specifications (e.g. HGS1021 or Legacy KC Specifications) shall apply simultaneously.\*

##### 154.3.3 Supplier Alternate Methods and Approvals\*

Where permitted by specification, requests for supplier alternate methods and approvals shall be communicated in writing to the buyer for disposition by Engineering & Technology Production Support Engineer. Disposition shall be via design characteristic classification change, drawing note allowance incorporating the exception, or denial of the request in writing to the buyer and supplier. Where requests for such exceptions /approvals /agreements are permitted by specification, evidence of communication to the buyer shall constitute evidence of compliance until such exception is dispositioned and communicated back to the supplier provided that each piece is inspected, found acceptable to KC tolerance, and records of inspection results are maintained.\*

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

### 154.3.4 Supplier Exception and Requirements\*

Suppliers taking exception to this SPOC in its entirety shall ensure that a drawing change removing the requirement is received before accepting orders. Removal of this SPOC from a PO does not alleviate the supplier from meeting all product requirements.\*

### 154.4 Disposition of Material\*

#### 154.4.1 Parts Exceeding Product Tolerance\*

In all cases, parts exceeding product tolerance shall require approval from Honeywell Material Review Board prior to delivery. Refer to SPOC 100 for Material Review Board requirements.\*

#### 154.4.2 Process Capability Levels\*

Process capability levels not meeting the requirements of the process control requirements specified on the drawing/spec shall not be cause for product rejection provided that each piece is inspected, found acceptable to tolerance, and records of inspection results are maintained.\*

### 154.5 Process Control Documentation\*

#### 154.5.1 Supplier's Document Control System\*

Where required by specification, process planning and control documents such as MSAs, PFMEAs, Control plans, etc. shall be generated under the supplier's document control system and maintained as quality records. These records are subject to audit and shall be made available for review. Process control documentation is a quality record and shall be retained by the supplier per PO requirements for quality records.\*

### 154.6 Establishment and Reporting of Process Capability\*

#### 154.6.1 Capability Studies\*

When capability studies are required by the controlling specification, the data shall be collected and analyzed in the order parts are produced.\*

#### 154.6.2 Capability Calculations\*

Capability calculations shall be made in NetInspect as defined below:

- 1) Supplier measures each KC on each piece and records the actual value in Net-Inspect.  
*(Data Collection and upload instructions are located on the Honeywell Aero Supplier Portal: <https://hasp.honeywell.com>, from the HASP menu, select > Quality >About Quality >Key Characteristics Management in Net-Inspect)*
- 2) Up to the first 20 measurements, supplier reviews the data in Net-Inspect, assures compliance to the tolerance limits, and looks for variation from run to run. No capability calculations will be available in Net-Inspect prior to the 20<sup>th</sup> measurement.
- 3) After 20 measurements supplier reviews Cpk and Real Cpk to determine if they meet the capability requirement defined in the applicable process control specification.
- 4) Suppliers not meeting the required capability performance level for Real Cpk after the first 20 pieces shall implement a documented process capability improvement milestone plan when required by controlling specification. Improvement plans shall be maintained by the supplier and are subject to audit.
- 5) Further capability study data and improvement plan changes/updates as required by controlling specifications shall be uploaded into NetInspect until specification-defined process capability requirements are achieved.

### 154.7 Process Monitoring\*\*

#### 154.7.1 Control Plan\*\*

Once process capability requirements have been met, the supplier shall operate to a control plan meeting the requirements of the applicable process control spec and SPOC 128. Supplier shall maintain records of compliance to the control plan.\*\*

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

### 154.7.2 Escapes of Key Characteristic\*\*

Escapes of a Key Characteristic shall be cause to revise any required control plans and PFMEAs. In the absence of an assignable cause and corresponding error-proofing for the escape, process capability shall be re-established.\*\*

### 154.7.3 Changes to Manufacturing or Inspection Processes\*\*

Changes to the manufacturing or inspection processes shall be cause to review any associated control plans and PFMEAs. Where such changes may affect process capability or where required by specification, a new process capability study shall be conducted to ensure capability requirements remain met.\*\*

**Revisions:** SPOC Rewritten for Clarification.

*\*Revised / \*\*Added*

## SPOC 155 – Temporary Inspection Characteristic (TIC) and Process Capability Data Acquisition \*\*

### 155.1 Quality System Requirements

Temporary Inspection Characteristics (TICs) are characteristics that HW Engineering would like process capability data on for a certain duration. These TICs are to be measured as specified in the TIC form. This SPOC will be applied on a characteristic basis and for a fixed timeframe or quantity and not imposed on all orders. Characteristics and duration to be determined at time of Specific Purchase Order Flowdown on individual orders and will be communicated with form AF-1027. Actions required by this SPOC are in addition to and not in lieu of SPOC 128 requirements.

Suppliers are required to electronically submit all data required by TIC form in Net-Inspect <https://www.net-inspect.com> for all TICs. Data Management and Transmittal instructions are located on the Honeywell Aero Supplier Portal: <https://scc.honeywell.com>, from the HASP menu, select > Quality >About Quality and see the instructions used for KC Management in Net-Inspect.

**Revisions:** New SPOC Added.

*\*Revised / \*\*Added*

## SPOC 159 – Repair and Overhaul Maintenance Requirements \*

### 159.1 Quality System Requirements

National Aviation Authority (NAA) Certification (local and/or international regulatory agency) and/or AS9100 or AS9110 compliance are required for suppliers and sub-tier suppliers performing maintenance. AC7004 Aerospace Quality System shall be accepted in lieu of SAE AS9100 for suppliers only conducting Special Process services accredited by Nadcap. Additional regulatory approvals may be requested and reflected on the Purchase Order (PO).

AS9100 and/or AS9110 certification shall be required for Honeywell Aftermarket suppliers that do not hold a National Aviation Authority (local and/or international regulatory agency) Repair Station certificate.

Suppliers performing Special Processes / Services:

- Suppliers holding a National Aviation Authority (NAA) Repair Station Certificate must have the appropriate ratings listed on the NAA Air Agency certificate Operations Specifications.
- Suppliers that do not hold a National Aviation Authority (NAA) appropriate ratings shall be identified on the Honeywell Approved Processor Supplier Listing (APSL).
- Suppliers that perform special process that do not hold regulatory or are not listed on the Honeywell APSL shall be assessed by the procuring site as defined in Honeywell Aerospace Procedures. Suppliers performing Special Processing / Services on Military material shall be assessed as defined in Honeywell Aerospace Procedures and approved by the procuring site.

**UNCONTROLLED IN HARDCOPY**



## Supplemental Purchase Order Conditions (SPOC) Manual

For a current Honeywell Approved Processing Source List (APSL) go to Honeywell Aero Supplier Portal: <https://scc.honeywell.com>, from the HASP menu, select Applications > APSL.

Suppliers shall have a qualification process for inspectors (i.e. training program providing familiarity with the methods, techniques, practices and the use of various types of inspection equipment and visual inspection aids).

### 159.1.1 Drug and Alcohol Testing Program

All safety sensitive functions (product maintenance and/or preventive maintenance) performed on Honeywell purchase orders shall be accomplished by personnel covered by a FAA compliant Drug and Alcohol Testing Program if performed within the territory of the United States. This is pursuant to 14 CFR Part 120 Drug and Alcohol Testing Program and 49 CFR Part 40 Procedures for Transportation Workplace Drug and Alcohol Testing Programs affects maintenance (not manufacturing) carried out at certificated and non-certificated subcontractors at any tier.

Proof of registration (A449 or AAM810) and D&A program compliance shall be provided to Honeywell upon request, including subcontractors at any tier.

### 159.2 Purchase Orders

The supplier must have written approval from the Honeywell buyer on all requested changes to the purchase order. This approval must be obtained prior to shipment.

If the serial number changes during the maintenance process and/or if it's not maintain (rotable) part (Repaired and/or Overhaul) under the exchange program (refer to **SPOC 159.3.1.3**, Commercial Non-Maintain Integrity Part (Repair and/or Overhaul) Exchanges), the supplier is not required to notify the buyer.

Note: Supplier must supply the exact part number as ordered on the PO and shall not exchange a like part number.

### 159.2.1 Use of DER Repairs or Installation of PMA Parts in Honeywell Designed Parts

Usage of approved Designated Engineering Representative (DER) repairs on Honeywell products:

Any approved DER repair held by the supplier that is intended to be used in the repair, overhaul, or installation of detail parts under a Honeywell purchase order shall be submitted for approval by Honeywell prior to use.

Installation of supplier Parts Manufacturer Approval (PMA) parts in Honeywell products:

The use of non-Honeywell approved supplier FAA-PMA parts in repair or overhaul of products shall be approved by Honeywell prior to installation.

Note: All approvals for the above shall be referenced in the Honeywell purchase order.

### 159.2.2 Document and Data Control

The supplier and sub-tier suppliers shall ensure that the current aftermarket technical data, specifications, and instructions required by the contract / purchase order, as well as authorized changes, are used for maintenance, inspecting, and testing.

Deviation from the current aftermarket technical data requires Honeywell approval.

### 159.3 Procurement Requirements

#### 159.3.1 Part Exchange Program

##### 159.3.1.1 New Part Exchange Program

This program permits the receipt of new hardware in exchange for used hardware. The following rules apply:

The supplier shall have "Direct Shipment Authorization" (DSA) granted from Honeywell OEM.

Follow the specific requirements as identified on the DSA letter, i.e.:

DSA certification statement on the shipping documents, etc.

Copy of the DSA letter will accompany the hardware.

The New Part Exchange code must be on the PO or have the Honeywell buyer approval by amending the PO prior to shipment.

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

The receipt part number is required to be the same as the part number identified on the PO.

Supplier FAA – PMA product requires Honeywell approval.

The Honeywell rework tag that accompanied the original PO part will not be required to be shipped back with the exchange hardware.

### 159.3.1.2 Commercial Non-Maintain Integrity Part (Repair and Overhaul) Exchanges

The exchange hardware can only be issued from assets provided by Honeywell or assets approved for use for Honeywell.

Exchanged part work/status shall match the work scope identified on the PO.

The appropriate cards shall be updated and accompanied with the certifying package if the part is Life limited/time controlled.

Shipper / invoice:

- a statement identifying the hardware that is exchanged and/or replaced and,
- the Honeywell Purchase Order (PO) and/or Repair Order (RO) number.

Note: The Honeywell rework tag (or equivalent) that accompanied the original PO part will not be required to be returned on part exchanges.

Suppliers with National Aviation Authority for part ordered, the supplier shall also provide:

A FAA 8130-3 or equivalent form shall be issued from the NAA supplier identified on the PO.

The FAA 8130-3 or equivalent forms shall be filled out in accordance with SPOC 159.5.1

DER repairs are required to be approved by Honeywell prior to shipment.

Compliance to any open Airworthiness Directives (as applicable).

Suppliers without National Aviation Authority for part ordered, the supplier shall also provide:

Sub-tiers FAA 8130-3 or equivalent form, and C of C from the Production Approval Holder (PAH)

### 159.3.1.3 Honeywell Interdivisional Commercial Non-Maintain Integrity Part (Repair/Overhaul) Exchanges

Internal - Honeywell to Honeywell:

Exchange part number shall match the part number identified on the PO.

Exchanged part work/status shall match the work scope identified on the PO.

Any DER repairs are required to be approval by procuring site prior to shipment.

Compliance to any open Airworthiness Directives (as applicable).

The appropriate cards need to be updated and accompanied with the FAA 8130-3 or equivalent form(s) if the part is Life limited/time controlled.

Shipper / invoice: a statement the hardware it's exchanged and/or replaced and, the Honeywell purchase order (PO) and/or repair order (RO) number.

The Honeywell rework tag that accompanied the original PO part will not be required to be returned on any part exchanges.

Non-serialized part exchanges shall have complete traceability, including identification of the supplier that conducted the maintenance and the maintenance record.

**UNCONTROLLED IN HARDCOPY**

**Supplemental Purchase Order Conditions (SPOC) Manual****159.4 Maintenance Requirements and Technical Data****159.4.1 Spot Operation Requirements**

When completing the maintenance in accordance with spot operations per the routing/traveler do not stamp off the routing/traveler.

Specify the operation performed per the routing / traveler on the Certificate of Conformance or FAA 8130-3 or equivalent form.

**159.4.2 No Maintenance Performed**

If the supplier can not conduct the maintenance as requested on the purchase order, the supplier shall notify the Honeywell buyer. The buyer will provide the supplier with instruction stating to either return the hardware, or scrap the hardware at the supplier's facility. A nonconforming material reviewed document is not required.

Supplier shall state the reason for return on the shipping invoice.

If the hardware is beyond economical repair (BER), then the shipping document must state "BER".

**159.4.3 Inspection Requirements**

100% inspection of each dimension which is affected by the repair / fixed processes is required.

**159.4.4 Rework Route Tag or Equivalent**

The Rework Route Tag or equivalent is provided to:

Identify parts for traceability,

Record of inspections,

Maintenance required.

When completing the maintenance do not stamp off the Rework Tag or equivalent.

Note: The Rework Route Tag or equivalent must remain with the original part for which it was issued.

**159.4.5 Teardown and Findings Report or Equivalent**

The Supplier shall furnish one (1) copy and maintain on file a completed Teardown and Findings Report (or equivalent) for functional components (e.g., fuel control, fuel nozzle, electronic computer, oil heater) and/or other products as requested by the purchase order.

**159.4.6 Test Data Sheet**

As required by the technical data the supplier shall furnish one (1) copy and maintain on file a completed test data sheet for functional components (e.g., fuel control, fuel nozzle, electronic computer, oil heater) and/or other products.

Test data sheets shall reference the technical data or test instructions by report number and revision number.

If required by the technical data, then the article that has been functionally tested and acceptance shall be identified with the supplier's Functional Test (FT) stamp.

**159.4.7 Log/Maintenance Cards**

The following are the types of Log/Maintenance Cards:

Life Limited Part Log is used to document the accumulated hours/cycles, service and or maintenance actions of specified hardware that has a maximum limit on hours and or cycles.

Ultimate Life Part Log Card (APU) is used to document the accumulated hours/cycles, service and or maintenance actions of specified hardware that has a maximum limit on hours and or cycles.

Component Maintenance/Modification Record Card is used to record maintenance actions, service bulletin compliance, etc., on specified components.

All Log/Maintenance cards shall be completed as defined and returned with the hardware.

**159.4.8 Nonconforming Material Identified During Maintenance**

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

The supplier shall segregate and return to the Honeywell site initiating the purchase order, all scrap material identified or incurred within the maintenance of the part(s).

The supplier shall specify the reason for return on the packing list or equivalent.

### 159.5 Shipping Certification Requirements\*

#### 159.5.1 FAA 8130-3 or Equivalent Forms (i.e. EASA Form One, TCCA Form One, etc.)

FAA 8130-3 or equivalent forms are required when:

Supplier is NAA approved

If CAAC approved, then an AAC-038 is required with each shipment.

FAA 8130-3 or equivalent forms information required:

Block 5 and/or block 12, record the Honeywell purchase order (PO) or Honeywell Repair Order Number, or as required by the Honeywell site\*

Block 12 EASA statement required if approved/accepted by EASA.

Block 14a Dual Release Certification required if the repair station is EASA accepted / approved.

Note: Suppliers located in countries with bilateral agreements with the FAA and EASA shall release product with a Dual Release Certification.

Attachments required (as applicable):

Rework Route Tag or equivalent (Reference 159.4.4).

Teardown and/or Findings Report or equivalent (Reference 159.4.5).

Test data sheets (Reference 159.4.6).

Log/maintenance cards (Reference 159.4.7).

Nonconforming material report as applicable.

A replacement of the original certificate must be provided for the following:

- A. Hardware returned due to correcting a nonconformance.
- B. Documentation returned due correcting a nonconformance.

Note: If the technical data does not allow the supplier to issue a FAA 8130-3 or equivalent form for the repair, then the supplier must provide an FAA 8130-3 or equivalent form for the inspection and additional certifications for the repair, as required.

#### 159.5.2 Certificate of Conformance

A Certificate of Conformance in accordance with SPOC 140 is required when:

Supplier is not a holder of a National Aviation Authority approved Air Agency Certificate.

Products are used for military programs (reference the PO).

Data is not regulatory and/or OEM approved.

#### 159.5.3 Packing Documentation Requirements

Statement that parts/materials conform to the applicable technical data, specifications, and Purchase order.

Purchase order number.

Purchase order part number.

Serial numbers (as applicable).

Repair Order (RO) number identified on the purchase order.

Shipment quantity.

Other requirements as defined in the purchase order.

**Revisions:** Paragraph 159.5, 5<sup>th</sup> line updated.

\*Revised / \*\*Added

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

### **SPOC 162 – Electronic and Electrical Components with Lead (Pb) and Pb-free Finishes\***

These requirements apply when evaluating component leads finishes which are not compliant with Honeywell parts list/ design documentation.

Use of tin-lead and lead free component termination finishes for Honeywell product shall be managed through the use of Honeywell Engineering Specification HPS1006 (Aerospace Process Specification for the Implementation of Lead Free Finished Electronic Parts with Tin/Lead Solder) unless otherwise specified by the program. Note that HPS1006 is intended to assure compliance to the GEIA-STD-0005-1 requirements.

#### **162.1 Solder Joint Integrity and Component Finishes**

Section 3.1.1, Table 1 of HPS1006 documents the acceptable combinations of lead finish systems that provide reliable solder joints and is to be used for all Honeywell Aerospace printed board assemblies.

#### **162.2 Re-finishing guidelines for Tin Whisker Mitigation\***

HPS1006 documents the approaches that are used when mitigating the risk of failure due to tin whiskers on components with pure tin termination finishes. Whether pure tin terminations may be used, or component re-finishing is required, is determined on a product-by-product basis, with specific requirements contained within program documentation.

#### **162.3 Sampling Requirements**

Honeywell reserves the right to sample any parts to ensure processing complies with the requirements of this specification.

#### **162.4 Component re-finishing sources**

The following sources are approved by Honeywell for refinishing of pure tin finished parts:

- 1) Corfin Industries LLC  
7B Raymond Ave. Ste 7  
Salem, New Hampshire 03079  
Cage Code: 0ZG10
  
- 2) AEM Holdings Inc  
11525 Sorrento Valley Rd.  
San Diego, California  
92121-1307  
Cage Code: 1GLF1

Other sources may be used, but shall require prior approval from Honeywell.

**Revisions:** Paragraph 162.2, first paragraph and table removed.

*\*Revised / \*\*Added*

### **SPOC 163 – Restrictions for use of Mercury and or Mercury Containing Components**

Products shall contain no metallic mercury and must be free from contamination by mercury. The Supplier shall not use mercury, mercury components or mercury bearing instruments or equipment that cause the contamination during the manufacture, service, assembly, or test of materials.

#### **163.1 Statement that Order is Free of Mercury**

The Supplier shall send a signed statement with the shipment that tells that the items are free of mercury and free from mercury contamination, the statement must include:

The Contract Number

The National Stock Number (NSN), as applicable

The Manufacturer's Code (CAGE) and Part Number or the Specification or Drawing Number

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

The date of shipment and the quantity shipped

This paragraph must be notated as below, or words that convey the same meaning:

“The undersigned certifies that the items shipped conform to the requirements of the Purchase Order. The items are free from mercury contamination. Mercury-bearing instruments and equipment which can cause mercury contamination were not used in the manufacture, service, assembly, or testing of the items supplied.”

The statement must contain the signature of a corporate or company officer.

### 163.2 Inclusion of Mercury

If the inclusion of metallic mercury is required as a functional part of the items supplied, the supplier shall get written approval from Honeywell prior to delivery and shall supply a “Warning Plate” to show that metallic mercury is a functional part of the item. The label must identify the name and the location of the part or component.

