

CURRENT REVISION			
REV	ECO NUMBER	DATE	ORIGINATOR
N	C45408	3/4/2019	S. Peterson

INFORMATION IN THIS DOCUMENT IS PROPRIETARY. IT IS ISSUED IN CONFIDENCE AND SHALL NOT BE USED AS A BASIS FOR MANUFACTURE WITHOUT WRITTEN PERMISSION FROM GOGO LLC



Gogo LLC
111 North Canal
Suite 1500
Chicago, IL 60606

Gogo LLC
814 W South Thorndale Avenue
Bensenville, IL 60106

PREPARED BY
Scott Peterson

TITLE:

DOCUMENT APPROVALS ARE ELECTRONIC AND ARE MAINTAINED IN THE CONFIGURATION MANAGEMENT DATABASE SYSTEM (AGILE)


Supplier Quality Requirements

SIZE A	CAGE CODE 1NQ67	DOCUMENT NUMBER D14521	REV N	SH 1 of 29
------------------	---------------------------	----------------------------------	-----------------	------------

The master version of this document resides on the Gogo LLC Configuration Management Server. Printed copies are considered uncontrolled, until verified as current by comparing with the master. It is the responsibility of the user to verify the most current revision.

Revision History

Revision	Date	ECO Number	Change Description	Prepared By
M	9/28/2017	C31122	<ul style="list-style-type: none"> Table 1 – removed “X” from B029 for Maintenance & Installation suppliers B010 – rewritten for clarification B011 – rewritten for clarification B014 – rewritten for clarification B021 – updated to reflect the new D14549 ECR process 	Scott Peterson
N	3/4/2019	C45408	<ul style="list-style-type: none"> Section 2 – all specs/documents shall be most current revision Section 3 – added waivers/exceptions noted in D14560/D20569 Section 4 – minor revisions/additions to acronyms/definitions Section 5 – reinstated B027, added B032 & B033 A001 – added 2 notes A005 – added sentence regarding verbal/email direction A006 – added records to be readily available during audits & within 3 days for other requests A007 – added action need when sub-tier performance poses a risk A008 – removed exception note regarding 10-day response time & added containment response within 5 days A009 – moved to Clause B032 B001 – added notification regarding certification status B002 – added reference to AS6081, AS6496, OCM/OEM preferential consideration. Removed sentence regarding liability for direct costs. B003 – rewritten for clarification B004 – rewritten for clarification B006 – added reference to AS9146 B008 – ESS requirements moved to D26952 B013 – revised references in first paragraph to the contract/SOW B014 – added 3-day requirement, added reference DV # on CoC B015 – changed sampling plan from ANSI Z1.4 to C=0 B016 – changed remaining shelf life from 75% to 50% or 6 months B019 – revised info needed on the packing list B020 – rewritten for clarification & added labeling requirements B021 – added clarification regarding use of ECO dispositions B022 – rewritten for clarification & added paperwork requirements B027 – reinstated this clause B028 – changed QMS requirements from conforming to ISO17025 to accredited to ISO17025 B032 – new clause “Notification of Change”, previously was A009 B033 – new clause “Structural Components” 	Scott Peterson


	Chicago, IL Bensenville, IL	SIZE	CAGE CODE	DOCUMENT NUMBER	REV	SH 2 of 29
		A	1NQ67	D14521	N	
Title: Supplier Quality Requirements						

The master version of this document resides on the Gogo LLC Configuration Management Server.

Printed copies are considered uncontrolled, until verified as current by comparing with the master. It is the responsibility of the user to verify the most current revision.

Table of Contents

1	Purpose	4
2	Scope	4
3	Responsibilities	4
4	Acronyms and Definitions	4
5	Supplier Quality Requirements	6
	Part A – General Requirements	10
	A001 – Quality Management System	10
	A002 – Evaluation & Approval	10
	A003 – Right of Facility Access	10
	A004 – Performance Measurement	10
	A005 – Purchase Order	11
	A006 – Record Retention	11
	A007 – Sub-Tier Supplier Management	12
	A008 – Corrective & Preventive Action	12
	Part B – Product/Service Specific Requirements	13
	B001 – QMS Certification	13
	B002 – Counterfeit Parts Prevention Program	13
	B003 – First Article Inspection (FAI)	14
	B004 – Certificate of Conformity (C of C)	15
	B005 – TSO/PMA Certificate and Airworthiness Approval Tag	15
	B006 – Foreign Object Debris/Damage (FOD) Prevention Program	15
	B007 – Electrostatic Discharge (ESD) and Moisture Sensitive Device (MSD) Protection Program	16
	B008 – Environmental Stress Screening (ESS)	16
	B009 – Failure Modes & Effects Analysis (FMEA)	16
	B010 – Key Characteristics	17
	B011 – Measurement System Analysis (MSA)	17
	B012 – Accelerated Testing	17
	B013 – Mean Time Between Failure (MTBF)	18
	B014 – Supplier Request for Deviation/Waiver	18
	B015 – Sampling Plan	19
	B016 – Handling of Sensitive Items	19
	B017 – Hazardous Material	19
	B018 – Delivery	20
	B019 – Packing Slip	20
	B020 – Packaging, Labeling and Shipping	21
	B021 – Configuration Change Notification (Engineering Change Request (ECR))	22
	B022 – Direct Ship Authorization (DSA)	23
	B023 – Source Inspection	23
	B024 – Control of Nonconforming Material	24
	B025 – Failure Reporting Analysis & Corrective Action System (FRACAS)	24
	B026 – Gogo Owned Tooling & Gauges	24
	B027 – Contract Maintenance Providers	25
	B028 – Calibration Service	25
	B029 – Solder/Solderability of Parts	26
	B030 – Special Processes	26
	B031 – Prohibited Materials/Substances	27
	B032 – Notification of Change	28
	B033 –Structural Components (SC)	29
6	Related Documents	29
7	Forms and Records	29

	Chicago, IL	SIZE	CAGE CODE	DOCUMENT NUMBER	REV	SH 3 of 29
	Bensenville, IL	A	1NQ67	D14521	N	
Title: Supplier Quality Requirements						

The master version of this document resides on the Gogo LLC Configuration Management Server.

Printed copies are considered uncontrolled, until verified as current by comparing with the master. It is the responsibility of the user to verify the most current revision.

1 Purpose

This document defines quality assurance requirements for suppliers providing airborne articles and services to Gogo.

2 Scope

This document applies to Gogo approved suppliers of airborne articles; hardware, material, Line Replaceable Units (LRUs), Shop Replaceable Units (SRUs), electrical and mechanical assemblies and sub-assemblies, software, and services. This document is subject to incorporation into contractual documents.

All specifications and documents referred to herein, and identified for use, shall be of the most current revision.

3 Responsibilities

Gogo Aviation Quality is responsible for updating, maintaining and ensuring compliance to this document.


Gogo Supply Chain and/or Gogo Aviation Quality is responsible for providing this document to potential and current suppliers.

Gogo Suppliers are responsible for implementing requirements defined within this document (as applicable). Any exceptions or waivers to these requirements will be documented and approved by Gogo Aviation Quality on the D14560 Supplier Quality System Survey or D20569 Supplier Evaluation Form. Suppliers are also responsible for ensuring the competence of personnel performing work and that personnel are aware of their contribution to product or service conformity, product safety, and the importance of ethical behavior.

4 Acronyms and Definitions

These acronyms and definitions apply to this document.


Term	Meaning
Airborne Articles	Production Articles manufactured or procured for installation onto aircraft. (Scope: COTS, Production Article (Active) & Production Article (Passive))
Aircraft Installation Service	Suppliers that provide aircraft installation services for Gogo systems. These suppliers may install or upgrade/modify existing Gogo system installations.
Aircraft Maintenance Service	Suppliers that provide aircraft maintenance support services for Gogo systems. These suppliers troubleshoot, remove and replace Gogo LRUs, and provide general maintenance and repair services for Gogo systems.
ALT	Accelerated Life Testing
ASL	Approved Supplier List
ATA	Air Transport Association of America
C of C	Certificate of Conformity
CAA	Civil Aviation Authority

	Chicago, IL Bensenville, IL	SIZE	CAGE CODE	DOCUMENT NUMBER	REV	SH 4 of 29
		A	1NQ67	D14521	N	
Title: Supplier Quality Requirements						

The master version of this document resides on the Gogo LLC Configuration Management Server.

Printed copies are considered uncontrolled, until verified as current by comparing with the master. It is the responsibility of the user to verify the most current revision.

Calibration Service	Services used to ensure/certify calibration of Gogo equipment and tools directly related to airborne article testing/inspection, Gogo system installation or servicing on aircraft. Note: Does not apply to calibration services engaged for developmental engineering efforts or non-aircraft functions, such as ground equipment servicing.
CCA	Circuit Card Assembly
COTS	Commercial-Off-The-Shelf. These articles include standard parts and components that are commercially available (i.e. screws, nuts, bolts, rivets, etc.)
Counterfeit Parts	Any parts containing unlawful or unauthorized reproductions, substitutions, or alterations that have been knowingly mismarked, misidentified, or otherwise misrepresented to be an authentic, unmodified part from the original manufacturer, or a source with the express written authority of the original manufacturer, such as an approved aftermarket distributor.
DFMEA	Design Failure Modes & Effects Analysis
DMSMS	Diminishing Manufacturing Sources and Material Shortages
DSA	Direct Ship Authorization
ERAI	Electronics Resellers Association International
ERP	Enterprise Resource Planning
ESD	Electrostatic Discharge
ESS	Environmental Stress Screening
FAA	Federal Aviation Administration
FAI	First Article Inspection
FAIR	First Article Inspection Report
FMEA	Failure Modes and Effects Analysis
FOD	Foreign Object Debris/Detection/Damage
FRACAS	Failure Reporting Analysis and Corrective Action System
GIDEP	Government-Industry Data Exchange Program
IAW	In Accordance With
ICOP	Independent Industry Controlled Other Party
LRU	Line Replaceable Unit
MRB	Material Review Board
MSA	Measurement System Analysis
MSD	Moisture Sensitive Device
MTBF	Mean Time Between Failure
NAS	National Aerospace Standard
NCR	Nonconformance Report
NFF	No Fault Found
OCM	Original Component Manufacturer
OEM	Original Equipment Manufacturer
OOT	Out of Tolerance

	Chicago, IL Bensenville, IL	SIZE A	CAGE CODE 1NQ67	DOCUMENT NUMBER D14521	REV N	SH 5 of 29
Title: Supplier Quality Requirements						

The master version of this document resides on the Gogo LLC Configuration Management Server.


Printed copies are considered uncontrolled, until verified as current by comparing with the master. It is the responsibility of the user to verify the most current revision.

OTD	On-Time Delivery
PFMEA	Process Failure Modes & Effects Analysis
PMA	Parts Manufacturer Approval
PO	Purchase Order
Production Article (Active)	Suppliers that provide electromechanical built assemblies and/or sub-assemblies (i.e. LRUs, SRUs, circuit card assemblies, etc.) This includes suppliers who perform contract maintenance on LRUs.
Production Article (Passive)	Suppliers that provide mechanical built assemblies and/or sub-assemblies (i.e. Installation kits, wire harnesses/bundles, racks, sheet metal parts, machined parts, radomes, composites, etc.)
QMS	Quality Management System
RCA	Root Cause Analysis
RPN	Risk Priority Number
SC	Structural Component
SCAR	Supplier Corrective Action Request
SDL	Supplier Disclosure Letter
SDS	Safety Data Sheet
SRU	Shop Replaceable Unit
Standard Parts	Standard parts are:(a) parts manufactured in complete compliance with an established industry, Agency, competent authority or other Government specification which includes design, manufacturing, test and acceptance criteria, and uniform identification requirements. The specification should include all information necessary to produce and verify conformity of the part. It should be published so that any party may manufacture the part. Examples of specifications are National Aerospace Standards (NAS), Army-Navy Aeronautical Standard (AN), Society of Automotive Engineers (SAE), SAE Sematec, Joint Electron Device Engineering Council, Joint Electron Tube Engineering Council, and American National Standards Institute (ANSI), EN Specifications etc.
STC	Supplemental Type Certificate

5 Supplier Quality Requirements

5.1 Supplier Quality Requirements are comprised of two parts:

- [Part A](#) – General Requirements (Applicable to all airborne suppliers)
- [Part B](#) – Product/Service Specific Requirements (Applicability defined in Table 1 – Requirements Compliance Matrix)


	Chicago, IL Bensenville, IL	SIZE A	CAGE CODE 1NQ67	DOCUMENT NUMBER D14521	REV N	SH 6 of 29
Title: Supplier Quality Requirements						

The master version of this document resides on the Gogo LLC Configuration Management Server.

Printed copies are considered uncontrolled, until verified as current by comparing with the master. It is the responsibility of the user to verify the most current revision.

Table 1 – Requirements Compliance Matrix


Requirements Compliance Matrix	Supplier Type (See Section 4 for definitions)					
	COTS	Production Article (Active)	Production Article (Passive)	Aircraft Maintenance Service	Aircraft Installation Service	Calibration Service
Part A – All Clauses	X	X	X	X	X	X
Part B – B001 QMS Certification		X	X			
Part B – B002 Counterfeit Parts Prevention Program	X	X	X			
Part B – B003 First Article Inspection		X	X			
Part B – B004 Certificate of Conformity	X	X	X			
Part B – B005 TSO/PMA Certificate and Airworthiness Approval Tag		X	X			
Part B – B006 Foreign Object Debris/Damage Prevention Program		X	X			
Part B – B007 Electrostatic Discharge Protection Program		X				
Part B – B008 Environmental Stress Screening		X				
Part B – B009 Failure Modes & Effects Analysis		X	X			
Part B – B010 Key Characteristics		X	X			

	Chicago, IL Bensenville, IL	SIZE A	CAGE CODE 1NQ67	DOCUMENT NUMBER D14521	REV N	SH 7 of 29
Title: Supplier Quality Requirements						

The master version of this document resides on the Gogo LLC Configuration Management Server.

Printed copies are considered uncontrolled, until verified as current by comparing with the master. It is the responsibility of the user to verify the most current revision.