**Revisions:** No Changes.

\*Revised / \*\*Added

## SPOC 165 – Approved Sources for Controlled Processes \*

### 165.1 Scope

Controlled process specifications are listed on the Honeywell Approved Processing Source List (APSL) and suppliers shall use only Honeywell approved sources except for:

Suppliers with design responsibility for hardware supplied to Honeywell may use their own approved process suppliers provided the Honeywell supplier complies with the following:

- Design and Development must be an element in their Quality Management System (Ref AS9100 Section 7.3)
- Supplier Control must be an element in their Quality Management System (Ref AS9100 Section 7.4)

This SPOC does not apply to:

- Industry standard parts such as AN, NAS, MS etc.

### 165.2 Approved Processing Source List (APSL)

The APSL is the list of Controlled Process Specifications and Approved Sources to perform those processes. Sources performing Controlled Special Processes shall be approved by Honeywell and listed on the web based Aerospace Unified APSL. The Supplier shall periodically review the APSL to ensure sources are not expired and to independently verify the source’s capability and quality specific to the Supplier’s product.

To determine if a specification or standard is controlled, go to the Honeywell Aero Supplier Portal: <https://scc.honeywell.com>, from the HASP menu, select Applications > APSL and refer to step 4 on the Must Read Instructions.

Requests for approval to perform Controlled Processes may be made using the online APSL.

### 165.3 Electronics & Wiring Commodities\*

Suppliers of Printed Boards (PB), Printed Board Assemblies (PBA) and Cables & Harnesses (C&H) shall be audited and approved to the appropriate specification as outlined in the table below. However, suppliers shall process and certify hardware to specification(s) contractually flowed down.

Commodity	Specification
Rigid Printed Boards (PB) {a.k.a. PWB}	HPS1011
Printed Board Assemblies (PBA) {a.k.a. CCA}	HPS1009
Flex / Rigid Flex PB	HPS1017

**UNCONTROLLED IN HARDCOPY**



## Supplemental Purchase Order Conditions (SPOC) Manual

Cables &amp; Harnesses (C&amp;H)

HPS1008

Sub-tier suppliers that perform specific sub-processes used in the manufacturing of these three commodities (PBs, PBAs, and C&H) shall be managed and approved by the respective commodity suppliers as part of their overall quality management system. Honeywell reserves the right to audit and approve these sub-tier suppliers. Suppliers that perform special processes on parts not contained on the Bill of Materials (BOM) for a PB, PBA or C&H **shall** fall under standard APSL control per SPOC 165 requirements.

## EXCEPTIONS / CLARIFICATION

The detail/component in question is one of the 3 Electronic & Wiring commodities listed above. Example: a Printed Board is procured as a component of a PBA/CCA, the Printed Board is still subject to the APSL requirements.

A separate APSL approval for EW.CAH is not required when cables or harness assemblies are terminated directly to the PBA by the PBA supplier (i.e. the cables or harness assembly is not a separate part number on the PBA BOM, but the individual components, such as wire, cable, terminal, etc., are part of the PBA BOM).

Sub-tier suppliers that perform conformal coating as part of PBA build must be listed in the APSL and approved to the appropriate controlled specification for that process (e.g. HPS1007).

Suppliers of special processes used in the fabrication of commercial off-the-shelf (COTS) electrical components and other non-PB, PBA, and C&H mechanical and electrical parts/commodities contained on the PB, PBA or C&H BOM are exempt from being listed on the APSL. Examples include, but are not limited to, wire, connectors, resistors, capacitors, inductors, transformers, microchips, brackets, heat sinks, board stiffeners, thermal switches, ejectors, card guides or wedge clamps.

EW.CC.TIER1 code approval is not required for suppliers approved to EW.PBA, EW.PBA.EX USA and/or EW.PBA.LEADFREE.

The following sub-processes for PB manufacturing are to be performed by an APSL approved supplier for PB manufacturing:

- i) Electroless and Electrolytic Copper Plating\*\*
- ii) Lamination\*\*

This only applies when the above processes are used for PB manufacturing itself, and do not apply for copper plating or lamination of components such as heat sinks that are to be integrated later with the PB. \*\*

All other sub-processes for PB manufacturing, such as final finish plating (ENIG, ENEPIG, HASL, etc.) and via filling, are not by themselves considered special processes, and may be outsourced to non-APSL suppliers.\*\*

Special processes to be used as a sub-process for PB manufacturing, such as electrolytic nickel and gold plating, are also exempt from APSL requirements and may be performed at the PB manufacturer or an alternate non-APSL supplier. All sub-process suppliers shall be managed and approved by the PB manufacturer as part of their overall quality management system\*\*

**165.4 Exception for Chemical Film Touch-Up\*****165.4.1 Exception for conversion coatings, except for magnesium alloys\*\***

Touch-up/rework coating applied by brush or swab application does not require use of an APSL approved processing source or process control testing. This kind of application also includes but is not limited to marking of parts, coating removed for the purpose of facilitating assembly, and other local applications. All other requirements of the coating specification must be met. Consult Materials and Process Engineering with design authority as needed.

**165.4.2 Exception for part marking and wet installation of fasteners\*\***

Touch-up/rework coating applied by brush or swab application does not require use of an APSL approved processing source or process control testing when touch up is applied for inadvertent damage, only. All other requirements of the coating specification must be met. Consult Materials and Process Engineering with design authority as needed.

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

### 165.4.3 Exception for paint\*\*

The application of paint or primer for part marking, wet installation of fasteners, overcoat of ink stamps or ID plates, or touch up of damaged coatings does not require use of an APSL approved processing source or process control testing. All other requirements of the material and application specifications must be met. Consult Materials and Process Engineering with design authority as needed.

### 165.5 Change in Location of Facilities

The Approval of Sources to Controlled Specifications is location specific. In the event of change in location, notification shall be made prior to the relocation and with substantial time (180 days) for hardware, system, and process re-qualification. Also, satellite sites shall be approved independently of a Source's primary location and must have a separate Honeywell OneSource ID.

Parts processed at the location that is not yet approved in the APSL are considered non-compliant hardware.

Notify by e-mail to the buyer and calling **Toll Free Number: 1-855-507-9058**

Suppliers' notifications shall contain the following supplier information as a minimum:

- supplier ID/DUNS number
- old data and new data (i.e. if address change, list the prior address and the new address)
- name of supplier quality contact
- phone number of supplier quality contact
- e-mail address of supplier quality contact

### 165.6 Nadcap Accreditation

Honeywell requires all external Suppliers and their Sub-Tier Suppliers to obtain the correct Nadcap accreditation for the controlled processes shown below.

The supplier is responsible for ensuring that the details of the Nadcap accreditation, including the appropriate audit scope/checklist, are accurate and up to date per the requirements shown in the APSL.

The Supplier is responsible for the cost of Nadcap accreditation.

Category	Category Code	Nadcap Commodity/Code
Chemical Processing	CP	Chemical Processing/CP
Composites	COMP	Composites/COMP
Controlled Machining	CNTRL MACH	Conventional Machining as a Special Process/CMSP
Elastomers	ELAS	Elastomer Seals/SEAL
Electrical & Wiring, includes C&H, PB & PBA	E/W	Electronics/ETG
Heat Treat, includes Brazing	HT	Heat Treating/HT
Material Testing	MATTEST	Materials Testing/MTL
Nonconventional Machining	NM	Nonconventional Machining/NM
NonDestructive Testing	NDT	NonDestructive Testing/NDT
Surface Enhancement	SE	Surface Enhancement/SE
Thermal Coatings	THCOAT	Coatings/CT
Welding, Includes Torch & Induction Brazing	WELD	Welding/WLD

#### 165.6.1 Exceptions to Nadcap Accreditation

Exceptions to Nadcap requirements are shown on the Controlled Specification list of the APSL.

### 165.7 Source Certifying Agent (SCA) Program\*

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

The electronic document is now published on the Honeywell Aero Supplier Portal (HASP):  
<https://scc.honeywell.com>, t > Docs > Documents > Quality > SPOC > Supporting Documents > j. SPOC Supplement Supplier Instructions 165.7.

- Section 4.5.1 was added to require quarterly NDT Product Audits and Annual Refresher Training. These changes need to be addressed procedurally and submitted to [ndeengineering@honeywell.com](mailto:ndeengineering@honeywell.com) for approval.\*\*
- Section 6 Note 7 was added to address minimum penetrant sensitivity requirements.\*\*

### 165.8 Exception for Paint Specs used for Marking

Several paint specifications such as M4030956 and M4065816 and other APSL controlled paint specs are often used for part marking. When used for part marking purposes only, the paint process does not require use of an approved processing source, Nadcap accreditation or SCA.

**Revisions:** Paragraphs 165.3, 165.4 and 165.7 Rewritten to clarify. Paragraph 165.9 Removed

*\*Revised / \*\*Added*

## SPOC 172 – Document Submittal Required

### 172.1 Requirement

The supplier shall create a data package and ship with each item. The data package shall be maintained per the records retention schedule and be available upon request. The data package shall include: Assembly record cards for each assembly and the device assembly Device test traveler.

**Revisions:** No Changes.

*\*Revised / \*\*Added*

## SPOC 179 – Government and Customer Directed Source Inspection\*

### 179.1 Scope\*

This SPOC applies to any purchase orders with items reflecting a U.S. Government Prime Contract Number. Government Source Inspection is required for these items. The inspection will be accomplished at the Supplier's facility unless otherwise specified on the Purchase Order. The supplier shall make available all necessary specifications, documents, facilities and assistance. U.S. Government end-use material subject to SPOC 179 shall not ship without evidence of Government Source Inspection approval unless the prime DCMA office provides alternate instructions in writing.\*

This SPOC may also be applied to Honeywell Customer Source inspection; however, Honeywell customer's quality representatives do not have the authority to approve quantities reflecting a U.S. Government Prime Contract Number noted on the Purchase Order unless granted by the U.S. Government Contract.

### 179.2 U.S. Government Notification Requirements

Upon receipt of the order containing quantities reflecting a U.S. Government Prime Contract Number, promptly notify the Government Source Inspection (GSI) Representative who normally services your facility and provide a copy of the order so that appropriate planning for Government Source Inspection can be accomplished. The GSI Representative shall be notified no more than 7 workdays before completion of the order.

If unsure of the DCMA Representative, contact the Honeywell Buyer immediately.

GSI may request the supplier to furnish all work instructions down to the lowest level(s), including all mandatory government inspection points, prior to the initiation of any work.

### 179.3 Honeywell Customer Notification Requirements

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

Promptly notify the Customer Source Inspection Representative as directed on the Purchase order or by the buyer. Careful attention should be given to planning source inspection to meet Purchase Order schedules. If unsure of the Customer Quality Assurance Representative (QAR), notify the Honeywell Buyer immediately.

### 179.4 U.S. Government In-Process Inspection

The DCMA QAR will notify the supplier of where in the process source inspection is required, and reserves the right to inspect product or process at any point along the manufacturing of the product. The supplier shall provide reasonable facilities and inspection equipment for in-process inspection and records where requested.

### 179.5 Honeywell Customer In-Process Inspection

The Purchase Order will specify where, in the process, source inspection shall occur by an authorized *Customer* QAR. The supplier shall provide reasonable facilities and inspection equipment for in-process inspection and records where requested. Supplier shall notify Honeywell a minimum of 72 hours prior to inspection.

### 179.6 Pre-Cap Source Inspection

Honeywell's pre-cap source inspection is required at the supplier's facility. Honeywell shall be notified ten days prior to the close up or sealing of devices supplied against this order so that Pre-cap / Internal Visual inspection can be performed. Evidence of Honeywell's Quality representative's certification shall accompany shipment per SPOC 140.

### 179.7 Evidence of Source Acceptance

Evidence of Source Inspection acceptance for a single shipment will be the authorized stamp or signature on the packing list.

If Government Source Inspection / Defense Contract Management Agency:

In addition to an authorized stamp, a letter of delegation (LOD) authority between DCMA offices is required, showing that the specific part number being shipped has been granted GSI delegation. The LOD authority must be linked to the part numbers and quantities that have been granted delegation. Where the total PO quantity is greater than the quantity pegged to the U.S. Government Prime Contract(s) Number, the LOD will be issued for the quantities associated with the Prime Contract(s) only.

GSI acceptance of a lot of parts, which is greater than the quantity of parts being shipped, is allowed only if the evidence of GSI acceptance can be traced to each part in subsequent shipments. This can only be done if parts and GSI accepted document are marked with serial numbers or lot numbers as required by print or manufacturer's assigned traceable numbers.

Government and Commercial items shall be segregated prior to presenting to GSI for inspection. The shippers for GSI and non-GSI quantities shall be kept separate for GSI acceptance.

If NASA Source Inspection:

The NASA quality representative shall be notified immediately upon receipt of this order. NASA or its designated representatives shall be notified 48 hours in advance of the time articles are ready for inspection or test. Inspection (in-process, pre-cap and/or final) is required prior to shipment from the supplier's facility.

**Revisions:** Paragraph 179.1 Rewritten to clarify.

\*Revised / \*\*Added

## SPOC 180 – Critical Safety Items \*

### 180.1 Scope

The Supplier and product shall meet all requirements for Critical Safety Items (CSI) as detailed in the applicable specification invoked by the design documents (Ref; E1010, FI-1776, AW/PS and others). When the CSI / Flight Safety specification is designated as a controlled spec, the CSI manufacturer is required to be approved for the associated specification code and listed on the Honeywell Approved Processing Source List (APSL). Honeywell Purchase Order holders are responsible for ensuring that they and their sub-tiers comply to this SPOC, including any Frozen Planning requirements.

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

### 180.2 Frozen Planning Approvals

Frozen planning is required for all CSI Critical Characteristics. The Supplier shall review Engineering documentation for critical characteristics and their control requirements. Honeywell approval of frozen planning is required prior to filling this order. Any change to frozen planning after initial approval must be approved by Honeywell prior to delivery.

The supplier shall submit planning for critical characteristics using the steps identified in SPOC 110.

Note: AW/PS (Airworthiness Product Safety) parts for Honeywell Aerospace Electronics businesses as delineated by drawings, specs and purchase orders shall have their design / processes approved using form INF-3133. Submittals shall be made to the Honeywell Buyer.

### 180.3 Auditing of Critical Safety Item Controls

The supplier shall conduct self-audits as specified in the controlling specifications invoked by the design data. Results of these self-audits shall be provided to Honeywell as required by the specification.

### 180.4 Requirements

Item	Requirement
Flight Safety Part Specification	E1010
Flight Safety Identification Symbol	Framed letter "S"
Frozen Item	Frozen Plan
Affected Engineering	Applies to drawings only
Execution of the order	Honeywell approval required prior to execution of P.O.
Honeywell Approval	Materials and Process Engineering
Inspection	100% Initially then sampling plan
MRB	Not Allowed

**Revisions:** Paragraphs 180.5 and 180.6 Site Specific deleted.

*\*Revised / \*\*Added*

## SPOC 182 – Marking LHTEC Program

### 182.1 Requirements

The Supplier shall comply with drawing requirements for part numbers, serialization and lot control marking.

All items that have been accepted by the Supplier's inspection system shall be identified with the supplier acceptance and test stamps, as outlined in the Honeywell product identification and traceability specifications MC9014 and LHG1013. The Supplier shall contact the Honeywell Buyer for current specification revisions.

This SPOC supersedes SPOC 140 traceability requirements when applied.

**Revisions:** No Changes.

*\*Revised / \*\*Added*

## SPOC 200 – Part Marking Requirements \*

### 200.1 Scope\*

Honeywell prohibits the use of part marking or numbering that is false or misleading as described in 14 CFR Part 3.\*

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

### 200.2 Torrance Orders Only

Marking shall be in accordance with the drawing requirements.

If there are no marking requirements on the drawing, marking shall be in accordance with AS478 Method 30, 35, or 37.

If the additional marking requirements below duplicate information already called out on the Honeywell Torrance drawing, the duplicate information need not be applied.

Unless the ink color is specified on the drawing, use an ink color that will provide contrast against the background of the hardware.

For any part whose surface, size, or configuration in the marking area is not suitable or is insufficient for Additional Marking requirements Contact Buyer stated on the purchase Order. The Honeywell Buyer shall contact Torrance SQA.

Determination of an area's lack of suitability or sufficiency for marking must be approved by Honeywell SQA and an authorization statement with alternate method will then be added to the purchase order.

#### Additional Marking Requirements:

In addition to the requirements listed above, the supplier shall apply a second line of marking directly below the part number consisting of the letters "MFR" followed by the supplier CAGE Code or SAP vendor number unless this information is in the Acceptance Identification Symbol. When complete, the entire marking shall be formatted as follows:

70210-123456-x

MFR-xxxxx

Note: Casting suppliers only - Unless otherwise stated on the drawing, a cast raised logo is acceptable on any non machined surface.

In a separate area not adjacent to the part number, the supplier shall also mark with their Acceptance Identification Symbol a date code and the drawing revision letter to which the part was made. When complete the marking shall be formatted as follows:



XX XX X (Last two digits of year, month or week of the year, revision letter of the drawing)

Date code and revision letter is not required on serialized or lot control specified parts. Heat numbers on castings is a form of lot control.

Acceptance Identification Symbol will be placed on the part and is considered final acceptance of the product as well as identification of the manufacturer. Format may resemble 'A' stamp.

**UNCONTROLLED IN HARD COPY**



## Supplemental Purchase Order Conditions (SPOC) Manual

### 200.3 Phoenix Engines Orders Only\*

All SPOC 001 and SPOC 002 hardware, except AGT 1500 program hardware (P/Ns with a 3-xxx-xxx-xx format), shall be accepted by the Supplier's inspection system and shall be identified with inspection acceptance stamps applied to the product per the B/P required marking method.

Stamp design, content, and usage requirements are defined in MC9014 and MC9015 specifications (as specified by the drawing).

While not currently required, presence of acceptance inspection stamps on AGT 1500 program hardware is permissible. Interpret AGT1500 traceability requirements per MC9015.

Certain AGT1500 drawings have not yet been updated to reflect (1) the design activity change from Lycoming (CAGE 91547) to Honeywell (CAGE 99193), and (2) the current marking requirements. Such drawings will (a) have CAGE 91547 in the title block, (b) **not** have a CURRENT DESIGN ACTIVITY decal identifying CAGE 99193, and (c) **not** have a marking note that includes marking of "CDA-99193". For these drawings, in **addition** to the marking content requirements stated on the drawing or in its referenced marking specification, the following additional requirements apply:

(Note: do not mark the quotation marks)

1. Mark "CDA-99193" as a separate line following the item identification marking (i.e., following the marking which in general will appear as 91547 3-XXX-XXX-XX REV. X).
2. If the Honeywell Purchase Order (PO) identifies the part's Army Ordnance Number (an eight-digit number beginning with 12) which follows the acronym AON on the PO, it shall be marked on the line following CDA-99193 and be preceded by the US Army CAGE Code (19207), as shown in the example below:

As an example, a Supplier with CAGE Code 12345 should mark PN 3-160-121-04 (manufactured to drawing revision A and with a corresponding AON on the PO listed as 12286922), as follows:

91547 3-160-121-04 REV. A

CDA-99193

19207 12286922

MFR12345

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

### 200.4 Tempe Orders Only

Accepted hardware shall be identified by application of the suppliers "A" stamp in accordance with GPS 1102-1 or GPS 1102-3 for part with engineering drawings, and per AS478-30 or -35 for standard / catalog parts, to indicate acceptance by the supplier's quality system. For parts which have been identified with an "A" stamp containing a pre-SAP supplier code, the application of an additional "A" stamp reflecting the post-SAP supplier code is acceptable. Furthermore, products requiring functional testing, pressure testing, dielectric testing, etc. shall be identified with the appropriate FT, PT, etc, stamps indicating acceptance by the supplier's testing in accordance with GPS 1102-1 or GPS 1102-3.

#### Engineering Drawing Requirement Interpretations and Clarifications for Honeywell Acquisitions

##### Interpretation on Tempe-controlled drawings

Unless otherwise specified on the drawing, the following specifications shall be used as applicable:

- GPS1000-1, Standard for Drawing Interpretation, General
- GPS1001-1, Specification for Machine Feature Clarification, General
- GPS1002-1, Sheet Metal Parts, General
- GPS1003-1, Castings/Forging parts, General
- Part Marking Requirements

If there is no part marking requirements stated on the drawing or Purchase Order, the part shall be marked in accordance with MIL-STD-130 and AS478-35D or -37 using 59364 CAGE CODE in front of the part number. (e.g., 59364-XXXXXXX-Y).