Requirements Compliance Matrix	Supplier Type (See Section 4 for definitions)					
	COTS	Production Article (Active)	Production Article (Passive)	Aircraft Maintenance Service	Aircraft Installation Service	Calibration Service
Part B – B011 Measurement System Analysis		X	X			
Part B – B012 Accelerated Testing		X				
Part B – B013 Mean Time Between Failure		X				
Part B – B014 Supplier Request for Deviation/Waiver	X	X	X			
Part B – B015 Sampling Plan		X	X			
Part B – B016 Handling of Sensitive Items	X	X	X			
Part B – B017 Hazardous Material	X	X	X			
Part B – B018 Delivery	X	X	X			
Part B – B019 Packing Slip	X	X	X			
Part B – B020 Packaging, Labeling and Shipping	X	X	X			
Part B – B021 Configuration Change Notification		X	X			
Part B – B022 Direct Ship Authorization		X	X			

	Chicago, IL Bensenville, IL	SIZE A	CAGE CODE 1NQ67	DOCUMENT NUMBER D14521	REV N	SH 8 of 29
Title: Supplier Quality Requirements						

The master version of this document resides on the Gogo LLC Configuration Management Server.

Printed copies are considered uncontrolled, until verified as current by comparing with the master. It is the responsibility of the user to verify the most current revision.

Requirements Compliance Matrix	Supplier Type (See Section 4 for definitions)					
	COTS	Production Article (Active)	Production Article (Passive)	Aircraft Maintenance Service	Aircraft Installation Service	Calibration Service
Part B – B023 Source Inspection		X	X			
Part B – B024 Control of Nonconforming Material	X	X	X	X	X	
Part B – B025 Failure Reporting Analysis & Corrective Action System		X				
Part B – B026 Gogo Owned Tooling & Gauges		X	X	X	X	
Part B – B027 Contract Maintenance Providers		X		X	X	
Part B – B028 Calibration Service						X
Part B – B029 Solder/Solderability of Parts		X	X			
Part B – B030 Special Processes		X	X			
Part B – B031 Prohibited Materials/ Substances	X	X	X			
Part B – B032 Notification of Change		X	X	X	X	
Part B – B033 Structural Components			X			

	Chicago, IL Bensenville, IL	SIZE A	CAGE CODE 1NQ67	DOCUMENT NUMBER D14521	REV N	SH 9 of 29
Title: Supplier Quality Requirements						

The master version of this document resides on the Gogo LLC Configuration Management Server. Printed copies are considered uncontrolled, until verified as current by comparing with the master. It is the responsibility of the user to verify the most current revision.

Part A – General Requirements

A001 – Quality Management System

The Supplier shall have a Quality Management System (QMS) that complies with the International Organization for Standardization ISO 9001 – Quality Management System Requirements (equivalent or better – i.e. AS9000 series). Independent Industry Controlled Other Party (ICOP) certification/registration is not required.

Note: Aircraft Maintenance/Installation Service suppliers shall have a QMS in accordance with (IAW) CFR 145.211 (Quality Control System) in lieu of ISO QMS requirements.

Note: Clause A001 does not apply to Suppliers required to be accredited IAW Clause B001 per Table 1.

A002 – Evaluation & Approval

The Supplier shall undergo an initial evaluation before inclusion to the Gogo Approved Supplier List (ASL).

The Supplier shall undergo recurring (surveillance) evaluation to maintain an Approved status on the Gogo ASL.

These evaluations may include, but are not limited to, a Quality System Survey review and/or Supplier Evaluation audit and may be completed by either a desktop or on-site assessment. Failure to meet the acceptance criteria of these evaluations may result in conditional approval status, or possible removal/exclusion from the Gogo ASL.


A003 – Right of Facility Access

The Supplier shall allow right of facility access to Gogo, Gogo's customers and governmental regulatory authorities, at any level of the supply chain involved in the order and to all applicable records. The aforementioned parties may conduct on-site process or product audits of the Supplier to ensure the requirements of this document, as well as the requirements of the Gogo Purchase Order, Contract, Statement of Work, drawings and specifications are being met. Refusal to allow on-site access may jeopardize the Supplier's approval status.

A004 – Performance Measurement

Supplier Performance Measurement criteria for ongoing supplier evaluation and selection may include the following, depending upon the product/service provided:

- Inspection Performance (i.e. receiving inspection, ATP and/or source inspection yield)
- Field Failures/Performance
- Supplier Corrective Action Requests (SCARs) Performance (i.e. quantity and responsiveness)
- On-Time Delivery (OTD) Performance

	Chicago, IL Bensenville, IL	SIZE A	CAGE CODE 1NQ67	DOCUMENT NUMBER D14521	REV N	SH 10 of 29
Title: Supplier Quality Requirements						

The master version of this document resides on the Gogo LLC Configuration Management Server.

Printed copies are considered uncontrolled, until verified as current by comparing with the master. It is the responsibility of the user to verify the most current revision.

Scoring Legend

- **Green** (Score 95 – 100):
Exceptional to Satisfactory supplier performance. Meeting Gogo expectations.
- **Yellow** (Score 90 - <95):
Substandard supplier performance, may require attention and improvement to meet Gogo expectations.
- **Red** (Score <90):
Unsatisfactory supplier performance, requiring immediate attention and improvement to meet Gogo expectations.

A005 – Purchase Order

The Supplier shall enter into a contractual relationship and have an approved Purchase Order from Gogo prior to delivery of any articles or services to Gogo. The Supplier may jeopardize their ability to be considered for future opportunities if they proceed without these arrangements. Verbal/e-mail authorizations are not considered formal agreements. Verbal/e-mail direction may be used to begin work, but a finalized Purchase Order must be in place in order to deliver to Gogo. The Purchase Order may include: part numbers, revisions, prices, quantities and other requirements that govern the purchase and supply of the parts or services. Quotations the Supplier provides must include additional costs; such as delivery, packaging, etc. required to supply the item or service. With regard to price, Gogo requires the Supplier invoice prices match negotiated Gogo prices to ensure timely processing. Changes may be handled on a case by case basis. Invoices which do not match the Purchase Order or the agreement may be returned to the Supplier.


A006 – Record Retention

The Supplier shall maintain accurate quality records documenting conformance to requirements. Documented procedures shall be in place defining responsibilities for record retention and control. Records pertaining to Gogo projects shall be retained for a minimum of 10 years unless otherwise specified in the Purchase Order or contract.

Records shall be readily available for onsite visits by Gogo, Gogo's customers and governmental regulatory authorities.

Upon request, records shall be made available within 3 business days. In the event of airline or regulatory inquiries, an urgent records request may be made and expected to be fulfilled within 24 hours.

Note: Aircraft Maintenance/Installation Service suppliers are excluded from the 10-year record retention requirement. In accordance with CFR 145.219, Aircraft Maintenance Service suppliers must retain records for at least 2 years from the date the article was approved for return to service.

	Chicago, IL Bensenville, IL	SIZE A	CAGE CODE 1NQ67	DOCUMENT NUMBER D14521	REV N	SH 11 of 29
Title: Supplier Quality Requirements						

The master version of this document resides on the Gogo LLC Configuration Management Server.

Printed copies are considered uncontrolled, until verified as current by comparing with the master. It is the responsibility of the user to verify the most current revision.

A007 – Sub-Tier Supplier Management


The Supplier shall manage all their sub-tier suppliers or subcontractors in accordance with their agreements. The Supplier must flow down all applicable requirements, including customer requirements, statutory requirements and regulatory requirements, as applicable.

The Supplier shall take appropriate action when sub-tier supplier performance poses a risk to Gogo programs.

A008 – Corrective & Preventive Action

The Supplier should have a Corrective & Preventive Action procedure in place which includes industry best practice Root Cause Analysis (RCA) problem solving tools (i.e. 8D, DMAIC, 5 Why, Fishbone, etc.).

Supplier Corrective Action Request (SCAR) and Nonconformance Report (NCR): The Supplier shall provide an initial SCAR/NCR containment response within 5 business days of SCAR/NCR issuance, unless otherwise agreed to in writing with Gogo. It is essential that corrective action be immediately taken by the supplier when any nonconformance is identified at Gogo or any of its customers. When this occurs, Gogo Aviation Quality will inform the supplier of the nonconformance. A SCAR/NCR may be issued for purchased components found to be nonconforming through line rejections, testing failures, failed inspection results, Gogo customer concerns or returns, or obsolete material. Suppliers may jeopardize their ability to be considered for future opportunities if they fail to respond to the SCAR/NCR in a timely manner.

	Chicago, IL Bensenville, IL	SIZE A	CAGE CODE 1NQ67	DOCUMENT NUMBER D14521	REV N	SH 12 of 29
Title: Supplier Quality Requirements						

The master version of this document resides on the Gogo LLC Configuration Management Server.

Printed copies are considered uncontrolled, until verified as current by comparing with the master. It is the responsibility of the user to verify the most current revision.

Part B – Product/Service Specific Requirements

B001 – QMS Certification

The Supplier shall have an ICOP QMS certification by an accredited registrar, either ISO 9001 or AS9100 series. The scope of the Supplier's certificate of registration shall adequately cover the product(s) or service(s) being provided by the Supplier.

All suppliers to Gogo who hold third-party certification under the AS9100 series of aerospace quality management system standards (AS9100, AS9110, AS9115 and/or AS9120) must maintain an active profile within the International Aerospace Quality Group – Online Aerospace Suppliers Information System (IAQG-OASIS). These suppliers must grant Assessment Detail access to Gogo within their respective OASIS profile upon request. Additionally, Supplier shall promptly notify Gogo Aviation Quality (AviationQuality@gogoair.com) of the following:

- Changes in its quality leadership or senior management
- Renewal, surrender or revocation of certifications
- Adverse changes to product accreditations/approvals (e.g., expired, withdrawn, suspended, downgraded)
- Certification body or regulatory agency findings/nonconformances classified as "Major"

B002 – Counterfeit Parts Prevention Program


The Supplier shall establish and maintain a counterfeit part prevention plan.

Counterfeit parts are defined as any parts containing unlawful or unauthorized reproductions, substitutions or alterations that have been knowingly mismarked, misidentified or otherwise misrepresented to be an authentic, unmodified part from the original manufacturer or a source with the express written authority of the original manufacturer, such as an approved aftermarket distributor.

Development of a Counterfeit Part Prevention Plan should utilize AS5553, AS6081, AS6174 or AS6496 as applicable, as a guide to develop and implement the plan. This plan shall focus on detection, prevention, mitigation, disposition and reporting of suspected or confirmed counterfeit parts or assemblies. The Supplier shall flow down requirements for a counterfeit parts prevention program to their suppliers, as applicable.

When selecting a source of supply, suppliers shall give preferential consideration to Original Component Manufacturer/Original Equipment Manufacturer (OCM/OEM) or their franchised distributors (i.e. OCM/OEM authorized/approved). As may be necessary due to such situations as Diminishing Manufacturing Sources and Material Shortages (DMSMS), suppliers may select an independent distributor, however, the supplier's counterfeit part prevention plan shall ensure that counterfeit parts are detected and prevented from entering the supply chain.

Regardless of the source of supply, documentation shall be retained and made available by Supplier that authenticates unbroken traceability to the applicable Original Component Manufacturer/Original Equipment Manufacturer (OCM/OEM) upon request.

	Chicago, IL Bensenville, IL	SIZE A	CAGE CODE 1NQ67	DOCUMENT NUMBER D14521	REV N	SH 13 of 29
Title: Supplier Quality Requirements						

The master version of this document resides on the Gogo LLC Configuration Management Server.

Printed copies are considered uncontrolled, until verified as current by comparing with the master. It is the responsibility of the user to verify the most current revision.

If Counterfeit Parts/Items are furnished under any Gogo PO and are found in any of the delivered goods, the Supplier shall promptly replace such with items acceptable to Gogo. Gogo reserves all rights to report such to third-party monitoring or reporting entities (e.g. Electronics Resellers Association International (ERAI) at www.eraf.com and the Government-Industry Data Exchange Program (GIDEP) at www.gidep.org).

Upon discovery of counterfeit or suspect counterfeit parts the Supplier shall notify Gogo Aviation Quality (AviationQuality@gogoair.com) and Gogo Supply Chain within one (1) business day. The Supplier must be able to provide the supply chain traceability showing how the counterfeit parts were obtained (this includes the supply chain path from the original manufacturing of the parts through any intermediaries and ultimately to delivery to Gogo).

B003 – First Article Inspection (FAI)

Supplier shall complete First Article Inspection (FAI), partial (delta) FAIs and First Article Inspection Reports (FAIR) IAW AS9102.

FAIR Forms shall meet the requirements of AS9102. Gogo document D13283 may also be used.


The supplier shall use a representative item from the first production run of a new part or assembly to verify that the production processes, production documentation and tooling are able to produce parts and assemblies that meet requirements.

The Supplier shall record, whenever possible the variable measurements, of all characteristics including applicable drawing notes on the FAIR. FAIR shall include appropriate documentation/evidence required by AS9102 to ensure conformance with design characteristics (i.e. completed route sheets, test data, raw material certifications, special process certifications, lower level FAIRs, etc.).

A representative of the Supplier's Quality Assurance Department shall sign and date the report.

The Supplier shall forward electronic versions to AviationQuality@gogoair.com for review (submittal to an agreed upon, alternate electronic location is acceptable).

If possible, Supplier shall include copies of the FAIR(s) with the shipment. If the FAIR(s) are large, then only copies of AS9102 Form 1, 2 and 3 shall be placed with the shipment. (Note: the entire FAIR package(s) shall still be submitted electronically).

	Chicago, IL Bensenville, IL	SIZE A	CAGE CODE 1NQ67	DOCUMENT NUMBER D14521	REV N	SH 14 of 29
Title: Supplier Quality Requirements						

The master version of this document resides on the Gogo LLC Configuration Management Server.

Printed copies are considered uncontrolled, until verified as current by comparing with the master. It is the responsibility of the user to verify the most current revision.

B004 – Certificate of Conformity (C of C)

The Supplier shall provide a Certificate of Conformity (C of C) for material delivered against a Gogo PO that states that the supplies or services are of the quality specified and are in conformance in all respects with the Gogo Purchase Order (contract) requirements, including specifications, engineering drawings, preservation, packaging, packing, marking requirements and physical item identification (part number), and are in the quantity shown on the PO..

The C of C must include, at a minimum, the name of the supplier, the address of the supplier, the part number, the part revision, part serial number (if applicable), lot/batch number (if applicable), the Gogo PO number, shipment quantity, all applicable specifications, the signature and printed name and title of the supplier's authorized quality representative and the date of execution.

Note: A traceable quality stamp may be used in lieu of a printed name and title; however, a signature is still required.

A manufacturer's C of C or their authorized distributor's C of C shall be provided for orders of standard parts and COTS parts in which the standard part or COTS part is an individual line item on a PO. The manufacturer's C of C is *preferred*, however, if it cannot be provided, then the authorized distributor's C of C must identify the manufacturer's name, address and Cage Code (if available).