For parts requiring company name identification, S3002-1 shall be used, in lieu of the Grimes Aerospace, Midland Ross, Janitrol, Altair, Garrett, GFSD, Allied, AlliedSignal, or any other former Honeywell name. In addition, the Tempe CAGE CODE (59364) shall be applied preceded with CDA, instead of MFR. CAGE CODE.

Example: Grimes drawing for part number 54D32-1, mark part as follows:

89513 - 54D32-1  
CDA - 59364

The Tempe Document 41-20422 provides clarifications of engineering drawings where standard title block information has become illegible.

Tempe Document 41-20421 clarifies engineering drawing notes describing design parameters.

RMRA disposition may require additional part marking and part tagging instructions. When the stamp in the Honeywell disposition block states APPLY MRB TAGS, the Supplier shall physically attach an approximately 2.5 X 5 inch green tag with the words "MRB Approved" printed on the tag. The Supplier shall attach one tag per part or package for small parts. The Supplier shall attach the tag so that it is clearly visible after the protective packaging has been applied. The MRB tags need to be visible without removing the parts from the protective packaging.

Note: Do not include green tags in direct shipments authorized by the Tempe site.

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

### 200.5 Tempe, Tucson, Mexicali Orders Only

#### Identification for Parts Not Traceable:

This section describes mandatory part marking requirements in addition to the drawing requirements (not applicable to standard hardware). "Parts not traceable" refers to parts which do not have lot control or serialization imposed by a drawing note.

Apply a 4-digit identification date to the part at the point where part marking is indicated by the drawing, using the required method and location. This date must be recorded on all applicable inspection records, test reports, and certifications. See below for format of the date. The 4-digit identification date is NOT required for:

- parts that have a drawing imposed serial number, lot number, or heat lot number,
- standard hardware (See definition in Sub-section 1.3),
- vendor item (previously known as specification) controlled drawing parts,
- suppliers that have an internal system that has been approved by a Honeywell quality representative.

**Format:** The first digit of the identification date is the last digit of the year. The remaining three digits will be the progressive calendar date on which the part is marked. For example, parts being stamped on May 7, 1990, would carry an identification date of "0127"—"0" representing the last digit of the year and "127" since May 7 is the 127<sup>th</sup> day of 1990. Parts being stamped on August 31, 1990, would carry an identification number of "0243", since August 31<sup>st</sup> is the 243<sup>rd</sup> day of 1990.

If parts are too small to accept this identification number, tags or bags must carry this 4-digit identification date.

In the event that the Honeywell Purchase Order specifies "less part marking", the 4-digit date code must still be applied to the part by rubber stamp, using semi-permanent ink at the same location where the part would normally be marked.

### 200.6 South Bend Orders Only

1. Each supplier furnishing product is assigned a supplier identification number by site Material Quality Assurance.
2. Exceptions to these requirements are "Standard Hardware" supply companies, forging, casting and certain molded rubber product suppliers where alternate identification methods, such as trademarks or specification driven supplier identification codes are used.
3. When the part number is required to be marked on the part, the supplier identification number shall be marked using the same size and method as the part number.
4. Unless the drawing identifies specific location, the supplier identification number may be on the part above, below or after the part number.
5. If the part number and supplier identification number is stamped on the same line, spacing equivalent to four digits shall be left between the part number and the identification number. No dash is permitted between the part number and the supplier identification i.e., 2601234B A180.

#### Product Serialization

1. Product requiring serialization of individual parts will be identified using the method per drawing specification.
2. A controlled serial number prefix and a block of numbers will be selected by the supplier. This serial number shall appear on all certifications and data sheets provided by the supplier. The supplier shall not duplicate serial numbers. Ref. AI-488.

**Revisions:** Paragraph 200.1 and 200.3 Rewritten to clarify. Paragraphs 200.7 through 200.12 Site Specific Removed.

\*Revised / \*\*Added

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

### SPOC 203 – Design of Special Tools and Gages\*

#### 203.1 Report of Loss, Damage, or Destruction, or Company Out-of-Business

Gages – loss, damage, destruction

Notify Buyer promptly of the loss, damage or destruction of gages.

Include:

- Ownership, Purchase Order number, contract number or equivalent code.
- A full description of the items, units, or assemblies lost, damaged, or destroyed. Include U.S. or other government property.
- Date and cause of loss, damage, or destruction, if known.
- Recommendations for disposition of the property. The cost of the repairs for damage – estimates if accurate costs are not available.
- The corrective action implemented to prevent more loss, damage, or destruction.
- Other related data.

Tooling / Gages – company going out of business

If company is going out of business, return all Honeywell-owned Tooling / Gages in the good condition.

#### 203.2 Identification

Gages

Permanently identify the gage with the Honeywell prefix letter, number, suffix letter, and agency/code letters shown on the Purchase Order. Use an electric pencil, or steel stamp, or permanently attach a tag, to put the data on the gage.

Use the gage number of the parent gage on all loose details of the gage. Permanently identify the primary (or base) fixture with the number of pieces (primary plus loose details).

Tools

Paint a yellow dot on all government-owned special tools for identification, or identify as described in the Purchase Order.

#### 203.3 Payment

Tools

No payment is made if the identification mark or tag is missing.

Tools and gages

Supply a Certified Tool / Gage List, a photograph of each tool or gage, and an invoice to the Buyer.

The photograph must show the entire tool and the Honeywell tool identification. If the tool is small, include a card that shows the tool identification in the photograph of the tool.

No payment is made until Honeywell has accepted the tooling or gaging.

#### 203.4 Certified Tool / Gage List

The Certified Tool / Gage List contains all special tools or gages manufactured or acquired by the Supplier and Sub-Tier Suppliers. The Certified Tool / Gage List must include:

- Tool / gage name
- Supplier tool / gage identification number
- Honeywell tool / gage identification number (if supplied)
- Contract or equivalent code

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

- Purchase Order number
- Total quantity
- Cost per unit (if applicable)
- Part numbers used to manufacture
- Weight
- Material content (wood, steel, aluminum, etc.)
- Supplier name
- Signature of the company's approved representative
- Date of certification
- Program name (if supplied)
- Honeywell Purchase Order site supplier code.

### 203.5 Design and Maintenance

Supplier shall establish maintenance instructions, including storage and preservation, and required interval.

**Revisions:** Paragraphs 203.1.1 through 203.1.5 Site specific Removed. Renumbered remaining paragraphs 203.2 through 203.6 to 203.1 through 203.5.

\*Revised / \*\*Added

### SPOC 228 – Shipments for Cost-Reimbursable Government Contracts

The Supplier shall put this statement on the Bill of Lading:

"Transportation is for the (*name of Government Agency*). The transportation costs paid to the carrier by the Shipper or the Receiver are reimbursed by the US Government as stated in the Cost Reimbursable Contract Number \_\_\_\_\_. The agency at (*Agency address in the contract*) can confirm this information."

**Revisions:** No Changes.

\*Revised / \*\*Added

### SPOC 235 – Drop Shipment of a Honeywell Purchase Order to another Honeywell Supplier

#### 235.1 Scope

The following requirements apply to Honeywell suppliers when they are instructed to ship material to another Honeywell supplier.

#### 235.2 Prior to the Drop Shipment

The Supplier shall ensure that the hardware:

- Meets all Purchase Order requirements (e.g., SPOC, engineering drawing, Manufacturing Operations & Tooling [MOT] or maintenance technical data)

The Supplier cannot drop ship if the hardware:

- Is a sample
- First Article Inspection Report (FAIR) has not been completed (**SPOC 124**)
- Is a research part
- Requires a Chemical and Metallurgical Report (CMR)
- Product has not been released in accordance with **SPOC 149**
- Is a Special Federal Aviation Regulation (SFAR) 36 repair

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

### 235.3 Immediately upon Shipment of Hardware

The Supplier shall forward the following to the Honeywell Buyer:

- A shipping receipt with reference to the Honeywell-applicable site-assigned supplier code
- Copy of packing slip, including Honeywell Purchase Order number, release, and part number
- All required identifications for traceability (i.e., inspection certificates, physical/chemical test reports)
- A copy of the common carrier prepaid (third-party billing to Honeywell) freight bill
- Bill of lading

**Revisions:** No Changes.

*\*Revised / \*\*Added*

## SPOC 236 – Drop Shipment from a Sub-Tier Supplier to Honeywell PAH Sites

### 236.1 Scope

The following requirements apply to Honeywell suppliers if shipments are made from a sub-tier supplier directly to a Honeywell PAH site. Honeywell PAH sites are listed on the FAA Production Certificates issued to Honeywell.

### 236.2 Prior to the Shipment

The Supplier is responsible:

- For flowing through applicable requirements to the sub-tier supplier
- For the hardware meeting all Purchase Order requirements (e.g., SPOC, engineering drawing, Manufacturing Operations & Tooling [MOT] or maintenance technical data)

The hardware cannot drop ship if:

- It is a sample
- A First Article Inspection Report (FAIR) has not been completed (**SPOC 124**)
- It is a research part
- It requires a Chemical and Metallurgical Report (CMR)
- The product has not been released in accordance with **SPOC 149**
- It is a Special Federal Aviation Regulation (SFAR) 36 repair

### 236.3 Immediately upon Shipment of Hardware

The Supplier shall ensure that the sub-tier supplier forwards the following to the Honeywell Buyer:

- A shipping receipt with reference to the Honeywell-applicable site-assigned supplier code
- Copy of packing slip, including Honeywell Purchase Order number, release, and part number
- All required identifications for traceability (i.e., inspection certificates, physical/chemical test reports)
- A copy of the common carrier prepaid (third-party billing to Honeywell) freight bill
- Bill of lading

**Revisions:** No Changes.

*\*Revised / \*\*Added*

## SPOC 237 – Return of Scrap

The Supplier shall segregate and return, at no cost to Honeywell, all scrap material incurred in producing parts to the Honeywell site initiating the Purchase Order. Note: This is only valid for Honeywell Free Issued Materials.

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

The Supplier shall specify the amount and alloy, or the specification, for the scrap material on the packing list. Government-owned material determined to be scrap should not be disposed of without obtaining prior written approval from the government representative.

**Revisions:** No Changes.

*\*Revised / \*\*Added*

### SPOC 238 – Military-Type Specific-Application and Multi-Application Re-usable Containers

#### 238.1 Scope

The Supplier shall either be an approved source, or procure Multi-Application Re-usable Containers units from approved sources established by the Container Control Point shown in the table below:

Container Type	Container Control Point	Document Name (Supplier List)
Container part number prefix 13414 and 15450	NAVICP – Naval Inventory Control Point, PHS&T Engineering Programs Branch	NAVICP “Approved Sources Of Multi-Application Re-usable Containers”
MS27684 prefixed exterior metal drums and related items (MIL-D-6054)	DSCP – Defense Supply Center, Philadelphia	DSCP “Sample Sources For Military Standard Drums”
Specific part number for the application	Service-specific	Dedicated drawing

#### 238.2 Government Source Inspection

When required by contract or other document, shipments of containers require Government Source Inspection prior to release.

Non-conformances detected by the Supplier shall be referred to the Procurement Contract Office (PCO), who will coordinate with the Container Control Point, or Cognizant Field Activity (CFA), for determination of fitness for use.

**Revisions:** No Changes.

*\*Revised / \*\*Added*

### SPOC 239 – Packaging and Package Identification \*

#### 239.1 GENERAL REQUIREMENTS

##### 239.1.0 Phoenix Engines Orders Only

In addition to the requirements of SPOC 239, the supplier shall follow the Packaging and Shipping Requirements located on the Honeywell Aero Supplier Portal: <https://hasp.honeywell.com>, from the HASP menu, select > Docs > Documents > Shipping. Both “3G10 Phoenix Supplier Packaging and Shipping Requirements”, and “3G10-ATT1” are posted to this location. Click on and download the documents.

##### 239.1.1 Product Delivery

The Supplier must ensure that all items are packaged and preserved adequately to guarantee that the hardware is delivered to Honeywell undamaged and free of corrosion. Unless otherwise specified, all hardware shall be packaged and preserved in accordance with the drawing, applicable specifications, or purchase order requirements. If there is no drawing or specification requirement, hardware shall be packaged and identified in accordance with Aerospace Industry Standards (ATA Spec 300, ASTM-D-3951-98 and MIL-STD-2073).

**UNCONTROLLED IN HARDCOPY**



**Supplemental Purchase Order Conditions (SPOC) Manual****239.1.2 Weight Limitations**

Hand-handled containers, including bundles are not to exceed 50 pounds (22.7 KG) gross weight. Containers in excess of 50 pounds shall be put on skids or pallets to permit mechanical handling. Hand-handled containers may be skidded or palletized to consolidate a shipment, but containers must be properly identified, stacked, and secured to the pallet. Shipping skids/pallets or boxes shall not exceed 2,500 pounds (1,136 KG) gross weight, and have appropriately placed pallet jack compatible fork truck slots or openings to allow mechanical handling.

**239.1.3 Prohibited Packaging**

- Newspaper wadding, loose-fill dunnage, macerated (shredded) paper, peanut foam, eco-foam, shredded materials, discarded paper, and broken or recycled foam-in-place are not acceptable as packing (dunnage) materials in any container.
- Paper wraps, envelopes or bags as exterior packages or any packaging material in the form of egg boxes, egg crate trays or dividers. Padded mailers (jiffy bags and similar) with bubble cushioning or packaging material which contains Penta DBE or Octa DBE.
- Bags made from bubble wrap or grocery paper sacks shall not be used as unit packs.
- Wood containers constructed from OSB wafer board, particle board, very thin plywood or any other manufactured wood product which is fragile and will not tolerate handling, stacking and re-closing throughout the entire transportation system and subsequent supply chain handling and forwarding.
- Used containers unless specifically designed to be reusable and are in adequate shape. Polystyrene die cuts are prohibited except for small, light non-critical items.
- Parts that have contact preservation (oil), or have residual fluids or operating oils, shall not be packed/wrapped in paper bags, bubble wrap, sheet foam, or Kraft paper.
- Skin packs that have film-to-film attachments under the item, making part removal difficult, or subjecting the item to damage during opening. Multi-compartment skins packs or blister packs unless they can be positively re-closed after opening, and provide continued part protection.
- Any type of container closure, or lack of a closure, which will result in safety issues, damaged parts or unserviceable packaging when opened.
- Any packaging material which may cause Foreign Object Damage (FOD) or part contamination, part obstruction or leave non-preservation residue.

**239.1.4 Inappropriate Closures**

Staples are prohibited as a means of closure for exterior shipping containers. Staples are permitted in non-closure portions of box type containers, such as bottom closure, side stitching, etc. The portion of the container meant to be opened must remain staple-free. Staples and other penetrating forms of unit package closure also are prohibited for use on bags (polyethylene or paper), bubble wrap, sheet foam, Kraft paper or other intermediate or interior containers. These types of unit packages must be heat sealed (if applicable) or sealed by folding, taping, Zip-Lok, or zipper sealing, etc.

**239.1.5 Fluid-Soaked Packages**

Fluid tight packaging shall be as required by hazardous material / dangerous goods regulations and as follows:

- Bagged and the heat-sealed closed in accordance with MIL-DTL-117. The bags shall be made from MIL-PRF-22191, Type I material also known as "bearing bag" material. This method is required for corrodible parts which have contact preservative.
- For non-corrodible items, residual fluids may be contained by bagging and sealing in heavy duty (6 mil or thicker) zip lock type polyethylene bag.
- If the item has internal fluids which may be released during transportation, the first bag shall be surrounded by appropriate absorbent packing and enclosed in a second fluid tight bag or package.

**UNCONTROLLED IN HARDCOPY**

**Supplemental Purchase Order Conditions (SPOC) Manual**

Note: The item must be cushioned & the first bag must be strong enough to avoid puncture during transportation, as contamination from the absorbent material may FOD the item.

**239.1.6 Package Design Characteristics****239.1.6.1 Exterior Shipping Container**

The exterior shipping container shall be sufficiently strong and functional to ensure product delivery, packaging identification and subsequent distribution and must withstand superimposed stacking loads, both as presented to the carrier and as may be expected during shipment.

**239.1.7 Hazardous Materials and Dangerous Goods**

The Supplier shall define, mark, label and prepare for hazardous goods, dangerous material and/or dangerous equipment for shipment in accordance with Department of Transportation HM181, CFR Title 49, "Dangerous Goods", as classified by IATA, IMDG or ICAO.

Due to regulation requirements and potential liability issues, Honeywell may report violations of hazardous materials & dangerous goods regulations to the appropriate governmental agencies.

Note: Jet fuel is a hazardous substance. If an item is purged with 1010 oil, label the exterior shipping container "Purged with MIL-PRF-6081, Grade 1010 Oil". If fuel-wetted items have significant cavities that cannot be flushed, even if purged, HAZ MAT shipment may be required.

**239.1.8 International Bug Ban on Containers with Solid Wood**

Containers, dunnage, pallets & skids other than those containing non-manufactured coniferous lumber shall be used when possible. If containers with solid wood components must be used, they shall be certified and marked bug free in accordance with ISPM 15 and/or as indicated by <http://www.aphis.usda.gov>

**239.2 PACKAGE IDENTIFICATION REQUIREMENTS\*****239.2.1 Application**

Bar code identification (labeling) is required on all exterior containers. Labels must be located to allow the markings to be easily read when stored on shelves or stacked, and to ensure marking will not be destroyed when the container is opened for inspection. When stencils are used, ink must be black waterproof.

Instead of using labels, it is permissible to print identification information directly on the container or packing slip as long as all other requirements are met.

**239.2.2 Bar Coding General\***

Bar code labels shall be printed directly on or be permanently affixed to the exterior shipping container. Additional internal packaging requirements may be specified by the Purchase Order, specification and/or drawing.

Bar codes shall be Code 39 symbology, also referred to as 3 of 9, and printed in medium density or code 128 symbology printed in high density.\*

Bar code height shall be 0.375 inches. The human readable text shall be in English. The characters shall be 0.110 to 0.125 in high, & shall be left justified over the bar code information.

The margin, or quiet zone, is an area surrounding each bar code and shall be a minimum of 0.25 inches at the left and right end of each bar code to decrease bar code reading errors.

Data identifiers shall appear in text on the label within parentheses immediately following the item (such as "Part Number (P)"). Data identifiers shall be programmed to precede the item in the bar code (part number text "3001488-113" coded as "P3001488- 113"). No space, or other character, shall be allowed between the data identifier and the part number.

Label material/paper shall be white with black printing for maximum contrast. The label may be self-adhesive, either pressure-sensitive or dry gummed, or held in place on the package with a self-adhesive over-laminate.

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual



Note: in Part Number field above, the bar code contains the characters "P3073609-1" with start & stop characters at each end.

**Figure 1 (Critical Label Spacing)**

Critical spacing dimensions for all fields on exterior container label.

Readability:

- Bar Codes shall conform to AIM BC1.
- Check digits and confirmation characters (\$, /, + %) shall not be used.
- X dimension (width of narrow segment) shall be from .010 to .015 inches. Ratio of average width of wide sections to average width of narrow sections shall be from 2.8:1 to 3.2:1. The inter-character gap should be the same as the X dimension.
- Reflectivity and contrast shall be measured at 660 nanometers. Bar codes shall meet one of the following contrast requirements:
  - Print contrast signal  $\geq 75\%$ , or
  - Minimum reflectance difference  $\geq 37.5\%$

Distinguish numeric zeros from the letter "O" by using "Ø", "0" or similar character for human-readable data.

### 239.2.3 Exterior Container Labels

A representative sample of an acceptable label is shown in Figure 2.

- Minimum label size shall be 3.937 inches (100 mm) high by 6.0 inches (152 mm) wide.
- Maximum label size shall be 5.0 inches (127 mm) high by 6.5 inches (165 mm) wide.