C of C's with any disclaimer statements such as "disclaims any responsibility for manufacturing or functional defects" or "to the best of my knowledge" will not be accepted.

Engineering test or Prototype articles must be provided with a C of C that states that the articles are of the quality specified and are in conformance in all respects with the Gogo Purchase Order (contract) requirements.


If a Deviation/Waiver or Nonconformance Report (NCR) is granted for articles being provided with the order, the Deviation or NCR Number must be noted on the C of C.

B005 – TSO/PMA Certificate and Airworthiness Approval Tag

If the Supplier holds National or Civil Aviation Authority (CAA) certification/approval/authorization (e.g., Federal Aviation Administration (FAA) Technical Standard Order Authorization/Parts Manufacturer Approval (PMA)/Type Certification)), and if required by the Purchase Order, the Supplier shall provide the original Authorized Release Certificate, FAA Form 8130-3 (Airworthiness Approval Tag) or other CAA equivalent Airworthiness Approval Tag with delivery of each product.

B006 – Foreign Object Debris/Damage (FOD) Prevention Program

The Supplier shall establish and maintain a FOD prevention program. NAS-412 (National Aerospace Standard, Foreign Object Damage/Foreign Object Debris (FOD) Prevention) or AS9146 (Foreign Object Damage (FOD) Prevention Program – Requirements for Aviation, Space, and Defense Organizations) may be used as a guide to develop the program. The program shall focus on FOD awareness, prevention, detection, housekeeping and material handling.

	Chicago, IL Bensenville, IL	SIZE A	CAGE CODE 1NQ67	DOCUMENT NUMBER D14521	REV N	SH 15 of 29
Title: Supplier Quality Requirements						

The master version of this document resides on the Gogo LLC Configuration Management Server.

Printed copies are considered uncontrolled, until verified as current by comparing with the master. It is the responsibility of the user to verify the most current revision.

Whenever and/or wherever FOD entrapment or foreign objects can migrate, the Supplier shall ensure applicable FOD requirements are flowed down to sub-tier suppliers. Prior to closing inaccessible or obscured areas and compartments during assembly, the Supplier shall inspect for foreign objects/materials and ensure no FOD barriers remain embedded or attached (e.g. protective plugs). The Supplier shall ensure tooling, jigs, fixtures and test or handling equipment are maintained in a state of cleanliness and repair sufficient to prevent FOD.

By delivering items to Gogo, the Supplier shall be deemed to have certified to Gogo that such items are free from any foreign materials that could result in FOD.

B007 – Electrostatic Discharge (ESD) and Moisture Sensitive Device (MSD) Protection Program

If the Supplier provides electric/electronic parts or assemblies, they shall document and implement an ESD and Moisture Sensitive Device (MSD) Control Program using ANSI/ESD S20.20, “ESD Association Standard for the Development of an Electrostatic Discharge Control Program for Protection of Electrical and Electronic Parts, Assemblies and Equipment (Excluding Electrically Initiated Explosive Devices)” and IPC/JEDEC J-STD-033, “Standard for Handling, Packing, Shipping and Use of Moisture/Reflow Sensitive Surface Mount Devices” as a guide.

B008 – Environmental Stress Screening (ESS)

Environmental Stress Screening shall be applied to all subject LRUs identified in Gogo document D26952 “Environmental Stress Screening Plan”, Section 2. ESS shall be performed on subject LRUs IAW D26952.

B009 – Failure Modes & Effects Analysis (FMEA)


Note: Articles in production before 8/31/16 (the release date of Rev J of this document) are excluded from this requirement, unless otherwise agreed to in writing with Gogo.

When supplying items classified as Production Article (Active), the Supplier shall perform Design Failure Modes & Effects Analysis (DFMEA) on the top level LRU and subsequently on the subsystem level if high risk areas are identified. The DFMEA report shall be submitted to Gogo with identified Risk Priority Number (RPN) values and action plans to address risk items. This shall be completed prior to Critical Design Review (CDR). All submissions shall be sent to GogoReliability@gogoair.com for acceptance.

Refer to MIL-STD-1629A and/or SAE J1739_200901 for additional DFMEA guidance.

When supplying items classified as Production Article (Active) or Production Article (Passive), the Supplier shall perform Process Failure Modes & Effects Analysis (PFMEA) on the assembly processes. The PFMEA report shall be submitted to Gogo with identified RPN values and action plans to address risk items. This shall be completed prior to delivery of the first production article/First Article Inspection (FAI). All submissions shall be sent to GogoReliability@gogoair.com for acceptance.

Refer to SAE J1739_200901 for additional PFMEA guidance.

	Chicago, IL Bensenville, IL	SIZE A	CAGE CODE 1NQ67	DOCUMENT NUMBER D14521	REV N	SH 16 of 29
Title: Supplier Quality Requirements						

The master version of this document resides on the Gogo LLC Configuration Management Server.

Printed copies are considered uncontrolled, until verified as current by comparing with the master. It is the responsibility of the user to verify the most current revision.

B010 – Key Characteristics

The Supplier shall identify key attributes or features whose variation have significant influence on product reproducibility, life or performance that would require specific actions to control the variation. The Key Characteristic could be for the product or process that makes the product. A report/Control Plan (e.g. reference AS9103) shall specify the Key Characteristics and how they will be controlled along with current process capability measurements (Cp, Cpk) for those characteristics. This shall be completed prior to production with process capability measurements analyzed during product ramp and thereafter.

B011 – Measurement System Analysis (MSA)

The Supplier shall perform Measurement System Analysis (MSA) on all measurement systems used for Key Characteristics to determine if they can adequately discriminate between good and bad parts, as well as identify trends in the product or process performance. Measurement systems that are not capable shall have action plans to address measurement error or variation prior to delivery of the first production article/First Article Inspection (FAI).

B012 – Accelerated Testing

Note: Articles in production before 8/31/16 (the release date of Rev J of this document) are excluded from this requirement, unless otherwise agreed to in writing with Gogo.

Supplier shall perform a Highly Accelerated Life Test (HALT) on their product to determine design margin and potential design weakness(es). The HALT procedure shall be submitted to Gogo prior to Preliminary Design Review (PDR). The HALT report shall be submitted to Gogo prior to the start of Qualification testing. HALT results shall be mutually reviewed by Gogo and the supplier to determine any subsequent need for redesign.


Supplier shall perform an Accelerated Life Test (ALT) on their product to determine potential end-use failure modes and predict the useful life of the product. The ALT procedure shall be submitted to Gogo prior to Critical Design Review (CDR). The ALT report shall be submitted to Gogo prior to the Production Readiness Review (PRR).

All document submissions shall be sent to GogoReliability@gogoair.com for acceptance.

For additional guidance, refer to:

Accelerated Reliability Engineering HALT and HASS, Gregg K. Hobbs, Hobbs Engineering Corporation.

HALT, HASS & HASA Explained: Accelerated Reliability Techniques, Harry W. McLean, ASQ Quality Press.

	Chicago, IL Bensenville, IL	SIZE A	CAGE CODE 1NQ67	DOCUMENT NUMBER D14521	REV N	SH 17 of 29
Title: Supplier Quality Requirements						

The master version of this document resides on the Gogo LLC Configuration Management Server.

Printed copies are considered uncontrolled, until verified as current by comparing with the master. It is the responsibility of the user to verify the most current revision.