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

<b>From: Supplier Name</b> 1234 E. Drive Rd. City, State, Zip...	<b>To: Honeywell Engines</b> 402 S. 36th Ave. Phoenix, AZ 85072
<b>P.O. Number(K): G00002164</b> 	
<b>Item Number(4K): 0052</b> 	
<b>Part Number(P): 2-063-320-31</b> 	
<b>Quantity(Q): 1234567</b> 	<b>Shipment Number: 12345678</b> 
<b>Optional(Z): H12345678901</b> 	<b>Box _ of _</b>
<b>COUNTRY OF ORIGIN:</b> _____	

**Figure 2:** Sample Exterior Container (Label not to scale)




“To” address to be as indicated on the purchase order.

Note: Some purchase orders show a combination of purchase order number and line item number (example:G00002164-0052). In this example, the 0052 is not part of the purchase order number, but is the line item number, which shall go on the second line of the label (Figure 2).

Note: Hand annotation of Box \_ of \_ numbers is acceptable and is required on boxes only. This field required for all boxes including Box 1 of 1.

The optional block is for additional supplier information, which may be human-read by Honeywell, but will not be read by bar code scanners. Data Identifiers, including prefix, shall be separated from item by a colon.

### 239.2.3.1 Detailed Field Requirements

-  Data Area is space containing field title, human-readable data, and bar coded data.
-  Data Area dimensions are shown in (Height, Width) inches; these are minimum values.
-  Valid data identifiers are shown in parenthesis prefixing bar code item. The data identifier must be imbedded in the bar code as a data identifier - not as the data itself. Character lengths shown do not include data identifiers.

Data identifiers Bar code prefix)	Item
K	Purchase Order
4K	Line Item Number
P	Part Number
Q	Quantity
3S	Packing Slip Number
Z	Optional (anything except s/n or l/n literal

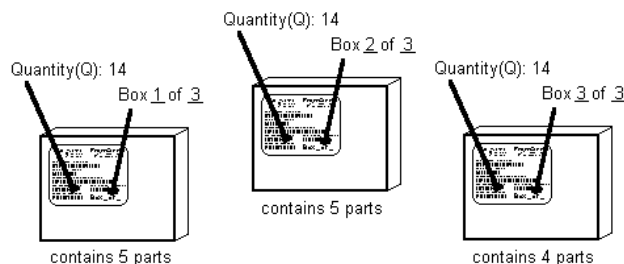
**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

**Figure 2 Detailed Field Requirements**

Addresses	Data Area (.80, 6.00) for both "From:" and "To:" addresses
(K) PO Number	15 alphanumeric characters, left-justified (flush left) & null filled. (.60, 6.00)
(4K) Line Item Number	4 alphanumeric characters, right-justified with leading zeroes (.60, 6.00). For example, print "0023R" and not "23R", and bar code "4K0023R", not "4K23R". <u>Note:</u> Exceptions to the 4-character length requirement: 1) For SAP POs, 5 alphanumeric characters are required, 2) Rework "W" P.O. item number may be followed by an 'R' making item number 5 alphanumeric characters in length
(P) P/N	25 alphanumeric characters, left-justified null filled. (.60, 6.00)
(Q) Quantity	7 numeric characters, left-justified null filled. (.60, 2.70)
(3S) Shipment Number	8 alphanumeric characters, left-justified null filled (.60, 3.30). If truncation of shipment number is required, only the last 5 right hand numbers shall be used
(Z) Optional	12 alphanumeric characters, left-justified null filled (.80, 2.70)
Boxes	No bar code. Readable text should be .20 to .25 inches high and may be hand-written (.80, 3.30). Legible written characters are acceptable.
Country of Origin	No bar code.

Note: "Null filled" refers to null, meaning "nothing". If a field is null filled, it's filled with nothing.



**Figure 3:** Shipment of 14 Parts with Same P.O. Number, Item, Part Number, Split Across Three Boxes

Note the quantity shown on the Exterior Container for any order shall reflect the quantities that are in the entire order.

### 239.2.4 Intermediate Package Marking

Intermediate packages, when used, shall be marked with the Part number, as specified on the PO, PO Number, Quantity and Unit of Measure (each, feet, etc.) and Supplier's Name (bar coding is optional). If product is shelf life sensitive, packaging is to be marked by the supplier with the expiration date.

### 239.2.5 Hand Tags

When the packaging material prohibits the use of containers that allow the application of self-adhesive labels, a tag shall be securely fastened to the material. The Supplier shall ensure that the location and attachment of the tag, under normal conditions, will not cause damage or premature removal of the tag prior to reaching Honeywell.

### 239.2.6 Additional Container Identification

When there are identical part numbers with multiple lot numbers, serial numbers, life tracking numbers and/or multiple orders within the same exterior shipping container, it shall be indicated on the exterior container, such as: multiple lot numbers in this container, multiple serial numbers in this container, multiple life tracking numbers and/or, multiple orders enclosed.

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

### 239.2.7 Shipping Documents / Packing Slip

Shipping documents; including the C of C, and/or the packing list required by SPOC 140, shall be attached to the exterior of container #1 in a weather-proof envelope marked "Packing List Enclosed." Specific additive customer requirements will be specified via PO and linked to receiving inspection line items. The envelope may be placed in a Tyvec envelope and securely attached to the exterior of the #1 container to prevent damage.

Identification and traceability (I&T) sheets, if provided, shall be placed inside the container or inside Box 1 of a multiple container shipment, at the top of the container (on top of the item shipped). ATP sheets shall be attached to each item or to the first wrap or bag of each item if direct item attachment is not practical.

### 239.2.8 Separation of Multiple Part Numbers, Purchase Orders, Item Numbers and Addresses

Shipping containers that contain multiple part number or purchase order items shall be clearly identified on the outside of the container as containing such. Place a label for each internal container on the exterior of the consolidation container. Orders to separate addresses shall be packaged separately and routed accordingly.

### 239.2.9 Airworthiness Certification, Labeling and Consolidation Box Marking

When the PO requires a FAA 8130-3 airworthiness certification or equivalent form (Form 1), the certification form(s) and container identification shall have a bright yellow airworthiness label with bold black printing, similar to that shown in Figure 4, permanently attached to the shipping container.



**Airworthiness  
Certification  
Enclosed**

**Figure 4** Airworthiness Label for Exterior Container

### 239.2.10 Country of Origin and Marking (includes U.S.A.) \*

Country of origin marking is mandatory to comply with Customs Regulations or Honeywell requirements. Packaging of articles must be legibly, conspicuously and permanently marked with the parts' country of origin. For a product to be called Made in USA, or claimed to be of US origin without qualifications or limits on the claim, the product must be "all or virtually all" made in the U.S. The term "United States," as referred to in the Enforcement Policy Statement includes the 50 states, the District of Columbia, the U.S. territories and possessions. "All or virtually all" means that all significant parts and processing that go into the product must be of U.S. origin. That is, the product should contain no - or negligible - foreign content.

U.S. suppliers should contact the Federal Trade Commission, Division of enforcement, since the phrase "made in U.S.A." is under their jurisdiction. Guidance can be found at the following link, <http://www.business.ftc.gov/documents/bus03-complying-made-usa-standard>. For the purpose of this SPOC, the designation "U.S.A." is not adequate country of origin marking.\*

It is the supplier's responsibility to ensure that marking on the product reflects the true country of origin of the product and that no illegal transshipment through a third country has occurred. The supplier must also ascertain that foreign suppliers are familiar with the country of origin rules.

### 239.3 Electro-Static Discharge (ESD) Labeling and Packaging\*

Packaging and labeling shall comply with one of the following unless specified in Honeywell approved design document: (reference SPOC 354):

- 1) ANSI/ESD S20.20 and ANSI/ESD S541 or equivalent. Or
- 2) MIL-STD-1686 and MIL-STD-2073-1. Or
- 3) JESD625 and ANSI/ESD S541

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

### 239.4 Refrigerated, Frozen or Cryogenically-Stored Items

For refrigerated, frozen or cryogenically-stored product, the supplier shall display the type of storage necessary on the outside of the package. Packages must be adequately thermally insulated to ensure temperature requirements are maintained through reasonably anticipated transportation, in-transit delays, transfers and destination.

The supplier's container shall be marked with:

- Net contents
- Manufacturer's production lot number
- Date of manufacture and expiration date
- Date and time shipped
- Warning notes and safety precautions in accordance with federal and state safety and health regulations.

#### 239.4.1 Specific Frozen Packaging Requirements

Supplier shall package material in dry ice to maintain -40 degrees Fahrenheit during shipment, and must use a 24 hour delivery service for this shipment.

### 239.5 Handling, Packaging, and Shipping of Moisture/Reflow Sensitive Surface Mount Devices (Electrical/Electronic Parts)\*

For protection of moisture sensitive parts, handle, process, and package per the requirements of IPC/JEDEC J-STD-033 unless specified in design document.

**Revisions:** Paragraph 239.2.2 Site Specific Removed. Paragraphs 239.2.2, 239.3 and 239.5 Rewritten to clarify.

*\*Revised / \*\*Added*

## SPOC 241 – Identification of Substantiation Test Items

The Supplier must clearly mark the packing list and each package with "SUBSTANTIATION TEST ITEM".

**Revisions:** No changes.

*\*Revised / \*\*Added*

## SPOC 246 – Exemption of Sales and Use Taxes

This order is exempt from Arizona and Phoenix Sales and Use taxes because the purchased items are equipment, machinery, or rentals to be used directly in manufacturing, processing, fabricating, or metallurgical operations.

**Revisions:** No Changes.

*\*Revised / \*\*Added*

## SPOC 259 – Freight to be Paid by Honeywell

The Supplier shall assess all freight charges for which Honeywell is responsible when the freight is tendered to the carrier.

Honeywell participates in discount programs with national carriers; but discounts accrue only when Honeywell is the payer of the original bill. The Supplier that holds the Honeywell Purchase Order will be charged with any lost discounts.

**Revisions:** No Changes

*\*Revised / \*\*Added*

**UNCONTROLLED IN HARDCOPY**



## Supplemental Purchase Order Conditions (SPOC) Manual

### SPOC 260 – Priority Rating

The Supplier shall follow all the provisions of the Defense Priorities and Allocations Systems (DPAS) regulation (15 CFR 700) for this rated order that is certified for national defense use.

See the Purchase Order for the appropriate priority rating (e.g., DO-A1, DX-A1, DO-A4).

Revisions: No Changes

\*Revised / \*\*Added

### SPOC 267 – Electronic Part Definition (Solid Model)\*

#### 267.1 Scope

Applicable when using Honeywell-supplied Electronic Part Definition (EPD) databases to manufacture and inspect hardware procured directly by Honeywell or indirectly through a sub-tier supplier.

#### 267.2 Requirements

##### 267.2.1 Software Quality Assurance Plan (SQAP)

The supplier utilizing the Honeywell-supplied EPD databases for the manufacture and inspection of product shall maintain a comprehensive SQAP.

##### 267.2.2 Part Inspection Document (PID)

A PID shall be used that describing the methods for inspection and verification of compliance to the Honeywell-supplied EPD database. The Supplier shall furnish a copy of the PID to Honeywell when requested.

In conjunction with standard layout / inspection practices, the following minimum requirements for part inspection should be utilized as a reference guideline. The PID must contain enough data points to adequately describe the inspected feature:

Feature	Minimum Point Density or Equivalent
Continuous Surface > 10"	1 point per square inch
Continuous Surface < 10"	2 points per square inch
Non Standard Radii	3 points
Diameter	6 points
Aero shapes (Blades, Vanes, Nozzles)	Conventional inspection methods may be used
Core Wrap & Wall Thickness	Conventional inspection methods may be used
Standard Radii (i.e. fillets, corners, etc.) standard gauging may be used	

#### 267.3 Translation Process

Suppliers shall have a Honeywell approved procedure that outlines their translation process. The documentation must demonstrate traceability and compliance to the EPD database.

Revisions: Paragraph 267.4 Site Specific Removed.

\*Revised / \*\*Added

### SPOC 270 – FAA Conformity (or Civil Aviation Authority of the Country)

#### 270.1 Conformity Process for Non-Certified Parts

FAA conformity inspection is required for parts under this Purchase Order.

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

### 270.2 Conformity Inspection Guidelines

The Supplier shall include all inspections necessary to show that the article conforms to the proposed type design data, and shall document the inspections and make the documentation available as objective evidence. The documentation includes but is not limited to:

- Accomplishment of physical inspections
- Witnessing of installation of critical assemblies
- Witnessing of functional tests
- Verification of company conformity through documented evidence (i.e., Material certifications, special process certifications, shop travelers, work orders).

### 270.3 Conformity Plan Requirements

The Supplier shall provide a Conformity Plan that:

- Defines how the company conformity will be completed.
- Provides a schedule of when parts will be available.
- Identifies where the parts will be FAA conformed.
- Identifies who will perform the conformities. (FAA, FCAA, DAR)

The Conformity Plan shall be approved by the appropriate Honeywell FAA designee working or assigned to the specific conformity project.

**Revisions:** No Changes.

*\*Revised / \*\*Added*

## SPOC 273 – NASA Required Notification\*

### 273.1 Scope

NASA required notification in procurement documentation.

### 273.2 Requirements\*

Purchase requests, Purchase Orders, contracts, and subcontracts covering the procurement of flight hardware items for use in manned spacecraft shall contain the two blocks of text shown below either printed, stamped, or added in boldface type. All Honeywell subcontractors and all of their subcontractors, including their lowest tier subcontractors shall include these blocks in all of their procurement documentation:

- "NOTE: For use in manned space flight. Materials, manufacturing, and workmanship of highest quality standards are essential to astronaut safety. If the supplier is able to supply the desired item with a quality which is higher than that of the items specified or proposed, the Supplier is requested to bring this fact to the immediate attention of the purchaser."**
- "For all International Space Station hardware, random and systematic errors in any article or material measurement shall not exceed 10 percent of the tolerance of the article or material being measured. Authorization for exceptions shall be requested from Honeywell Aerospace Equipment Systems. Random and systematic errors in any calibration measurement shall not exceed 25 percent of the tolerance of the parameter being measured. Authorization for exceptions shall be requested from Honeywell Aerospace Equipment Systems. Certification of conformance to these requirements shall be provided with each shipment of product. These requirements shall be flowed down to all Sub-Tier Suppliers." \***

**Revisions:** Paragraph 273.2 International Space Station Rewritten to clarify.

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

### SPOC 276 – NASA Product Requirements

---

#### 276.1 Scope

NASA product requirements for Manned Space Flight.

#### 276.2 Purchase Order Requirements

For Purchase Orders involving product for Manned Space Flight: materials, manufacturing, processes and workmanship of the highest quality standards are essential to Manned Space Flight safety. If the Supplier or its Sub-Tier Suppliers can provide a higher standard of quality than requested in this purchase order and associated SPOCs, the Supplier must bring this information to the attention of the buyer.

The Supplier and its Sub-Tier Suppliers must be approved by Honeywell.

Supplier's certifications (i.e., material, controlled process, etc.) including those of Supplier's Sub-Tier Suppliers, in support of this order shall provide an auditable trail back to the Honeywell Purchase Order.

Soldering operations for manned space flight applications must conform to NASA's soldering requirements specified in NHB 5300.4(3A-1) or replacement, unless otherwise noted in the specification control or source control drawing. Evidence of solder operation performance must appear on the packing slip and certificate of conformance for products shipped.

There will be no change in the design of the part, in the material and processes, in its construction or in the manufacturer's part number after the first acceptable unit has been received by Honeywell unless requested and/or approved by Honeywell in writing. 3Parts and materials which have been permanently installed in an assembly using soldering, alloying, or other fusing techniques, and are then removed from the assembly for any reason shall not be used again in any flight hardware without specific written approval from Honeywell.

**Revisions:** Paragraphs 276.3 Site specific deleted.

*\*Revised / \*\*Added*

### SPOC 277 – Verification of Hardware

---

#### 277.1 Scope

Source Inspection of product by Honeywell or its customer at Supplier's facility is required.

#### 277.2 Requirement\*

The Supplier shall contact HTSI (reference SI 149-02) or other designee as directed by the purchase order, 72 hours in advance of any inspection need. Self-Released suppliers do not carry authority to perform product release for this order. Source Waiver shall not be used for this order.

The supplier shall make available to the buyer's Quality representative any necessary specifications, documents, facilities and assistance. Evidence of buyer's Quality representative's acceptance / certification shall accompany shipment.

**Revisions:** Paragraphs 277.3 and 277.4 Site specific deleted.

*\*Revised / \*\*Added*

### SPOC 308 – Printed Wiring Boards (PWB) Deleted\*

---

**Revisions:** Deleted

*\*Revised / \*\*Added*

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

### SPOC 309 – Flexible & Rigid Flex Printed Wiring Boards\* Deleted\*

Revisions: Deleted

\*Revised / \*\*Added

### SPOC 325 – Electronics Solder Requirements

Product covered under this Purchase Order is to be assembled and soldered per ANSI/J-STD-001 Revision (latest), Class 3, (Standard Requirements for Soldered Electrical & Electronic Assemblies), and acceptance criteria based on IPC-A-610 Revision (latest) and applicable Honeywell "M" specification, to the class as specified on the PO. Workmanship and testing also shall conform to the class of IPC-A-610 specified on the purchase order. Any exceptions or deviations must be delineated on the Honeywell drawing and / or Honeywell specification.

If solder testing is required per the drawing/specification then the parts must meet the applicable soldering requirements of the specification listed below:

PRODUCT TYPE	SPECIFICATION	METHOD
SEMICONDUCTORS	MIL-STD-750	2026
MICROELECTRONICS	MIL-STD-883	2003
RIGID PRINTED WIRING BOARDS	MIL-P-55110	PARA 3.7.4.5
RIGID FLEX PRINTED WIRING BOARDS	MIL-P-50884	PARA 3.4.6 PARA 3.7.14
FLEXIBLE PRINTED	MIL-P-50884	PARA 3.4.6 PARA 3.7.14
ALL OTHER PARTS	MIL-STD-202	208
WHEN REQUIRED BY PURCHASE ORDER	MIL-STD-2000	PARA 5.4.4

Components shall have been tested to the requirements listed in the above table within 18 months of the date Honeywell receives the components. The soldering test date (month and year) shall be noted on the Certificate of Conformance supplied with each shipment.

Revisions: No Changes.

\*Revised / \*\*Added

### SPOC 326 – Electronics Marking Requirements

If marking permanency is required per the drawing/specification then the parts must meet the applicable marking permanency (resistance to solvents) requirements of the respective specifications:

PRODUCT TYPE	SPECIFICATION	METHOD
Semi-Conductors	MIL-STD-750	1022
Micro-Electronics	MIL-STD-883	2015
Rigid Printed Wiring Boards	MIL-P-55110	PARA 3.5.4
PRODUCT TYPE	SPECIFICATION	METHOD
Rigid Flex Printed Wiring Boards	MIL-P-50884	PARA 3.4.4
Flexible Printed	MIL-P-50884	PARA 3.4.4
All Other Parts	MIL-STD-202	215

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

Revisions: No Changes.

*\*Revised / \*\*Added*

### SPOC 329 – Hardness Critical Item

The parts contain Critical Characteristics shown as Hardness Critical Item / Hardness Critical Process (HCI/HCP). No substitutions or deviations are permitted.

Revisions: No Changes.

*\*Revised / \*\*Added*

### SPOC 335 – Tape and Reeled Components

Surface mount or axial lead components shall be tape and reeled in accordance with table below. For order quantities less than 1000; bulk, ammo or rail packaging is acceptable.

Number	Carrier Type	Standard	Requirement
1	Embossed Carrier Taping	EIA 481	Surface mount components shall be supplied on tape and reel in accordance with EIA 481.
2	Axial Lead Taping	EIA 296	Axial lead through hole components shall be supplied on tape and reel in accordance with EIA 296.
3	Radial Lead Taping	EIA 468	Radial lead through hole components shall be supplied on tape and reel in accordance with EIA 468.
4	JEDEC Trays	JEDEC CO-029, etc	Integrated Circuits shall be supplied on JEDEC antistatic trays

Revisions: No Changes.