B013 – Mean Time Between Failure (MTBF)

All Gogo Suppliers shall comply with the MTBF requirements as stated specifically in the contract, exhibits or statement of work(s). If the requirements are not specified in those parts of the agreement, then Supplier shall comply with the following:

MTBF Analysis & Reporting – The Parties agree as follows: (i) Gogo may, at its discretion, provide periodic reports of Supplier’s MTBF performance with respect to the Products; and (ii) Suppliers shall provide Gogo with access and available data required to analyze MTBF of Products for the returned/repared Products including but not limited to:

Analysis of MTBF; and

Analysis reports including but not limited to summary of warranty returns, confirmation of fault or No Fault Found, root cause analysis and corrective actions.

Supplier shall provide quarterly electronic reports to Gogo detailing the required information as specified above, throughout the applicable warranty period.

MTBF Remedies - In the event the Products (hardware and software) do not meet the MTBF Guarantee as specified under the terms of this Agreement, Supplier shall provide: (i) within thirty (30) days following Gogo notice, mutually agreed to quantity spares to meet the availability criteria to Gogo on a loan basis until the MTBF Guarantee Values are met; (ii) Immediate technical support for investigation via telephone and e-mail; and (iii) Supplier will work with Gogo to achieve a recovery plan.

Measured MTBF = Total Flight Hours x Component Quantity / Number of Verified Failures. A “Verified Failure” means a failure corrected by (i) pulling and replacing an LRU which has been verified as a failure or (ii) download of a critical software patch or release to restore functionality. For avoidance of doubt, no fault found Products and Product upgrades are not considered a “Verified Failure”.


B014 – Supplier Request for Deviation/Waiver

The Supplier’s adherence to approved design data is essential to continued, repeatable quality & reliability.

A Deviation request is used to obtain temporary authorization, prior to manufacture, to depart from a requirement of an item’s current approved configuration. The deviation shall be for a specific number of units or time period.

A Waiver request is used to obtain authorization to ship an item which is known to depart from a requirement but is considered suitable after repair by an approved method or after a “Use-As-Is” disposition.

Requests for Deviation/Waiver shall be communicated in writing via Form D20157, Supplier Request for Deviation/Waiver and submitted for approval to AviationQuality@gogoair.com at least 3 business days prior to expected delivery. Copies of the approved D20157 form must accompany all shipments of affected product.

	Chicago, IL Bensenville, IL	SIZE A	CAGE CODE 1NQ67	DOCUMENT NUMBER D14521	REV N	SH 18 of 29
Title: Supplier Quality Requirements						

The master version of this document resides on the Gogo LLC Configuration Management Server.

Printed copies are considered uncontrolled, until verified as current by comparing with the master. It is the responsibility of the user to verify the most current revision.

The Gogo Deviation Number shall be noted on Suppliers Certificate of Conformance (reference clause B004).

Note: In accordance with Clause B024, the Supplier is not granted MRB authority to issue "Repair" or "Use-As-Is" dispositions without Gogo approval.

B015 – Sampling Plan

In the event a sampling plan is applicable, the sampling process shall be based on the American Society for Quality (ASQ) Zero Acceptance Number Sampling Plan (C=0), Table 1a with an AQL=1.0 or other Gogo accepted methodology.

B016 – Handling of Sensitive Items

Age (Shelf Life): Upon shipment, shelf life remaining shall meet the minimum shelf life specified on the Purchase Order. If no shelf life is specified, the product shall have a minimum of 6 months or 50% of the shelf life remaining upon shipment, whichever is less.

Note: Expiration dates must be clearly noted on the material, as well as on the packing slip, and the most restrictive item within the kit shall have its expiration date marked on the outside of the outermost kit container.

Light or temperature sensitive: Items which require special storage, such as light or temperature sensitive materials, must be shipped with consideration of this sensitivity and must be clearly identified on the outside of the packaging material, as well as on the packing slip.

Electro-Static Discharge (ESD): Items that are ESD sensitive shall be handled and packaged to prevent ESD damage utilizing MIL-STD-1686, ANSI/ESD S20.20 or EIA/JEDEC JESD625 as a guideline. ESD sensitive items must be shipped in ESD protective packaging and be clearly marked, as well as noted on the packing slip.


Moisture Sensitive Device (MSD): Items that are moisture sensitive shall be handled and packaged to prevent damage utilizing IPC/JEDEC J-STD-033 as a guideline. MSD items must be shipped in MSD protective packaging and be clearly marked, as well as noted on the packing slip.

B017 – Hazardous Material

The Supplier must comply with all local, State and Federal Health, Safety and Environmental regulations.

Shipping of all hazardous materials must be prepared in accordance with the appropriate Federal Hazardous Materials Regulations. These regulations can be found in Title 49 of the Code of Federal Regulations (49 CFR). 49 CFR changes periodically and it is the Supplier's responsibility to comply with the most current standard.

The supplier must ensure that the proper Dangerous Goods-Hazardous Materials/Safety Data Sheet (SDS) markings are placed on the shipping or storage containers, and proper documentation is supplied. SDS sheets should be included in initial shipments and upon request.

	Chicago, IL Bensenville, IL	SIZE A	CAGE CODE 1NQ67	DOCUMENT NUMBER D14521	REV N	SH 19 of 29
Title: Supplier Quality Requirements						

The master version of this document resides on the Gogo LLC Configuration Management Server.

Printed copies are considered uncontrolled, until verified as current by comparing with the master. It is the responsibility of the user to verify the most current revision.

B018 – Delivery

Gogo expects suppliers to maintain On-Time Delivery (OTD) performance of 100%. Just-In-Time delivery demands consistent and timely response from the entire supply base.

Short Shipments

Short shipment requests shall be communicated to the appropriate Supply Chain Buyer as soon as the issue is known and may result in the need for Gogo approval of a Deviation or NCR. Short shipments may require a supplier action plan and may result in poor delivery performance ratings.


Delivery Schedules

It is the supplier's responsibility to ensure goods are received at the required location on or by the date specified on the agreed documents. The acceptable time frame for shipments will be addressed specifically in these documents. Suppliers may be required to provide corrective action plans whenever this requirement is not being met. It is the supplier's responsibility to inform Gogo Supply Chain personnel immediately of any potential difficulties in meeting shipping requirements. Alternative plans may be available which avoid downtime. Gogo expectation is that all shipping requirements will be adhered to (including during holiday or other supplier shutdown periods), unless prior written arrangements are made.

B019 – Packing Slip

Material shipped shall be identified on a Packing Slip or Bill of Lading. The following information must be noted on these documents:

- Shipment Method, Carrier Name, Tracking Information and Date
- Ship to Address (PO and Packing Slip Ship to Address must match)
- Single Line Item for Each Part Number Shipped
- Part Number, Revision and Serial Number (as applicable)
- Description of the Product
- Identification of any Sensitive Item information (see clause B016)
- Purchase Order Number(s) and Line Item Number for each item being shipped
- Order Release Number (if applicable)
- Quantity Ordered, Quantity Shipped and Unit of Measure
- Number of containers of each part number shipped with the extended quantity noted. (ex. 10 containers @ 100 pieces total 1000)
- Total number of cartons/skids and weight

	Chicago, IL Bensenville, IL	SIZE A	CAGE CODE 1NQ67	DOCUMENT NUMBER D14521	REV N	SH 20 of 29
Title: Supplier Quality Requirements						

The master version of this document resides on the Gogo LLC Configuration Management Server.

Printed copies are considered uncontrolled, until verified as current by comparing with the master. It is the responsibility of the user to verify the most current revision.

B020 – Packaging, Labeling and Shipping

Articles supplied to Gogo shall be packaged to provide physical, chemical and cleanliness protection to prevent damage to or deterioration of the parts.

Packaging shall meet or exceed the guidelines established per Air Transport Association of America (ATA) Specification 300 Specification for Packaging of Airline Supplies (also known as Airlines for America (A4A)).

Wiring Harness Kits shall be packaged in separate unit containers. Multiple wire harnesses may be placed in the same intermediate container; however, they shall be packaged in such a way to preclude latent damage such as crushed or pinched wiring. Wire harness connectors shall be protected from damage by use of plastic caps (ESD caps required for ESD sensitive harnesses) or other protective means.

Structural kit items shall be packaged in separate unit containers. Multiple structural items may be placed in the same intermediate container; however, they shall be packaged in such a way to preclude damage during shipping such as scratches, dings, gouges, chipped paint or damage to corrosion preventative finishes.

Note: For purposes of this clause, Intermediate Containers shall be of cardboard construction at a minimum. Intermediate Containers shall be over packed for shipment unless designed to provide shipping protection.


Sensitive items (age, light, temperature, ESD and MSD) shall be packaged in accordance with the Sensitive Items clause B016 of this document.

Suppliers are responsible to ensure shipping containers or pallet loads meet the following criteria:

- Shipping Containers shall meet or exceed ATA Specification 300, Category II (Testing of Category II Shipping Containers is not required)
- Even, level pallet loads (not pyramided)
- Proper securing shall be used to ensure the pallet is stable (e.g. straps, stretch wrapped, corners, boxed, etc.)
- Product shall not exceed pallet dimensions (i.e. product must not overhang the pallet)
- Wood pallets and crates shall be 'heat-treated' to protect against wood infesting insects. International pallets require a conformance ID stamp to pass Customs.

Labeling/Marking of sub-kits, kits and containers shall be IAW marking requirements listed in the ATA Specification 300 chapter for "Packaging of Kits". The marking must also include Part Number, Part Revision, Serial or Lot number as well the marking required by ATA Specification 300.

- Label exterior containers with the following:
 - Top Level Kit Part Number, Revision & Description (provided by Gogo Supply Chain) or LRU Part Number, Revision & Description
 - Supplier Name
 - Gogo Purchase Order Number

	Chicago, IL Bensenville, IL	SIZE A	CAGE CODE 1NQ67	DOCUMENT NUMBER D14521	REV N	SH 21 of 29
Title: Supplier Quality Requirements						

The master version of this document resides on the Gogo LLC Configuration Management Server.

Printed copies are considered uncontrolled, until verified as current by comparing with the master. It is the responsibility of the user to verify the most current revision.

- Container X of Y (i.e. Container 1 of 4, Container 2 of 4, etc.)
- Most restrictive shelf-life/date of expiration of all applicable items within the container
- If shipping to a third-party logistics provider, identify “Gogo” on the label (i.e. Gogo c/o EA Logistics)
- Label each intermediate container (i.e. sub-kit, container, bag) with the following:
 - Supplier name
 - Gogo Purchase Order Number
 - List all Part Numbers (including sub-kit Part Number, if applicable), Revisions, Description and Quantities in the intermediate container
 - Lot Number or Serial Number
 - Most restrictive shelf-life/date of expiration of all applicable items within the container
- If Direct Shipping product (reference clause B022), add a label to each crate/skid that includes the following information:
 - Top Level Kit Part Number (provided via Gogo PO update) or LRU Part Number
 - Top Level Kit Serial Number (provided via Gogo PO update) or LRU Serial Number
 - Gogo Customer (Airline) Purchase Order Number (provided via Gogo PO update)
 - Gogo Customer Transfer Order Number (provided via Gogo PO update)
 - Gogo Purchase Order Number

For questions, please contact your Gogo Supply Chain representative for clarification.

B021 – Configuration Change Notification (Engineering Change Request (ECR))


The Supplier shall notify Gogo of any proposed design change (major or minor) and receive approval from Gogo prior to incorporation of the change.

Note: Due to contractual and regulatory requirements, Gogo is required to review and approve all changes for components that are used in Gogo owned Supplemental Type Certificates (STCs).

The Supplier shall notify Gogo of any proposed change to any LRU, production article or installation design data. The Supplier shall submit the ECR in Gogo’s Agile Configuration Management system in accordance with D14549 (Procedure, Engineering Change Request) and attach any substantiating evidence (e.g. drawing redlines, BOMs, test reports, similarity assessments, etc.).

If the submitted Change Request is deemed acceptable, a Gogo Engineering Change Order shall be issued by Gogo and implemented prior to the Supplier incorporating the change. **(Note: Gogo acceptance of the Change Request is not authorization to incorporate the proposed change)**

Suppliers are expected to build and deliver item configurations listed on the Purchase Order. Suppliers may utilize a “Use As Is” disposition to allow shipment of earlier item revisions only if allowed by the “On Order” disposition in the applicable Agile ECO. In the event suppliers would like to supply later item revisions, a deviation would be required (reference clause B014).

	Chicago, IL Bensenville, IL	SIZE A	CAGE CODE 1NQ67	DOCUMENT NUMBER D14521	REV N	SH 22 of 29
Title: Supplier Quality Requirements						

The master version of this document resides on the Gogo LLC Configuration Management Server.

Printed copies are considered uncontrolled, until verified as current by comparing with the master. It is the responsibility of the user to verify the most current revision.

B022 – Direct Ship Authorization (DSA)

The Supplier shall receive formal approval from Gogo Aviation Quality, in accordance with D20035, Procedure, Direct Ship Authorization, prior to shipment of any production article(s) shipping to locations other than Gogo's Bensenville, IL facility or any Gogo third party logistics provider. The Gogo PO will identify the required *Ship To* address.

A DSA letter (D19399) from Gogo Aviation Quality will be granted for every approved DSA shipment.

The Supplier shall notify AviationQuality@gogoair.com 5 business days in advance of any expected direct shipment.

Any item(s) intended for Engineering test or Prototype development are excluded from this clause.

Standard Hardware as defined in this document is excluded from this clause, however any standard hardware ordered as a standalone line item on a Gogo PO must ship with a C of C compliant with clause B004.

All DSA shipments shall be labeled in accordance with clause B020.

All DSA shipments shall have the entire paperwork package provided with the shipment and scanned and emailed to DSSO@gogoair.com and AviationQuality@gogoair.com. This package shall consist of:


- 8130-3 (as applicable)
- Form 1 (as applicable)
- Supplier issued C of C
- Gogo issued C of C
- Gogo issued DSA Letter (D19399)
- Packing List (Gogo Part Numbers and Serial Numbers shall be listed)
- Gogo Kit Document (i.e. K13114-xxxxx) (as applicable)
- Weights and Dimensions
- Bill of Lading (signed by the carrier and shipper) showing Gogo PO# and Gogo's Customer (Airline) PO#

Note: A Gogo provided C of C for a DSA shipment does not relieve the supplier of their responsibilities to ensure all product conforms to approved documentation and requirements.