*\*Revised / \*\*Added*

### SPOC 349 – Material Samples Required\*

#### 349.1 Sample Requirements

The Supplier shall supply material samples for the items listed on this Purchase Order. The samples must be:

- Two (2) fully processed test bars **and**
- One (1) chemistry tab.

Revisions: Site specific paragraphs 349.2 and 349.3 deleted.

*\*Revised / \*\*Added*

### SPOC 354 – Electro-Static Discharge Requirement\*

For ESDS (Electrostatic Discharge Sensitive) items, the Supplier shall establish and maintain a written electrostatic discharge control program for the control of Electro-Static Discharge (ESD) during fabrication, handling, and packaging of electrical and electronic parts, assemblies, and equipment. The program shall be based on and meet the intent of ANSI/ESD S20.20 (or equivalent), or JESD625, or MIL-STD-1686.\*

Revisions: Last sentence Rewritten to clarify.

*\*Revised / \*\*Added*

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

### SPOC 385 – Printed Circuit Board (PCB) Testing

The Supplier shall perform continuity and circuit short testing on all double-sided and multi-layer Printed Circuit Boards (PCBs) before shipping to Honeywell.

**Revisions:** No Changes.

*\*Revised / \*\*Added*

### SPOC 406 – Commercial Items Used in Government Contracts\*

This part has been identified as dual usage having both Government and Commercial end use requirements.\* Unless otherwise noted in the header text of the purchase award, the terms contained in Honeywell's "Supplemental Provisions – U.S. Govt Contracts (SPFFP), apply and are hereby incorporated by reference as if written in full. Honeywell's Terms and Conditions of Purchase, including SPGCI, are located on the Honeywell Aero Supplier Portal: <https://scc.honeywell.com>, from the HASP menu, select > Docs > Documents > Terms & Conditions.\*

**Revisions:** Rewritten to clarify.

*\*Revised / \*\*Added*

### SPOC 407 – Military Customer First Article Inspection

Verification of First Article by the Military customer (military quality assurance and/or Defense Contract Management Agency) is required. The Honeywell Quality Assurance Point of Contact will coordinate First Article inspection by the Military customer at the supplier.

If FAR 52.209-03 is required, coordinate with your Honeywell Quality Assurance point of contact or your Honeywell Buyer for the required First Article Testing (FAT) and Inspections. Requirements are documented in the Customer Purchase Order and DD1484 form.

**Revisions:** No Changes

*\*Revised / \*\*Added*

### SPOC 410 – Process Control

#### 410.1 Scope

Process Control Planning & Execution (PCPX) is a disciplined approach to identify and eliminate sources of systemic process variation. Minimum program requirements for PCPX compliance are available in SI-100.9 located on the Honeywell Aero Supplier Portal: <https://scc.honeywell.com>, from the HASP menu, select > Docs > Documents > PCPX and MPC > PCPX Implementation Information.\*

PCPX shall be the primary way to meet SPOC 410.

Note: A Supplier that has an active MPC program that began and was in compliance prior to January 1, 2011 may continue to receive credit for process control implementation and must provide objective evidence of ongoing compliance to MPC requirements. MPC compliance requirements are posted on the Honeywell Aero Supplier Portal. Eligible MPC Suppliers shall continue to be subject to Honeywell MPC compliance audit(s). Compliant MPC Suppliers may also be called upon to implement PCPX on specific part numbers at the sole discretion of Honeywell. Non-compliant MPC Suppliers and/or MPC Suppliers with less than 50% Proactive Quality penetration as of April 15, 2012 will be required to re-align their process control implementation with Honeywell PCPX requirements. Effective April 15, 2012 increases in Proactive Quality Percent Penetration will only be realized through implementation of Honeywell's PCPX and/or APQP programs.\*

#### 410.2 Project Approval

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

The Supplier shall make available PCPX process analysis and control plan package(s) to their Honeywell Quality representative upon request. The supplier shall continuously monitor PCPX effectiveness, updating controls plan and process control documentation, as applicable. All changes to the approved control plan package shall be clearly identified.

### 410.3 Equivalency

MPC Equivalency approval will continue to be honored for only those Suppliers that were approved prior to January 1, 2011 and subject to ongoing periodic conformance audits for continued effectiveness. Honeywell reserves the right to remove MPC Equivalency at its discretion.

### 410.4 Records

PCPX and/or applicable MPC documentation shall be considered quality documents. Supplier shall consider the Honeywell PCPX and/or applicable MPC program documents living documents and shall maintain and update documents with any changes that may affect product or process control plans.

Revisions: No Changes

\*Revised / \*\*Added

## SPOC 418 – Foreign Object Damage (FOD) Control\*

The supplier shall ensure that **Foreign Objects** and subsequent **Foreign Object Damage** ( FOD ) is eliminated from all parts prior to shipment. In addition to maintaining compliance with Honeywell site's cleanliness specifications, all suppliers must maintain a FOD free environment during machining, manufacturing, assembly, maintenance, inspection, storage, packaging and shipping.

- Potential FOD includes but is not limited to burrs, chips, dirt, corrosion and contamination resulting from the manufacturing, assembly, maintenance, processing, cleaning, storage and subsequent packaging of parts.
- Suppliers must ensure all passageways- cast and/or machined are clear of chips, core material, dirt, breakout of cast walls, etc.
- Prior to closing inaccessible or obscured areas and compartments during assembly, supplier shall ensure the areas are free of FOD.
- Suppliers must ensure all parts are clean and FOD free prior to shipment.
- Suppliers are required to maintain a FOD prevention program, which includes prevention and elimination of FOD from the manufacturing processes and work area.

Specific attention should be given, where applicable, to items such as:

- Housekeeping and cleanliness
- Food and beverage control
- Tool and small part accountability
- Loose objects
- Material handling and parts protection
- External cleaning following evidence of external contamination

Supplier shall ensure that the responsibility for the FOD prevention program is clearly defined and appropriate personnel have received FOD awareness training.

Suppliers are responsible for flow down of these requirements to their sub-tier suppliers to ensure FOD free products.

Suppliers FOD prevention program and controls are subject to periodic audits by Honeywell as deemed necessary to ensure program effectiveness and compliance. This includes, but not limited to, Failure Analysis Reports, Containment and Preventive Corrective Action Plans taken to preclude recurrence. These reports shall be made available and submitted upon request though formal notifications per SPOC 100.9.\*\*

**UNCONTROLLED IN HARDCOPY**



## Supplemental Purchase Order Conditions (SPOC) Manual

For additional information regarding FOD prevention, refer to National Aerospace Standard NAS 412, "Foreign Object Damage / Foreign Object Debris (FOD) Prevention". The NAS 412 document may be used as a baseline FOD prevention resource.

**Revisions:** Paragraph 418 added. Paragraph Site Specific 418.1 deleted.

\*Revised / \*\*Added

### SPOC 419 – Supplier Counterfeit Parts Prevention Requirements \*

#### 419.1 Scope

##### 419.1.1 Purpose

This SPOC 419 is intended to prevent suspect and confirmed counterfeit Electrical, Electronic and Electromechanical (EEE) and Materiel commodities from entering Honeywell's supply chain and to standardize practices to:

- a) Specify the flow down of these requirements to applicable suppliers/contractors and their sub-tier suppliers/contractors who are performing work on behalf of Honeywell;
- b) Maximize availability of authenticated EEE and Materiel;
- c) Procure EEE and Materiel from authorized sources where available;
- d) Clear risks with Honeywell when EEE and Materiel are not available from authorized sources;
- e) Assure authenticity and conformance of procured EEE and Materiel;
- f) Control EEE and Materiel identified as suspect or confirmed counterfeit within the Honeywell supply chain and in the Supplier/Contract Manufacturers' supply chain;
- g) Report suspect counterfeit and confirmed counterfeit EEE and Materiel, to other potential users and to Government investigative authorities as required by contract or by law;
- h) This SPOC is specific to counterfeit prevention and detection, and not fraudulence beyond counterfeiting.

The provisions of this SPOC 419 are in addition to Supplier's responsibility to meet all contractual / purchase order requirements. The requirements of this SPOC 419 supplement the requirements of a higher level quality standard (e.g. AS9100), the Honeywell Counterfeit Parts Prevention control plan and other quality management system requirements. The requirements of SPOC 419 support both counterfeit prevention SAE Aerospace Standards: AS5553A and AS6174. SPOC 419 is not intended to stand alone or to supersede or cancel requirements found in other quality management system documents, requirements imposed by contract, or applicable laws and regulations unless an exemption and variance has been granted in writing by the Honeywell Director of Supplier Quality.

##### 419.1.2 Applicability

- (a) The requirements defined in SPOC 419 apply to all commodity and assembly (EEE and Materiel purchase orders issued to Honeywell suppliers as defined in the applicability tables.
  1. Honeywell suppliers shall flow these requirements down to their lowest level sub-tier suppliers on behalf of Honeywell no later than the effective date of this SPOC Manual.
  2. Periodic audits
    - i. May be performed to assess compliance to SPOC419 requirements.
    - ii. Will be determined by Honeywell and Honeywell sites.
    - iii. Will assess SPOC419 flowdown requirements for compliance.
    - iv. Will be conducted by Honeywell and Honeywell sites as applicable.
- (b) EEE and Materiel delivered by a supplier after the effective date of this SPOC Manual shall comply with the requirements set forth in the current SPOC 419 revision.
- (c) The Counterfeit Avoidance (EEE or Materiel) Inspection and Testing Statement of Work (SOW) are applicable for commodity and assembly risk mitigation for Honeywell Design Authority

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

- (d) Honeywell EEE and Materiel commodity Furnished Material will have Authorizing Documentation providing traceability to the authorized source, or material verification testing and inspection, or inventory (receipt history) documentation. The supplier may use Honeywell EEE and Materiel commodity Furnished Material with Authorizing Documentation (Honeywell CofC) without needing to comply with further requirements of SPOC 419.
- (e) EEE and Materiel inventory is applicable to SPOC419. However Non-Pedigree inventory is applicable per Para's 419.3.5.1 and 3.5.2.
- (f) Supplier will indemnify, defend, and hold Honeywell harmless from and against any and all loss or expense incurred by Honeywell as a result of the delivery by Supplier to or on behalf of Honeywell of suspect, fraudulent, or counterfeit EEE and Materiel Parts or Assemblies, with the exception of parts included in assemblies acquired in accordance with paragraph (d) above.
- (g) This SPOC419 supports SAE Aerospace Standard AS5553A, "Fraudulent/Counterfeit EEE Parts; Avoidance, Detection, Mitigation, and Disposition", and SAE Aerospace Standard AS6174 "Counterfeit Materiel; Assuring Acquisition of Authentic and Conforming Materiel", with exceptions noted below.\*
- (h) All goods to be delivered will consist of new and unused materials (i.e. No used, refurbished, reclaimed) unless otherwise specified as "used" and no returned parts unless specified on the Honeywell purchase order or contract.\*\*
- (i) Suppliers Providing Product under Design Authority of Honeywell Aerospace.

Companies that supply product for which Honeywell Aerospace is the design authority (build to print) shall certify in accordance with SPOC 140 that all sources of part supply have been verified as Authorized, utilizing the guidance provided in SPOC 419 Table 1. In the event that a source cannot be verified as Authorized, a Counterfeit Avoidance Workflow System (CAWS) request shall be initiated to clear the risk of counterfeiting. CAWS is accessible to suppliers through the following link: <https://cpp.honeywell.com/CounterfeitPartsPrevention/>. Training for CAWS is available through the "Help" tab on the CAWS Portal. Suppliers shall maintain objective evidence that sources of supply for material being incorporated into assemblies is from Authorized Sources, and shall make that objective evidence available upon Honeywell and U.S. DoD Contracting Officer (when applicable) request for review and audit.

When a First Article Inspection Report (FAIR) is initiated, Suppliers shall have a FAIR in Net-Inspect for EEE or Materiel commodities incorporated into sub-assemblies for which Honeywell has design authority that certifies:

- Compliance to SPOC 419 Supplier Counterfeit Parts Prevention Requirements and the drawing requirements;
  - That all sources have been verified as authorized in accordance with SPOC 419 Table 1 or a Counterfeit Avoidance Workflow System (CAWS) request has been initiated to clear the risk of counterfeiting.
- (j) Suppliers Providing Product under the Supplier's Design Control.

For companies that supply product to Honeywell Aerospace under their own design authority, SPOC 419 requirements to obtain parts from Authorized Sources still apply. However, Suppliers should utilize their own counterfeit parts control plan in accordance with applicable regulations to verify parts acquisition from Authorized Sources and to mitigate any related risk of counterfeiting instead of using the aforementioned CAWS request. Industry specifications such as SAE AS5553 – "Counterfeit Electrical, Electronic, and Electromechanical (EEE) Parts; Avoidance, Detection, Mitigation, and Disposition" and AS6174 – "Counterfeit Materiel; Assuring Acquisition of Authentic and Conforming Materiel" provide the framework to create a counterfeit parts control plan. Additional information and industry specifications on counterfeit avoidance and detection are available through the SAE Website: <https://www.sae.org/news/3558/>. Suppliers shall maintain objective evidence that sources of supply for material being incorporated into assemblies is from Authorized Sources, and shall make that objective evidence available upon Honeywell and U.S. DoD Contracting Officer (when applicable) request for review and audit.

**UNCONTROLLED IN HARD COPY**

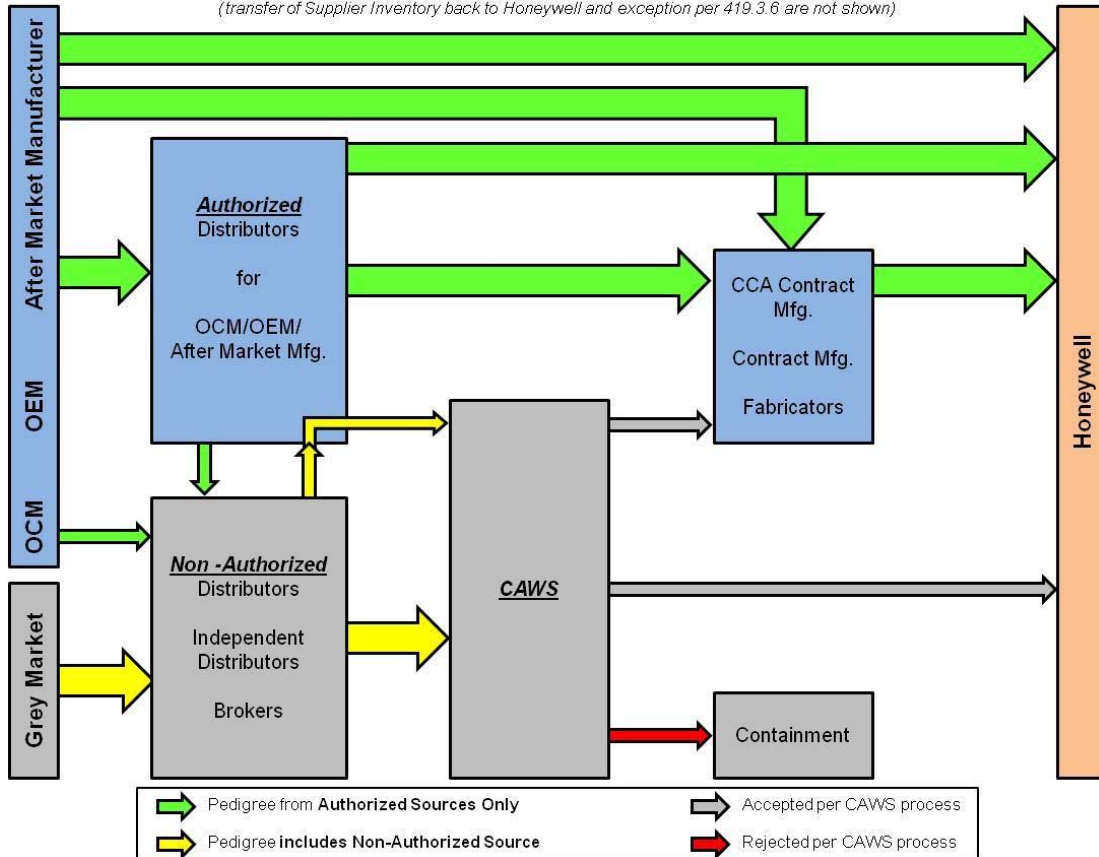
## Supplemental Purchase Order Conditions (SPOC) Manual

The SPOC 419 takes exception to the following elements from both SAE Aerospace Standards:

- AS5553 - 4.1.4.c Purchasing Information, and consistent with the standard, Honeywell considers the appendices as guidance.
- AS6174 - 3.1.6 Materiel Control, and consistent with the standard, Honeywell considers the appendices as guidance.

### Flow of Commodities from Authorized and Non-Authorized Sources

*(transfer of Supplier Inventory back to Honeywell and exception per 419.3.6 are not shown)*



#### 419.1.2.1 Applicability Tables:

The latest version of the Counterfeit Avoidance (EEE or Materiel) Inspection and Testing Statement of Work (SOW) applicability tables identifies the commodities that shall follow SPOC 419 and are found on the Honeywell Aerospace Supplier Portal. Commodities that are not listed within the SOW applicability tables are exempt from SPOC 419.

The current part type applicability table used by the supplier is as of the date of the purchase order.

The following two SPOC Supporting Documents on the Supplier Portal provide the most recent applicability tables:

1. Counterfeit Avoidance – EEE Inspection and Testing Statement of Work

**UNCONTROLLED IN HARD COPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

### 2. Counterfeit Avoidance – Materiel Inspection and Testing Statement of Work

#### 419.1.3 Reference Documents

The following documents are directly associated with the application of SPOC 419.

- For dated references, only the edition cited applies.
- For updated references, the latest edition of the document, including all amendments, applies unless otherwise specified by contract.

In the event of conflict between the provisions of this SPOC 419 and references cited herein, the provisions of SPOC 419 take precedence.

##### 419.1.3.1 SAE Publications

- SAE Aerospace Standard **AS5553** (current release) - Fraudulent/Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition
- SAE Aerospace Standard **AS6174** (current release) - Counterfeit Materiel; Assuring Acquisition of Authentic and Conforming Materiel
- SAE Aerospace AS9100 (current release) - Quality Management Systems - Requirements for Aviation, Space and Defense Organizations

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), [www.sae.org](http://www.sae.org).

##### 419.1.3.2 Commercial Publications

- DEA-STD-1010 Acceptability of Electronic Components Distributed in the Open Market  
Available from Independent Distributors of Electronics Association (IDEA), 6312 Darlington Avenue, Buena Park, CA 90621, Tel: 714-670-0200, [www.idofea.org](http://www.idofea.org).

##### 4.19.1.3.3 Honeywell Documents

HPS1013, APPROVAL AND CONTROL OF TESTING LABORATORIES FOR METALLIC MATERIALS

#### 419.2 Terms and Definitions

Refer to the following Appendices in SPOC 419:

- Appendix A for applicable definitions based on AS5553A for EEE commodity items
- Appendix B for applicable definitions based on AS6174 for Materiel commodity items

#### 419.3 Requirements

The following flow chart, SPOC419 Process Flow, specifies the overall counterfeit prevention actions required by SPOC 419:

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

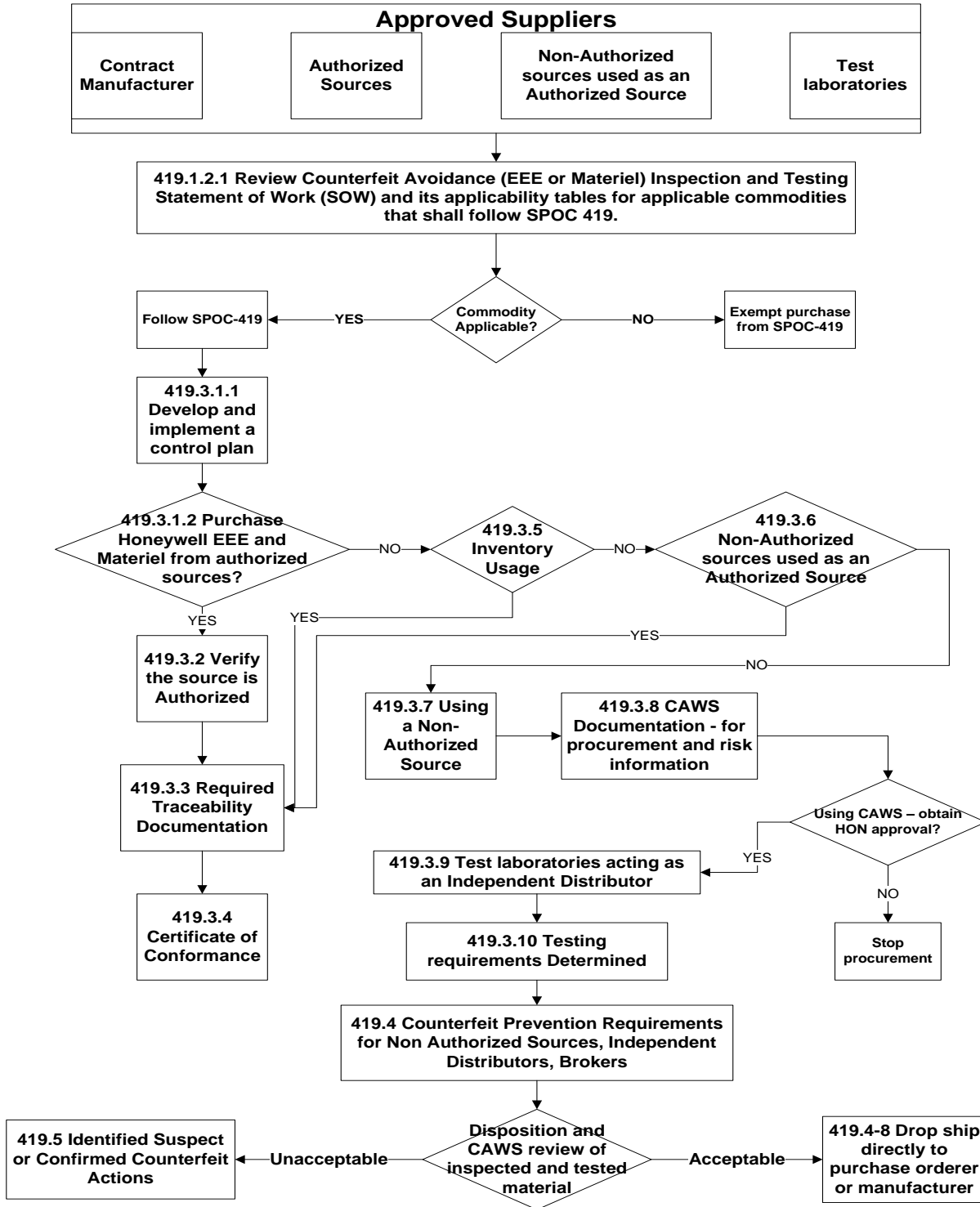


Figure 1 – SPOC419 Process Flow

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

## 419.3.1

**419.3.1.1 Develop and implement a control plan appropriate to the EEE and Materiel commodity**

- ☐ All goods to be delivered shall consist of new and unused materials unless otherwise specified as “used” on the Honeywell purchase order or contract.\*
  - ☐ For EEE parts, (excluding Materiel parts), the supplier shall develop and implement a counterfeit parts control plan which includes the requirements of SPOC419 and include EEE parts as identified within the applicability tables in the SOW (419.1.2.1).
  - ☐ For Materiel, (excluding EEE parts), the supplier shall develop and implement a counterfeit parts control plan which includes the requirements of SPOC419 and include materiel as identified within the applicability tables in the SOW (419.1.2.1).
  - ☐ The requirements of this document shall be flowed down to sub-tier suppliers, contractors and their sub-contractors for Honeywell-related purchases.
  - ☐ Due to increased scrutiny and flow down of Counterfeit requirements from Honeywell's customers, the Supplier shall perform their own internal audits to verify compliance to the requirements within this SPOC annually. Records of the audits and their results shall be maintained.

The supplier shall implement appropriate controls to assure product origin and conformance to Honeywell requirements and related engineering drawings, including:

- ☐ Processes to maximize availability of authentic originally designed and/or qualified parts.
- ☐ Internal procedures to provide suspect parts awareness training relative to identification and reporting of counterfeit parts.
- ☐ Validation of subcontractor's procurement methodology and sources of supply where procurement is outsourced to another entity.
- ☐ Verification of product being received. Supplier is to check for required documents and verify that suspect, counterfeit, and fraudulent EEE and Materiel parts and assemblies are not being supplied.
- ☐ Shall have processes to resolve nonconformance's related to suspect counterfeit or fraudulent EEE and/or Materiel parts that may or have been used in product delivered to a customer. This shall include the investigation and reporting process.
- ☐ Training of relevant personnel - Internal procedures to provide suspect parts awareness training relative to identification and reporting of counterfeit parts. Records of training shall be available.  
Relevant personnel, including management of programs, projects, procurement, quality assurance, inspection, receiving, manufacturing and engineering activities shall be trained as appropriate to their function, in the awareness, avoidance, detection, mitigation and disposition of suspect/fraudulent/counterfeit EEE and/or Materiel parts.

**419.3.1.2 Part Availability and Purchase of Honeywell EEE and Materiel from Authorized Sources**

- ☐ EEE and Materiel parts shall be purchased directly from the OCM, OEM or directly from an Authorized Source with part pedigree directly from the OCM, OEM, or from an Aftermarket Manufacture.
- ☐ EEE and Materiel assemblies shall only be purchased from the OEM or an Authorized Distributor with pedigree directly from the OEM.
- ☐ In the event that material (EEE or Materiel) is not available from these sources, then the Supplier shall be governed by the requirements shown in SPOC 419.4.

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

### 419.3.2 Verify The Source Is Authorized

The supplier shall verify and retain as a quality record, that the source of the purchase is authorized by performing the following actions detailed in the following table. The buyer shall verify each Authorized Source prior to purchase to prevent the occurrence of counterfeit EEE and Materiel part numbers from entering the supply chain.

**Table 1: Verify Source \***

Commodity Type	Verification that Source is Authorized
EEE Parts (other than MIL Spec) *	<p>Refer to the Approved Manufacture Part List (AMPL), accessible through <a href="https://webampl.honeywell.com/webAMPL/EntryHandler">https://webampl.honeywell.com/webAMPL/EntryHandler</a> Approved Manufacturer's Part List (AMPL), for sources which must be verified.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Copy of the OEM/OCM distribution agreement with the Supplier and Original Manufacturer OR,</li> <li><input type="checkbox"/> Screen shot (with embedded date) from Original Manufacturer's website with list of authorized sources that identifies the Supplier OR,</li> <li><input type="checkbox"/> Letter from a person of authority at OEM/OCM authorizing the Supplier OR, <b>Note:</b> A person of authority should be a Director level or above, or an Officer of the OEM/OCM</li> <li><input type="checkbox"/> Screen shot (with embedded date) from the Authorized Sources Database showing Supplier is Authorized, OR <b>Note:</b> The Authorized Sources Database is located in the AMPL and WebAMPL.</li> <li><input type="checkbox"/> Screen shot (with embedded date) from the Electronic Components Industry Association (ECIA) website of the item and Supplier in question, OR <b>Note:</b> The ECIA website is located at <a href="http://www.eciaauthorized.com/">http://www.eciaauthorized.com/</a></li> <li><input type="checkbox"/> Screen shot (with embedded date) from the Electronics Authorized Directory listing the Supplier as an Authorized Source for the Original Manufacturer. <b>Note:</b> The Electronics Authorized Directory is located at <a href="http://www.authorizeddirectory.com/">http://www.authorizeddirectory.com/</a></li> <li><input type="checkbox"/> <b>Note:</b> A Purchase Order or Contract with the Approved Manufacture Part List (AMPL) or WebAMPL or drawing listing the item and source who is approved at the time of the PO or Contract.*</li> </ul>
Raw Materials (e.g. Chemicals, Metals, Epoxies, Plastics, etc.)*	<p>Refer to the Approved Manufacture Part List (AMPL) as contained in the Honeywell Supplier Portal for additional sources which must be verified.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Copy of the OEM/OCM distribution agreement with the Supplier and Original Manufacturer OR,</li> <li><input type="checkbox"/> Screen shot (with embedded date) from Original Manufacturer's website with list of authorized sources that identifies the Supplier OR,</li> <li><input type="checkbox"/> Letter from a person of authority at OEM/OCM authorizing the Supplier OR, <b>Note:</b> A person of authority should be a Director level or above, or an Officer of the OEM/OCM.</li> <li><input type="checkbox"/> A Purchase Order or Contract with the Approved Manufacture Part List (AMPL) or WebAMPL or drawing listing the item and source who is approved at the time of the PO or Contract OR,</li> </ul>

**UNCONTROLLED IN HARDCOPY**



## Supplemental Purchase Order Conditions (SPOC) Manual

	<ul style="list-style-type: none"> <li><input type="checkbox"/> Build to Print – refer to SAP to identify the authorized source for the part number, OR</li> <li><input type="checkbox"/> Source Control Drawing (SOCD) or Vendor Item Drawing (VID) with the supplier identified on the drawing.</li> </ul> <p><b>Note:</b> The Approved Source List (ASL) provides potential authorized sources (manufacturers). The buyer must provide documented verification of any source from ASL including the requirement for manufacturing certification availability.</p> <p><b>Note:</b> Production raw material must have specification documentation as certification.</p> <p><b>Note:</b> Raw Material does not have Honeywell part numbers, but is bought using the manufacturer’s part numbers.*</p>
<p>Mechanical</p>	<p>Refer to the source controlled drawing; slash sheet or Vendor Item Drawing (VID) from DLA website (<a href="http://www.dla.mil">http://www.dla.mil</a>) showing the authorized source.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Source Control Drawing (SOCD) or Vendor Item Drawing (VID) provides the authorized source on the drawing,</li> <li><input type="checkbox"/> Copy of the OEM/OCM distribution agreement with supplier OR,</li> <li><input type="checkbox"/> Screen shot (with embedded date) from manufacturer’s website with list of authorized sources OR,</li> <li><input type="checkbox"/> Letter from person of authority at OEM/OCM authorizing the source OR,</li> <li><input type="checkbox"/> Refer to the Approved Manufacture Part List (AMPL) as contained in the Honeywell Supplier Portal OR,</li> <li><input type="checkbox"/> Build to Print – refer to SAP to identify the authorized source for the part number, OR</li> <li><input type="checkbox"/> Screen shot (with embedded date) from the Authorized Sources Database showing the list of sources for that material (new tool) loaded in SAP.</li> </ul> <p><b>Note:</b> The Approved Source List (ASL) provides potential authorized sources (manufacturers). The buyer must provide documented verification of any source from ASL including the requirement for manufacturing certification availability.</p> <p><b>Note:</b> All hardware items must be procured to a set of manufacturing standards and have a Spec or Part Number.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Hardware items may have a Qualified Part List (QPL) which specifies the authorized supplier.*</li> </ul>

### 419.3.3 Required Traceability Documentation

The purpose of this section is to define relevant authorizing documents necessary for traceability and the prevention of counterfeit parts. Additional records may be included as applicable and required under contract as applicable.

The following provides instructions for Authorizing Traceability Documentation for EEE and Materiel parts and assemblies entering the supply chain including all inventory, Stock Transfer Orders (STOs), Inter-Division Orders (IDOs), Buy-Backs, Customer Furnished Material (CFM), Government Furnished Material (GFM), and Sub-tier Supplier Transfers.

#### 419.3.3.1 From Authorized Sources

EEE and Materiel that has been acquired directly from an authorized source (OEM, OCM, Authorized Distributors, and Aftermarket Manufacturers) shall have procurement history provided as authorizing traceability documentation to ensure parts have chain of custody to the authorized source.

Optional supporting authorizing traceability documents for EEE and Materiel parts and assemblies purchased from authorized sources may include any one or more of the following as required:

1. OEM/OCM certification;
2. OEM/OCM Certificate of Conformance;

**UNCONTROLLED IN HARDCOPY**

**Supplemental Purchase Order Conditions (SPOC) Manual**

3. OEM/OCM packing list;
4. Authorized Distributor Certificate of Conformance;
5. Authorized Distributor packing list;



Note: OEM/OCM certification is typically only available for MIL-SPEC (e.g. QML/QPL) parts upon request and may not be available for items already on the shelf at Authorized Distributors. When available from Authorized Distributors, there is typically a fee associated with the service. Some military specifications (e.g. MIL-PRF-38535, MIL-PRF-19500, etc.) require specific certifying documentation.

**419.3.3.2 From Inventory (Including CFM and GFM)**

The supplier has the responsibility to retain all documentation sent with Customer Furnished Material (CFM) and/or Government Furnished Material (GFM), this documentation may include certificates of conformance.

When this material is returned to HON, the documentation must be included.

**419.3.3.2.1 Honeywell Supplied Material – Processing Authorizing Traceability Documentation for EEE and Materiel**

-  For Authorized Source material, Honeywell shall provide procurement history as authorizing traceability documentation to ensure parts have chain of custody to the authorized source. Note authorizing traceability documentation section above in SPOC 419.
-  For Non-Authorized Source material, If Honeywell purchasing records do not show that items procured have been acquired from Authorized sources, or that the items procured have come from non-authorized sources (Independent Distributors, Brokers), Honeywell will provide appropriate documentation including purchasing records that provide evidence that the material has been cleared of risk using counterfeit prevention risk assessment and mitigation.

**419.3.3.3 From Non-authorized Sources**


EEE and Materiel commodities, assemblies, and inventory from non-authorized sources shall be handled in accordance with SPOC 419, and segregated, either electronically, physically or both. EEE and Materiel from non-authorized sources shall have test documentation in accordance with Counterfeit Avoidance (EEE or Materiel) Inspection and Testing Statement of Work traceable to each specific lot/date code and shipment that was evaluated. When the material is missing authorizing and traceability documentation, the material shall be identified as “missing authorizing documentation”. Test documentation shall be retained in the Honeywell Counterfeit Avoidance Workflow System (CAWS) and available when EEE and Materiel is transferred that is traceable to each specific lot/date code and shipment that was evaluated (i.e. goods receipt number or batch number identified in CAWS).

**419.3.4 Certificate of Conformance (Cof C)**

For CofC consideration, refer to SPOC 140 “Certification of Conformance/Shipping Declaration Document/Packing Slip Requirements” for guidance and ensure the following sections are complied with. SPOC 140 has precedence over the following sections (419.3.4.1, 419.3.4.2).

**419.3.4.1 Provide with the shipment a Certificate of Conformance**

The Authorized Source shall provide with the shipment a Certificate of Conformance, certifying that the EEE or Materiel commodity or assembly provided is the actual part number being procured on the Honeywell Purchase Order.

-  A Certificate of Conformance which certifies the vendor part number, with the Honeywell ordered part number identified as “Reference or Customer P/N,” **does not** indicate certification to the Honeywell ordered part number, if the Honeywell drawing includes

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

additional requirements. Therefore, a CofC to the Honeywell ordered part number is not needed.

- ☐ Typically for mechanical materiel commodities Source Control Drawings, Procurement Control Drawings, Vendor Item Control Drawings (10 digit), Design Parts (ASL) and raw material should have C of C. For Industry Standards, NAS, SAE, MIL and AMS consult the PRI (NADCAP) vendor approval list for approved suppliers.

A Certificate of Conformance from an Authorized Source must also provide traceability to the OEM or OCM.

- ☐ The preferable method is for the Authorized Source to provide a copy of the manufacturer's certificate for the lot number being supplied, or as part of an assembly, along with their Authorized Source certification.
- ☐ Acceptable, but not preferable, is an Authorized Distributor certificate identifying the Original Manufacturer and the source of the Authorized Distributor's authorization from the Original Manufacturer.

**419.3.4.2 Certificate of Conformance shall be provided for the following:**

- ☐ EEE and Materiel part procured from an OCM or Authorized Distributor with established pedigree to the OCM,
- ☐ EEE and Materiel assembly procured from an OEM or Authorized Distributor with established pedigree to the OEM.

There is a distinction regarding the level of documentation on a Certificate of Conformance to be supplied when buying parts manufactured to U.S. military standards and aerospace specifications versus parts made to commercial or industrial standards002E

- ☐ For procurement of military grade components, a manufacturer's certification to a specified military or aerospace specification or standard is required.
  - (a) This documentation shall contain at a minimum the manufacturer, distributor, distributor purchase order number, part number, quantity, and date code of each quantity supplied.
  - (b) Governing specifications may require additional information to be provided.
  - (c) A copy of the manufacturer's certification shall accompany shipment of parts, or, for parts procured through Authorized Distributors, shipment shall be accompanied by a Certificate of Conformance showing proper supply chain traceability.
- ☐ For procurement of product for commercial or industrial use, product delivered by the manufacturer to the authorized distributor is not normally required to contain a formal Certificate of Conformance.
  - (a) In such cases, the accompanying documentation is a commercially acceptable packing list. This document normally identifies the manufacturer, distributor to whom the parts were supplied, distributor purchase order number, part number, and quantity.
  - (b) Additional information, such as date code or statement of compliance, may be provided but is not normally required.
  - (c) The Certificate of Conformance must be maintained on file by the distributor and shall be made available to Honeywell upon request.
- ☐ Shipments of commercial and industrial parts are typically accompanied by a distributor packing list and/or Certificate of Conformance.
  - (a) Purchase orders issued by Honeywell or on behalf of Honeywell to suppliers shall require that material purchased through authorized distribution be acquired directly from OCMs or authorized suppliers, and sub-tier suppliers that purchase material on behalf of Honeywell shall flow down the requirements of SPOC419.

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

### 419.3.5 Inventory Usage

#### 419.3.5.1 Pedigree Inventory Usage

Suppliers and sub-tier suppliers, who manufacture and procure EEE and Materiel on behalf of Honeywell, may transfer Inventory to Honeywell or other Honeywell Contract Manufacturers without being considered an Independent Distributor only if:

- (a) The source is a Honeywell Approved and audited Contract Manufacturer;
- (b) It is performing work for Honeywell under a long term contract; and
- (c) It has acquired the components directly from the OCM, OEM or their authorized/franchised source and provides authorizing traceability documentation for each item used in Honeywell product in accordance with SPOC 419.3.3 and a Certificate of Conformance

#### 419.3.5.2 EEE Contract Manufacturer Non-Pedigree Inventory

EEE non-pedigree inventory on hand at a Supplier or sub-tier suppliers who manufacture and procure EEE on behalf of Honeywell, which is Honeywell owned or provided or purchased on behalf of Honeywell is exempt from the testing requirements specified herein and authorized to "use as is" as conforming EEE parts.

##### 419.3.5.2.1 Non-Pedigree Inventory prior to October 25, 2010

EEE non-pedigree inventory is defined as parts or components ("parts") acquired before October 25, 2010 (pre SPOC manual Rev J) from one of the following sources:

1. Honeywell furnished material, including parts supplied as part of a CCA transition;
2. Life Time Buy material acquired by the Supplier pursuant to Honeywell purchase orders;
3. Parts acquired by the Supplier from brokers specifically for use in products sold to Honeywell product;
4. Product purchased from an authorized source.

##### 419.3.5.2.2 Non-Pedigree Inventory after October 25, 2010

EEE non-pedigree inventory may also include Honeywell furnished material acquired by the Supplier on or after October 25, 2010 with a Honeywell-provided Certificate of Conformance and/or shipping/packing slip document in accordance with 419.3.3.

#### 419.3.5.3 Materiel Non-Pedigree Inventory

Subject to the three restrictions identified below in this paragraph, Materiel non-pedigree inventory on hand at a Supplier or sub-tier suppliers who manufacture and procure Materiel on behalf of Honeywell, which is Honeywell owned or provided or purchased on behalf of Honeywell is exempt from the testing requirements specified herein and authorized to "use as is" as conforming materiel.

Materiel non-pedigree inventory is defined as parts or components ("parts") acquired before the published date of this SPOC release (Rev L) from one of the following sources:

1. Honeywell furnished material, including parts supplied as part of a transition;
2. Life Time Buy material acquired by the Supplier pursuant to Honeywell purchase orders;
3. Parts acquired by the Supplier from independent distributors (broker equivalent) specifically for use in products sold to Honeywell product;

Materiel non-pedigree inventory also includes Honeywell furnished material acquired by the Supplier on or after the published date of this SPOC release (Rev L) with a Honeywell-provided certificate of conformance and/or shipping/packing slip document in accordance with 419.3.3.

**419.3.6 Contract Manufacturers or Suppliers may procure from a distributor who has obtained an Authorized Distributor Exception from Honeywell. For a supplier to obtain an Authorized Distributor Exception it must meet the following criteria:**

**UNCONTROLLED IN HARDCOPY**

**Supplemental Purchase Order Conditions (SPOC) Manual**

- 419.3.6.1 Each applicable Authorized Distributor Exception supplier can only deliver EEE or Materiel parts or assemblies to Honeywell or to other suppliers on behalf of Honeywell where:**
- A. The supplier is under the terms of a long term agreement (LTA) with Honeywell and the LTA specifically identifies those EEE or materiel parts or assemblies.
  - B. The supplier only procures EEE or Materiel parts or assemblies that are identified within the LTA from Authorized Sources and provides written letter from corporate officer attesting compliance to this requirement.
- 419.3.6.2 The Authorized Distributor Exception supplier must be approved in writing by the Procurement/Sourcing Director and SPM/SQE Director as an Authorized Distributor Exception.**
- A. Approval must be renewed every three years.
  - B. Approval can be revoked at any time by the Procurement/Sourcing Director and/or SPM/SQE Director.
- 419.3.6.3 Each applicable Authorized Distributor Exception supplier must comply with the following:**
- A. An on-location Honeywell Common Assessment (CA) must be completed.
    - a. The CA Business and Technical score must be 3.0 or greater.
    - b. All RAIL action items from the CA must be closed.
  - B. A Honeywell SPOC 419 compliance audit must be performed.
    - a. The compiled audit score must be 95 or greater.
    - b. All RAIL action items from the audit must be closed.
    - c. The following must be verified in detail and determined to be acceptable during the audit:
      - i. Verify the supplier has an unbroken chain of custody from the Authorized Source for EEE and Materiel parts or assemblies identified in the LTA by pulling a random sample of part numbers and reviewing their chain of custody for completeness.
      - ii. Verify that the warehouse and storage facilities that support Honeywell deliveries maintain physical segregation and control of EEE and Materiel parts that have the required chain of custody, from material that has an unknown pedigree, by pulling a random sample of both part number types (parts that require chain of custody and parts of unknown pedigree) and reviewing their chain of custody for completeness.

**419.3.7 Contract Manufacturers or Suppliers may procure from a Non-Authorized Source, (Independent Distributor, and broker), in the event parts or assemblies are not available from an Authorized Source, and when all of the following is completed:**

**419.3.7.1 Obtain Honeywell documented approval using the Counterfeit Avoidance Workflow System (CAWS) tool.**

**419.3.7.2 Comply with the requirements of SPOC 419.4.**

**419.3.8 Counterfeit Avoidance Workflow System (CAWS) Documentation**

Documentation requirements shall be in accordance with SPOC Manual Section 1.11 Records Requirements, and/or as directed by the procuring site's purchase order.

Specific counterfeit prevention documentation regarding procurement information, risk assessment, risk mitigation actions, approvals, and testing documentation will be maintained in CAWS. The non-authorized

**UNCONTROLLED IN HARDCOPY**

**Supplemental Purchase Order Conditions (SPOC) Manual**

source procurement shall not be completed without the use of the CAWS tool. The CAWS tool is located on the Honeywell Aerospace Supplier Portal at <https://scc.honeywell.com>, from the HASP menu select DOCS > Documents > Quality > SPOC > SPOC Supporting Documents.

**419.3.9 Test laboratories:**

Test laboratories that purchase EEE and Materiel on behalf of Honeywell for upscreening testing shall purchase EEE and Materiel only from Authorized Sources with part pedigree directly from the OCM or OEM.

1. In the event that material is not available from an Authorized Source with part pedigree directly from the OCM or OEM, then the Test Laboratory will be considered an Independent Distributor and shall be governed by the requirements of this SPOC.
2. Test laboratories in this category shall not self certify the Counterfeit Avoidance – (EEE or Materiel) Inspection and Testing Statement of Work requirements and shall have the required testing performed by another Honeywell Approved test laboratory.

**419.3.10 Testing Requirements for Detection, Verification and Control of Non-Authorized Procurement**

In all instances where parts are procured from a Non-Authorized source the following shall be completed:

1. Supplier shall follow the test requirements defined in the Counterfeit Avoidance – (EEE or Materiel) Inspection and Testing Statement of Work and additional mitigation actions defined and approved by Honeywell, regardless if the non authorized source provides a Manufacturer's Certificate of Conformance for the lot being supplied or certification paperwork.
  - a. The versions for both SOW documents are in effect as of the date of the Purchase Order issued to the non-authorized source.
2. When a failure analysis is conducted and the failure is isolated to a single part (single part within a lot or single part number), the assigned test lab shall determine and document whether or not a failure is due to a suspect fraudulent/counterfeit EEE or materiel part.

**419.4 Counterfeit Prevention Requirements for Non Authorized Sources – (Independent Distributors, Brokers)\***

1. Pre-assessment actions from Brokers and Independent Distributors for EEE parts should at a minimum include an External Visual Inspection (EVI) for electronic parts in accordance with the latest revision of IDEA-STD-1010 in effect of the date of the purchase order. Results of the pre-assessment inspection actions shall be attached to the CAWS record for the transaction. Note: X-Ray exposure on electronic parts and other test techniques may be damaging in certain application and may be considered a destructive test. Additional testing beyond an EVI performed by the Independent Distributor on electronic parts and assemblies should be carefully considered and reviewed with appropriate subject matter experts prior to performing.\*
2. The non-authorized source that supplies EEE and Materiel to Honeywell or to Suppliers and sub-tier suppliers on behalf of Honeywell shall warrant such items to be original and not counterfeit or fraudulent. Failure to do so renders such item(s) ineligible for purchase / use by Honeywell and its Suppliers and sub-tier suppliers. \*\*
3. All EEE and Materiel parts and assemblies that are purchased by the CM, supplier, or a sub-tier supplier from a non-authorized source on behalf of Honeywell shall be sent to a Honeywell Approved Test Laboratory in accordance with the CAWS documented actions and the current version of Honeywell's Counterfeit Avoidance – (EEE or Materiel) Inspection and Testing Statement of Work.

Counterfeit Avoidance – (EEE or Materiel) Inspection and Testing Statement of Work is located on the Honeywell Aerospace Supplier Portal at <https://scc.honeywell.com>. From the HASP menu select DOCS > Documents > Quality > SPOC > Supporting Documents. The list of Honeywell Approved Test Laboratories is contained in the Counterfeit Avoidance Workflow System (CAWS). When logged into CAWS, select "Approved Test Labs" from the main menu.

**UNCONTROLLED IN HARDCOPY**



## Supplemental Purchase Order Conditions (SPOC) Manual

4. All material accepted per CAWS in accordance with the Counterfeit Avoidance – (EEE or Materiel) Inspection and Testing Statement of Work shall be shipped directly to a Honeywell production facility from the Honeywell Approved Test Laboratory and shall not be shipped back to the Independent Distributor. A Honeywell production facility may be a Honeywell Supplier or sub-tier supplier when the Supplier is producing material on behalf of Honeywell. If material is shipped back to the Independent Distributor after it is successfully tested, then the material shall be retested to the latest revision of Counterfeit Avoidance – (EEE or Materiel) Inspection and Testing Statement of Work as of the date of the scheduled shipment of goods.

**419.5 Identified Suspect or Confirmed Counterfeit EEE or Materiel****419.5.1 CM or Supplier Location Identified Suspect or Confirmed Counterfeit Actions**

The following actions shall be completed upon the identification of EEE or Materiel suspect or confirmed counterfeit material at the supplier location:

1. Upon identification by Supplier of fraudulent, suspect or confirmed counterfeit parts that were purchased for or on behalf of Honeywell or that were delivered to Honeywell,
  - a. Supplier shall provide notification to Honeywell within **FIVE (5)** days in accordance with SPOC 100, to the Government Industry Data Exchange Program (GIDEP), industry supported reporting programs (e.g., ERAI), and/or to applicable Government investigative authorities and law enforcement agencies as appropriate and required by law, and
  - b. Supplier shall quarantine the suspect or confirmed counterfeit parts so that they shall not be used in production
2. Upon identification by Honeywell of its receipt from Supplier of fraudulent, suspect or confirmed counterfeit parts, Honeywell may quarantine and disposition such parts as required by law.
3. Honeywell reserves the right to withhold payment for parts that are quarantined, pending their disposition.

**419.5.2 Non-Authorized Source (Independent Distributor and Broker) Location Identification of Suspect or Confirmed Counterfeit Actions**

The following actions shall be flowed down, by the CM, supplier or their sub-tier supplier, to the non-authorized source (Independent Distributor and Broker). Upon the identification of EEE or Materiel suspect or confirmed counterfeit parts, the non-authorized source shall:

1. Notify the CM, supplier or their sub-tier supplier of the suspect or confirmed counterfeit EEE or materiel parts.
2. The CM or supplier to provide notification to Honeywell within **FIVE (5)** days in accordance with SPOC 100, to the Government Industry Data Exchange Program (GIDEP), industry supported reporting programs (e.g., ERAI), and/or to applicable Government investigative authorities and law enforcement agencies as appropriate and required by law, and
3. The non-authorized source shall be requested by the supplier and/or materiel supplier to quarantine the suspect or confirmed counterfeit parts so that they shall not be used in production, and to provide a certificate of destruction.

**APPENDIX A: TERMS AND DEFINITIONS**

Located on the Honeywell Aerospace Supplier Portal at <https://scc.honeywell.com>, from the HASP menu select DOCS > Documents > Quality > SPOC > SPOC Supporting Documents > SPOC 419 - Terms and Definitions.

**APPENDIX B: Additional TERMS AND DEFINITIONS for AS6174 MATERIEL**

Located on the Honeywell Aerospace Supplier Portal at <https://scc.honeywell.com>, from the HASP menu select DOCS > Documents > Quality > SPOC > SPOC Supporting Documents > SPOC 419 - Terms and Definitions.

**Revisions:** Paragraph 419.1.2 Bullet (h), (i) and (j) added. Paragraph 419.3.1.1 First bullet added. Paragraph 419.3.2 Table 1 Rewritten to clarify. Paragraph 419.4 Rewritten to clarify.

\*Revised / \*\*Added

**UNCONTROLLED IN HARDCOPY**



## Supplemental Purchase Order Conditions (SPOC) Manual

### SPOC 420 – Advanced Product Quality Planning (APQP)\*

---

#### 420.1 Applicability\*

APQP requirements apply to any Honeywell part number being made for the first time by a supplier. The requirement shall continue to apply during ongoing production. Where a purchase order holder subcontracts some/all of the manufacture of an item, the PO holder shall be responsible for the compliance of their subtier(s) to the requirements of this SPOC.

#### 420.2 Requirements\*

Purchase order holder (supplier) shall comply with AS9145 -REQUIREMENTS FOR ADVANCED PRODUCT QUALITY PLANNING AND PRODUCTION PART APPROVAL PROCESS and the requirements of this SPOC. APQP/PPAP activity shall begin immediately upon receipt of a purchase order for a part number being made for the first time by the supplier.

Items/documents/approvals defined within APQP requirements shall be completed in accordance with the schedules provided in applicable APQP program documents.

Unless otherwise specified, all PPAP submissions shall require level 3 compliance.

#### 420.3 Process\*

Supplier shall comply with SQG-5525 which defines the generation, submittal, approval, and maintenance processes for APQP/PPAP.

SQG-5525 is located at; <https://scc.honeywell.com> From the HASP menu select > Docs > Documents > Quality > APQP.

The PPAP will be approved by the responsible APQP engineer after the supplier demonstrates the ability to produce conforming hardware while incorporating the APQP tools.

Supplier shall maintain records of compliance to APQP/PPAP requirements.

**Revisions:** Rewritten for clarification.

*\*Revised / \*\*Added*

### SPOC 500 – Failure Analysis and Reporting Process

---

This SPOC is intended for applications that require specific Honeywell approved test failure or anomaly analysis and reporting procedures.

#### 500.1 Failure Reporting and Corrective Action

The supplier shall establish a formal, controlled failure reporting, analysis and corrective action process which is subject to Honeywell approval. The supplier process shall include:

- Reporting of all failures which occur from any initial application of power at the lowest level of assembly through qualification/acceptance testing of deliverable hardware.
- Positive control of failed items, retrieval of failed/overstressed parts, failed item and part failure analysis, and documentation of all pertinent information relating to each failure.

Procedures and forms used in support of the supplier's failure reporting system are subject to approval by Honeywell.

The supplier failure review board shall include at least one member each from the supplier's engineering, reliability and quality assurance organizations.

#### 500.2 Failure Reporting and Corrective Action Notification

The supplier's failure reporting system shall include the following elements:

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

- ☐ An agreed method for notification to the designated Honeywell representative of all failure incidents, regardless of magnitude.
- ☐ Notification of the Honeywell Buyer in writing within 24 hours of each failure occurrence. The text shall indicate the failed item part number and serial number, date of failure, test being performed, test specification and paragraph, description of the failure including failed parameters with actual/should be data, and preliminary analysis and disposition.
- ☐ Submission of the failure report to the Buyer within five (5) working days of the occurrence of each failure. A copy of the initial failure report may be used for notification purposes.
- ☐ Adequate support of failure report status and formal closure actions.
- ☐ Submission of the completed (closure) failure report within 21 days of each failure, or prior to shipment of the affected assembly, whichever occurs first.
- ☐ Notification of the Buyer of all failure occurrences and shall, along with other Honeywell representatives, have the right to participate in all failure investigation activities.
- ☐ Failure Analysis Reports
  - ☐ Reports shall include all supporting data and analyses, and shall be described in the supplier's detailed procedures.
- ☐ Supplier failure review board members shall review (sign and date) all failure reports when all actions are complete and reports are ready for submittal to Honeywell for approval and formal closure.

**Revisions:** No Changes.

*\*Revised / \*\*Added*

### SPOC 501 – Single Lot Requirement\*

#### 501.1 Scope

The entire quantity ordered shall be delivered from one lot date code, batch number, or heat number. The supplier shall contact Honeywell if this cannot be accomplished to obtain written authorization prior to shipping multiple lot date codes.

**Revisions:** Site specific paragraph 501.2 deleted

*\*Revised / \*\*Added*

### SPOC 502 – Single Raw Material Lot

All parts for this purchase order item should be from the same raw material lot number. If a single lot cannot be used, the parts shall be produced from as few raw material lots as possible. The parts shall be segregated, packaged and identified by raw material lot to maintain raw material lot identification & traceability.

**Revisions:** No Changes.

*\*Revised / \*\*Added*

### SPOC 503 – Delegation of Inspection Authority

Honeywell hereby delegates to the supplier the authority to perform in-process inspections and final acceptance inspection for the product described by part number in the purchase order or letter of delegation. The supplier shall maintain inspection records and make them available upon request. Supplier shall not delegate inspection authority to sub-tier suppliers. Suppliers with this delegation authority are subject to FAA/Honeywell-customer surveillance.

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

This is a special application SPOC and is not intended to be utilized in place of Self Release / Source Inspection requirements as imposed in SPOC 149.

**Revisions:** No Changes.

*\*Revised / \*\*Added*

### **SPOC 504 – Baseline / BOM Approval Required Deleted \***

**Revisions:** Deleted

*\*Revised / \*\*Added*

### **SPOC 505 – Lot Traveler Requirement\***

**505.1 A copy of the Supplier's manufacturing process flow lot traveler showing sequential processing of parts shall be provided.**

Travelers shall include operation description, including all inspection and test approval points, quality control approval, and sign off with date is required, and shall reflect the quantity of parts processed through each operation.

**Revisions:** Paragraph 505.2 Site Specific deleted.

*\*Revised / \*\*Added*

### **SPOC 506 – Parts List Controlled Item**

The revision listed on this purchase order is the Parts List (PL) document revision and is the controlling document for the item. The associated item drawing revision is the minimum drawing revision (MIN DWG REV) as listed on the Parts List document.

**Revisions:** No Changes.

*\*Revised / \*\*Added*

### **SPOC 507 – Manufacturing Plan Required**

The Supplier shall develop a Manufacturing Plan that defines the manufacturing processes to be employed in the manufacture of the part/assembly. The Supplier is encouraged to maximize the use of current documentation techniques (e.g. Part Tracking Systems, Travelers, etc.). The Manufacturing Plan shall be provided to the Honeywell Buyer a minimum of 10 working days prior to the initial start of manufacturing. The Honeywell Buyer will process to the appropriate group for review / approval. Manufacturing shall not start until the Manufacturing Plan has been approved, in writing, prior to the start of manufacturing.

The Manufacturing Plan shall include the following as a minimum:

- 1) Processing Sequence including a brief description of each main processing step.
- 2) Equipment to be used at each step (e.g. Mill).
- 3) Any subcontracted procurements including the identification of sub-tier suppliers (e.g. parts, processes, etc.).

**Note:** This SPOC is not in place of, or inclusive of, a Detailed Inspection Plan, which is covered in SPOC 128.

**Revisions:** No Changes.

*\*Revised / \*\*Added*

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

### SPOC 509 – Manufacturing Readiness Review

#### 509.1 Requirement

A joint Honeywell and Supplier Manufacturing Readiness Review (MRR) shall be conducted at the supplier's facility prior to the start of manufacturing when required by the Purchase Order (PO) or Statement of Work (SOW). The supplier shall submit the MRR data package to the Honeywell Buyer a minimum of 10 days in advance of the scheduled MRR.

#### 509.2 MRR Objective

The MRR objective is for the supplier to demonstrate the overall production readiness prior to manufacturing, and to ensure that items to be manufactured will meet the requirements of the PO, SOW, engineering drawings and engineering specifications. The supplier shall demonstrate that all necessary manufacturing plans, inspection plans, travelers (build documentation), tooling, facilities, and other resources are in place and available to ensure meeting all quality and design requirements within the negotiated program budget and schedule.

#### 509.3 MRR Team

The supplier MRR team shall consist of representatives from the management and the technical functions. The management functions shall include the contract administrator and responsible project engineer as a minimum. The technical representatives shall include design engineer/representative, manufacturing engineer/representative, and quality engineer/representative as a minimum.

#### 509.4 MRR Presentation

The MRR presentation shall address the following items as a minimum:

- Supplier Project Team Organization with key personnel identified
- Overall Program Schedule including current status
- Procurement status including all sub-tier suppliers, and if applicable, Qualification status
- Manufacturing milestone schedule
- Action Item Status/Review
- Design Status (as applicable) including current status, trade-offs, producability studies, lessons learned, etc.
- Detailed Manufacturing Flow Diagram including supplier inspection points and Buyer Mandatory Inspection Points (MIP).
- Manufacturing Documentation Status
- Inspection Documentation Status
- Test Documentation Status
- Tooling needs and statuses including drawing status, build status, calibration status, etc.
- Facilities Readiness including layout and capacity (including plant tour during MRR)
- Operators and Inspectors training
- Overall Project Risk Assessment; technical, cost, schedule. Should include any plans to mitigate risks identified.
- Any additional requirements to be part of the presentation as defined in the PO/SOW

#### 509.5 MRR Data Package

The MRR data package shall include the following as a minimum:

- Copy of MRR presentation
- Any Subcontractor (Supplier) Data Requirements List (SDRL) items as defined in the PO/SOW

#### 509.6 MRR Supporting Documentation

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

The following documentation, as a minimum, shall be available for review at the MRR:

- Supplier Drawings and Specifications (as applicable)
- Traveler(s)/Build Documentation
- Test Procedures (as applicable)
- Inspection Procedures
- Tooling Drawings

**Revisions:** No Changes.

*\*Revised / \*\*Added*

### SPOC 513 – Certifications Required Deleted\*

**Revisions:** SPOC Deleted

*\*Revised / \*\*Added*

### SPOC 527 – Airworthiness / Safety Critical

Procurement of Airworthiness / Product Safety Critical, or Flight Safety Critical items or materials: A copy of the quantitative data or AWPS certification/Data sheet shall be supplied with the material for each shipment.

AWPS is identified within the print notes as to being Design Critical or Production Critical.

A BLACK square symbol within the note identifies an AW/PS critical parameter. The number within the square ( ) refers to the corresponding drawing note and the note within the body of the drawing and/or Bill of Material (BOM) that defines/identifies the critical requirements.

#### EXAMPLE

3. ■ THE SOLID SQUARE SYMBOL DENOTES A CRITICAL PARAMETER. THE NUMBER IN THE CENTER CORRESPONDS TO THE FOLLOWING SUB-NOTE WITH THE SAME NUMBER, STATING TYPE AND NATURE OF CRITICALITY.
- 3.1 DESIGN CRITICAL- COMPLIANCE WITH CRITICAL DESIGN REQUIREMENTS PER ITEM EB7017153.
- 3.2 PRODUCTION CRITICAL- PRESENCE OF CORRECT PARTS.

#### Design Critical:

This is to prevent design changes after initial release, which might invalidate the inherent safety provisions.

- No action is necessary by a sub-tier supplier.

#### Production Critical:

If the analysis shows that the physical failure (as a result of a manufacturing defect) of any assembly or detail part (including batch considerations) could create a catastrophic condition, the item is classified as "PRODUCTION CRITICAL". Associated with this classification are the specific safeguards that must be taken to preclude the possibility of catastrophic failure (by defect) of the part/assembly.

The supplier is responsible to:

- Have an internal procedure/process outlining AWPS steps to follow.

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

- Build Sheets which include operator instructions for assembly of product such as Method Sheets, Operation Sheets, etc. shall:
  1. Be Clearly marked as AWPS
  2. Describe the specific AW/PS processing requirements for operator to accomplish.
    - AW/PS requirements shall be flowdown to sub-tier suppliers where applicable.
  3. Document a 100% inspection, validating/recording every S/N, that the AWPS parameters are met.
- Every shipment is to be accompanied with:
  1. A standard C of C
  2. An AWPS certification
  3. An AWPS INSPECTION CERTIFICATION Data form. It shall note AWPS requirements, the S/N's inspected, the inspection results (if quantitative) and stamp/signature of responsible party performing the validation.
- Any acceptance documentation for AW/PS Production Critical products shall be retained indefinitely as Quality Records. This includes but is not limited to Test Data sheets, AW/PS tags, X-rays, and certifications.

### **AWPS Certification Form example:**

Blank Form example is located on the Honeywell Aerospace Supplier Portal at <https://scc.honeywell.com>, from the HASP menu select DOCS > Documents > Quality > SPOC > Supporting Documents (SPOC 527 AWPS sample Cert)

**Revisions:** No Changes.

*\*Revised / \*\*Added*

### **SPOC 528 – Homogeneous Material Requirement**

All material supplied under this specification number shall be homogeneous. Homogeneous supplies are defined as material that is produced:

- To the same design as defined by the buyer and seller's documentation;
- 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 Honeywell, the supplier may not change alternates without prior written approval from Honeywell.

The supplier is not restricted to any source of supply of raw material as long as the material meets the applicable specifications; by the same manufacturing process as defined by the seller'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 the initial shipment of supplies to Honeywell, and the process used to manufacture the initial product shipment and all shipments thereafter.

Departure from these requirements, including changes suggested by Honeywell, must be approved in writing by Honeywell's Quality Engineering department prior to such departure.

**Revisions:** No Changes.

*\*Revised / \*\*Added*

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

### SPOC 529 – Delegation of MRB Authority

The supplier is hereby granted authority to perform Material Review Board (MRB) actions on material not in conformance. Results of the MRB action shall be submitted to the Buyer with each shipment of the affected material.

- \*Revised / \*\*Added Supplier shall furnish one copy of all Material Review reports to Buyer's Supplier Quality Engineering Department via Buyer's Purchasing Department. One copy of each Material Review action shall be included with the shipment of affected material. These reports shall list in detail the salvage methods utilized, if applicable.
- Final review authority over Supplier's Material Review decisions is retained by Honeywell.
- The Supplier shall not make substitution of Material Review members or delegate Material Review authority to subcontractors performing work on Buyer parts without advance written authorization from Buyer.
- Supplier Material Review action is not allowed when interchangeability, external configuration, function, service life, safety, reliability, or point of attachment to Buyer assemblies are affected.

**Revisions:** No Changes.

*\*Revised / \*\*Added*

### SPOC 530 – Standard Repairs of Printed Board Assemblies (PBA)

Standard Repairs shall be performed in accordance with IPC-7711 and IPC-7721. The supplier shall provide a document with each PBA/CCA that has had a standard repair. This document will provide:

- Serial number or UCN
- Location of the repair (zone on pictorial view of drawing or termination points), and
- Type of repair performed (stating the paragraph number in the HPS1009).

**Revisions:** No Changes.

*\*Revised / \*\*Added*

### SPOC 531 – Outsourcing Approval Required\*

The Supplier shall notify Honeywell, and request written approval prior to outsourcing a process, part, assembly or end item.

**Revisions:** Paragraph 531.1 Site Specific deleted

*\*Revised / \*\*Added*

### SPOC 532 – Cosmetic Part – Visual Inspection Requirement

Obvious blemishes (e.g., digs, pits, scratches, etc.) are not permitted. Parts should be packaged individually or in containers using dividers. Suppliers shall ensure that inspection practices include a thorough visual examination of product and shall refer to site specific workmanship specifications where available.

**Revisions:** No Changes.

*\*Revised / \*\*Added*

### SPOC 534 – Paint / Plating Thickness Test Required

Painting or plating thickness tests shall be conducted on the item(s) on this order by the painting or plating supplier. Painting or plating thickness test data shall be provided with the shipment.

- If material code 94-G10-78 is used, resistance check per M-spec, M8258799, shall also be performed.
- If material code 94-G14-78 is used, resistance check per M-spec, M8251332, shall also be performed.

**UNCONTROLLED IN HARDCOPY**



## Supplemental Purchase Order Conditions (SPOC) Manual

**Revisions:** No Changes.

*\*Revised / \*\*Added*

### SPOC 535 – TSO / PMA Tags\*

If the supplier holds certification (TSO/PMA/TC), the supplier is responsible for assigning and maintaining serial number control. If Honeywell holds the certification (TSO/PMA/TC), the supplier shall assign serial numbers sequentially beginning with serial number 1001, or as otherwise directed in the Purchase Order.

For product with supplier held TSO/PMA, the supplier shall provide an FAA Form 8130-3 or equivalent Airworthiness Approval Tag with each product, or for large shipments a single FAA Form 8130-3 or equivalent covering the range of serial numbers shipped. If the Honeywell part number differs from the TSO/PMA/TC approved part number, the Honeywell part number shall be referenced on the 8130-3 or equivalent form (it is acceptable to use Remarks Section 13). For individual products, the original certification shall be attached to the exterior of each product container in a protective envelope or inside the box provided that a stamp/label on the box exterior indicates the enclosure. For products covered under a range certification, a copy of the certificate shall be attached to the exterior of each product container in a protective envelope or inside the box provided that a stamp/label on the box exterior indicates the enclosure.

Honeywell will specifically request suppliers to provide 8130-3 tags to each country to which the products are shipped if they are not shipped to domestic customers. In case of products that are to be shipped to any of EU customers and if those products require TSO certification and/or supplier holding TSO approvals for the products, such suppliers shall provide a FAA Form 8130-3 containing a reference to the FAA TSO. Authorization number in remarks block. This is per EASA regulation 5.1.6b(2) which states that each new appliance exported to the EU with FAA Authorized Release Certificate shall have an FAA Form 8130-3 containing a reference to the FAA TSO Authorization number in the remark block.\*

**Revisions:** Last paragraph added.

*\*Revised / \*\*Added*

### SPOC 536 – Airbus Requirements – Equipment Suppliers

Products or services provided under this purchase order must comply with the requirements stated in Airbus' GRES E-0009 document (General Requirements for Equipment Suppliers). Buyer (or Buyer's representative) may assess Supplier's processes and/or product using the IPCA Industrial Process Control Assessment (or other) to validate compliance.

**Revisions:** No Changes.

*\*Revised / \*\*Added*

### SPOC 537 – Airbus Requirement – Equipment and Systems Suppliers

Products or services provided under this purchase order must comply with the requirements stated in Airbus' GRESS AP1013 document (General Requirements for Equipment and System Suppliers). Buyer (or Buyer's representative) may assess Supplier's processes and/or product using the IPCA Industrial Process Control Assessment (or other) to validate compliance.

**Revisions:** No Changes.

*\*Revised / \*\*Added*

### SPOC 538 – Boeing Approved Source

Supplier must comply with the latest revision of the D1-4426 Boeing Approved Process Sources requirement specification and be a Boeing approved source.

**Revisions:** No Changes.

*\*Revised / \*\*Added*

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

### SPOC 539 – Required Sources for Jewel, Miniature and Instrument Bearings

#### 539.1 Requirements for Jewel Bearings

The supplier shall supply jewel bearings in accordance with FAR 52.208-1, "Required Source for Jewel Bearings"

#### 539.2 Requirements for Miniature and Instrument Ball Bearings

The supplier shall supply ball bearings in accordance with FAR 52.208-7000 "Required Sources for Miniature and Instrument Ball Bearings".

Revisions: No Changes.

*\*Revised / \*\*Added*

### SPOC 540 – Teardown Analysis Inspection

All lots supplied on this order are subject to part teardown analysis to an LTPD of ten (10), with a maximum accept number of one. Internal workmanship and bond strength will be examined to the criteria of MIL-STD-883, Method 2010, where the detail specification requires MIL-STD-883 processing or to the criteria of MIL-STD-750 for discrete transistors or diodes.

Revisions: No Changes.

*\*Revised / \*\*Added*

### SPOC 541 – Insulation, Isolation, Dielectric Testing

Insulation, Isolation, Dielectric isolation (DITMCO) testing is required. Records of DITMCO testing shall be sent with the parts.

Revisions: No Changes.

*\*Revised / \*\*Added*

### SPOC 542 – Diodes – Metallurgical Bond

MIL-S-19500 diodes with dash 1 part numbers shall be constructed using only a metallurgical bond between the die and the header.

Revisions: No Changes.

*\*Revised / \*\*Added*

### SPOC 544 – CCA Requirements

For Purchased Circuit Card Assemblies, supplier shall comply with 001-06010-0000, Honeywell Standards and Processes for Circuit Card Assemblies and Bare Boards and 001-00072-0000, Honeywell Procurement Specification for Printed Circuits Boards.

Revisions: No Changes.

*\*Revised / \*\*Added*

### SPOC 545 – Inspection Requirement Deleted\*

Revisions: Deleted

*\*Revised / \*\*Added*

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

### SPOC 547 – Summary Report Requirement

Manufacturer shall supply summary reports listing all screening and Quality Conformance Inspection (QCI) tests performed on or covering the components supplied to this order, as specified in the applicable military specification and/or Source Control Drawing (SCD). For periodic tests covering but not performed on the lot shipped, the date of test and lot date code tested shall be shown. Tests involving Percent Defective Allowable (PDA) must show the number of components tested and the number passing, or the calculated PDA for that test. This data may be incorporated into the manufacturer's certificate of conformance.

**Revisions:** No Changes.

*\*Revised / \*\*Added*

### SPOC 548 – Automated Optical Inspection (AOI)\*

#### 548.1 AOI Requirements

All CCA's will be programmed on an AOI machine to inspect for: wrong, missing or extra parts; polarity and solder joint criteria. Solder joint criteria may be inspected using X-Ray instead of AOI. Records of AOI operation by UCN and Part number shall be retained by the Seller and made available upon request by the Buyer.

**Revisions:** Paragraph 548.2 Site specific deleted

*\*Revised / \*\*Added*

### SPOC 549 – AXI (Automated X-Ray Inspection) of Circuit Card Assemblies

Automated X-Ray Inspection (AXI) of Circuit Card Assemblies (CCA) Requirement – Inspection shall be performed by Automated x-ray (AXI) and/or x-ray. CCA's shall be x-rayed for all hidden solder joints, including BGA and any other inaccessible solder joints, to ensure good solder joints have been achieved. X-ray can be used for other solder joints not inspected during AOI. Records of the AXI or x-ray by UCN and Part number shall be retained by the Seller and made available upon request by the Buyer.

**Revisions:** No Changes.

*\*Revised / \*\*Added*

### SPOC 550 – Particle Impact Noise Detection (PIND) Screening\*

The supplier shall provide signed and dated PIND test results which shall include:

- Part number, lot number &/or date code
- Test specification, method and condition
- Quantity tested
- Number of failures at each pass
- Number of test passes completed
- PDA calculation, if applicable

PIND testing shall be performed by a Honeywell approved source.

**Revisions:** Site specific paragraphs 550.1 and 550.2 Removed.

*\*Revised / \*\*Added*

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

### SPOC 551 – Purchase and Finish PBA Requirement

This order requires that some components will not be placed on the PBA. Refer to drawing notes and parts list (referenced as select) for locations and quantities on the PBA ordered on this purchase order. These locations must be masked during the soldering and conformal coat operations in order to facilitate assembly and final functional testing. Please refer to individual PBA assembly drawings and associated parts list for identification. Components shall be loaded at buyer's facilities.

**Revisions:** No Changes.

*\*Revised / \*\*Added*

### SPOC 552 – Automatic Insertion Tubes

Parts shall be supplied in tubes suitable for automatic insertion and with consistent component orientation. Multiple lot numbers/date codes shall not be mixed in the same tube.

**Revisions:** No Changes.

*\*Revised / \*\*Added*

### SPOC 553 – Destructive Physical Analysis (DPA) Samples Required\*

The supplier shall perform In-house Destructive Physical Analysis (DPA) testing and shall furnish the Honeywell buyer with a list of all serial numbers.

The supplier shall:

- Ship to Honeywell the random sample (selected by Honeywell)
- Continue with the production lot in accordance with normal manufacturing procedures
- Submit a signed certification with the shipment of the DPA test units stating that the submitted units are those that were randomly selected by Honeywell for DPA testing.

The certificate shall also identify the Honeywell part number, manufacturer, manufacturer part number, production lot, date code and serial numbers.

Upon successful completion of the DPA, the Honeywell buyer shall give formal written authorization to ship the production lot. In no event shall the supplier ship the production units prior to authorization from the buyer.

**Revisions:** Site specific paragraph 553.1 Removed.

*\*Revised / \*\*Added*

### SPOC 557 – X-Ray Film Required\*

Radiographic film, (uncut sheets), digitized film or digital radiograph, with penetrameters intact, is required. The media and marking shall include:

- device manufacturer
- device type
- production lot code or date code
- radiographic film / digitized film / digital radiograph view number and date
- device serial number or cross reference list, and
- x-ray/digitizer laboratory identification (if other than manufacturer).

**Revisions:** Paragraph 557.1 Site specific deleted.

*\*Revised / \*\*Added*

**UNCONTROLLED IN HARDCOPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

### SPOC 558 – Workmanship Standard

Specification 001-06001-0000 is a requirement of this order.

**Revisions:** No Changes.

*\*Revised / \*\*Added*

### SPOC 560 – Integrated Circuit (ICT) and Flying Probe (FP) Requirements

The supplier shall perform circuit testing by either ICT or FP prior to shipment to Honeywell, and shall provide certified test coverage report that:

- lists each reference designator tested by each method
- submitted as part of the FAI report (and subsequent delta FAI reports)
- maintained on file at the supplier facility.

The supplier shall maintain proper revision controls for all test procedures.

#### 560.1 Integrated Circuit Testing

Method 1 ICT testing is the preferred electrical testing method.

#### 560.2 Flying Probe Testing

Flying probe testing shall be performed when ICT is not available.

**Revisions:** No Changes.

*\*Revised / \*\*Added*

### SPOC 561 – Workmanship Standard

Specification 3608102 is a requirement of this order.

**Revisions:** No Changes.

*\*Revised / \*\*Added*

### SPOC 562 – Component Traceability

The Supplier of any component assembly shall be able to, upon request, provide a list of all material utilized in the creation of said assembly. Material requiring this work order to lot/date code level traceability includes electrical components, the active and passive parts and items in the schematic. It does not include non-critical parts such as hardware and other mechanical parts.

The list shall contain as applicable:

- Work order number
- CCA serial number range in the work order

For each electrical component used in the work order:

- The component name
- Honeywell part number
- Reference designators where this Honeywell part number is used
- Quantity used per assembly
- Component OEM manufacturers used in the work order
- Manufacturer part numbers used in the work order
- Lot numbers and / or manufacturing dates used in the work order
- Also required to be provided upon request, is the component distributor and procurement date of each component listed

**UNCONTROLLED IN HARD COPY**

## Supplemental Purchase Order Conditions (SPOC) Manual

The system must account for any/all components that require replacement past initial installation. The traceability must be maintained throughout the manufacturing process from work order launch to shipping to Honeywell.

In addition to the component traceability, the supplier shall, upon request, provide all necessary processing history for the assembly in question. This shall include process name, date and time, location, and operator ID of the personnel performing the function.

Revisions: No Changes.

*\*Revised / \*\*Added*

### SPOC 563 – Airbus Concession Process for Notification of Nonconforming Material to Honeywell Purchase Order Requirements

#### 563.1 Scope

This program is for Subcontractors **with** Design Authority.

Material that departs from drawings and/or specifications during manufacturing shall be identified and controlled to prevent unauthorized use or delivery to Airbus and/or Honeywell.

#### 563.2 Request for Material Review and Acceptance

The subcontractor may request consideration for nonconforming material that cannot be reworked to fully conform to drawing or purchase order requirements. The concession is required to be submitted in accordance with Airbus concession procedure **AP 2006 - Accepting Nonconforming Items by Concession**. This applies to Class one discrepancies – fit, form, or function of a feature outside the limits of the Subcontractor's own design and MRB authority.

#### 563.3 Failure Reporting

Honeywell reserves the right to request failure analysis on nonconforming hardware from the subcontractor.

Any concession submitted to and dispositioned by Airbus will be reported to the Honeywell Buyer and cognizant site A350 program Quality representative.

##### 563.3.1 Applicability

Upon request from Honeywell, the Subcontractor shall submit failure analysis and corrective action plans, focusing on the root cause of the discrepancy. Report shall be submitted within 30 calendar days of the request unless otherwise specified. The Honeywell eCATS system is to be used by the Subcontractor unless otherwise directed.

#### 563.4 Containment and Corrective Action

When a nonconformance is discovered the Subcontractor must take immediate action to determine if the condition exists on any other inventory, either work-in-process, in Stores at the subcontractors facility, or in prior shipments. Containment action must be taken and documented prior to the next shipment and/or process. For product which has escaped the Subcontractor's quality system the customer must be promptly notified.

The Subcontractor will be responsible for issuing corrective action as applicable and/or as requested by Honeywell.

Revisions: No Changes.

*\*Revised / \*\*Added*

### SPOC 564 – Functional Test

The supplier shall perform functional test prior to shipment to Honeywell, and shall provide certified test coverage report and results in accordance with the Functional Test SOW in place for the purchased product.

Revisions: No Changes.

*\*Revised / \*\*Added*

**UNCONTROLLED IN HARDCOPY**

**UNCONTROLLED IN HARDCOPY**