B023 – Source Inspection

Gogo reserves the right to conduct Source Inspection at any time as stated on a PO and the supplier is expected to support these inspections. Additionally, Source Inspection is required on Direct Shipments where delegated inspection has not been authorized by Gogo Aviation Quality. For Direct Shipments, Delegated or Source Inspection will be identified on the DSA letter (D19399) issued by Gogo Aviation Quality.

The Supplier shall notify AviationQuality@gogoair.com 5 business days in advance of any inspection readiness.

	Chicago, IL Bensenville, IL	SIZE A	CAGE CODE 1NQ67	DOCUMENT NUMBER D14521	REV N	SH 23 of 29
Title: Supplier Quality Requirements						

The master version of this document resides on the Gogo LLC Configuration Management Server.

Printed copies are considered uncontrolled, until verified as current by comparing with the master. It is the responsibility of the user to verify the most current revision.

B024 – Control of Nonconforming Material

The Supplier shall have a Control of Nonconforming Material procedure in place which identifies, controls and prevents the unintended use or delivery of nonconforming material.

All materials furnished to Gogo shall conform to contractual requirements, approved type design and specifications. All materials are subject to inspection and acceptance upon receipt.

The Supplier is not granted Material Review Board (MRB) authority to issue “Repair” or “Use-As-Is” dispositions for products sold to Gogo unless authorized in writing from Gogo.

To obtain Gogo approval to ship unit(s) with known nonconformance(s), utilize the Supplier Request for Deviation/Waiver form D20157 (refer to clause B014 of this document).

If a nonconformance has been identified on parts already shipped to Gogo, supplier is required to notify Gogo Aviation Quality (AviationQuality@gogoair.com) immediately via the Supplier Disclosure Letter (SDL) form D20158. Please utilize these forms and follow the instructions found therein for further details and requirements.

A disclosure letter in supplier format may be used as long as the information required on Gogo Form D20158 is captured.


B025 – Failure Reporting Analysis & Corrective Action System (FRACAS)

The Supplier shall provide inputs to the Gogo FRACAS system upon request. This includes but is not limited to responding to failures and/or noncompliances for which the supplier is responsible; identifying the failure mode, containment action(s), RCA, corrective action(s) and preventive action(s). The Supplier shall provide all required objective evidence needed to validate the effectiveness of the corrective action(s) taken.

B026 – Gogo Owned Tooling & Gauges

Unless otherwise agreed upon in writing, all supplies, materials, facilities, tools, jigs, dies, fixtures, patterns and equipment furnished to the supplier by Gogo for the performance to a Purchase Order, or for which the supplier has been reimbursed by Gogo, shall remain the property of Gogo. The supplier shall bear the risk of loss and damage to such property, normal wear excepted. Such property shall at all times be properly stored and maintained by the supplier, shall be identified as Gogo property, shall not be commingled with the property of the supplier or with that of a third party, shall not be moved from supplier’s premises without Gogo prior written approval, and shall, upon request of Gogo to Supplier, be properly packed and marked in accordance with the requirements of the carrier selected by Gogo to transport such property. In general, the requirements for supplier’s use of Gogo property include:

- Inspection & measuring equipment must be specified in the control plan and be traceable to the inspections performed
- All inspection & test equipment must be included in a comprehensive calibration program, conducted prior to initial use and at prescribed intervals. Reaction plans must be in place and followed when a piece of inspection/test equipment is deemed out of calibration

	Chicago, IL Bensenville, IL	SIZE A	CAGE CODE 1NQ67	DOCUMENT NUMBER D14521	REV N	SH 24 of 29
Title: Supplier Quality Requirements						

The master version of this document resides on the Gogo LLC Configuration Management Server.

Printed copies are considered uncontrolled, until verified as current by comparing with the master. It is the responsibility of the user to verify the most current revision.

- Supplier is responsible for the proper use, maintenance and calibration of all tooling, testing and inspection equipment
- All equipment must be clearly identified, including part number, revision level, calibration date and have a Gogo identification number
- Records of maintenance shall be kept by the supplier until such time that the part is no longer considered "active" (part remains "active" until tooling scrap authorization is given by Gogo)

Gogo reserves the right to inspect any tooling, testing and/or inspection measuring equipment at the supplier's location.


B027 – Contract Maintenance Providers

Suppliers (certificated and noncertificated) based in the U.S. performing repair and/or contract maintenance on aircraft or aircraft components (i.e. LRUs) for Gogo and our airline customers are required to participate in a U.S. Department of Transportation anti-drug and alcohol misuse prevention program compliant with CFR Title 14 Part 120, Subparts D, E and F.

B028 – Calibration Service

Calibration service suppliers shall:

- Have a quality management system accredited to ISO/IEC 17025:2005, General Requirements for the Competence of Testing and Calibration Laboratories and/or ANSI/NCSL Z540.
- Perform calibration against measurement standards traceable to internationally recognized standards; where no such standards exist, the basis used for calibration or verification shall be recorded.
- Achieve traceability through calibrations by the National Institute of Standards and Technology or other National Measurement Institutes.
- Calibrations shall be per the OEM's specification or of greater accuracy.
- Identify measuring equipment in order to determine its calibration status.
- Protect equipment from damage and deterioration during handling, maintenance and storage.
- Safeguard equipment from adjustments that would invalidate the measurements result.
- Provide to Gogo a Certificate of Calibration for each piece of measurement equipment, which includes details of equipment type, unique identification, frequency of checks, check method/acceptance criteria, environmental conditions under which the calibration was performed, specifications to which the item was calibrated, the calibration standards used (which are traceable to NIST), date calibrated, due date and any out-of-tolerance (OOT) conditions, including "before" and "after" calibration data for those devices found OOT.

	Chicago, IL Bensenville, IL	SIZE A	CAGE CODE 1NQ67	DOCUMENT NUMBER D14521	REV N	SH 25 of 29
Title: Supplier Quality Requirements						

The master version of this document resides on the Gogo LLC Configuration Management Server.

Printed copies are considered uncontrolled, until verified as current by comparing with the master. It is the responsibility of the user to verify the most current revision.

B029 – Solder/Solderability of Parts


As applicable, drawing and specification requirements supersede these requirements:

- **Electronic and Circuit Card Assemblies** - Electronic and electronic Circuit Card Assemblies (CCA) shall be soldered to the requirements of IPC J-STD-001, Class 3. The Supplier shall implement and maintain a system that includes adequate process controls to assure conformance to the soldering, cleanliness, acceptance, material handling, storage and shipping requirements. The item shall meet the cleanliness requirements of IPC J-STD-001, cleanliness designator C-22. Rework, if required, shall be in accordance with IPC 7711/7721.
- **Component & PCB Solderability** - The Supplier (manufacturer or distributor) shall ensure that all parts: leads, lugs, terminal, wires and terminations cited on this PO shall meet the component solder requirements of IPC J-STD-001 and the solderability requirements of IPC J-STD-002, and Printed Circuit Boards shall meet the solderability requirements of IPC J-STD-003.
- **Pre-Tinning** - Component leads or the like shall be tinned per IPC J-STD-006 and properly cleaned to remove flux residue. Leads shall meet the solderability requirements of IPC J-STD-002, Category 3.
- **Fluxes, Solder and Solder Paste** - Fluxes, solder alloys and solder pastes shall meet the IPC J-STD requirements: J-STD-004 for Fluxes, J-STD-005 for Solder Pastes and J-STD-006 for Solder Alloys.
- **Conformal Coating** - To mitigate the risk of tin whisker growth, conformal coating should be applied to CCAs to the requirements of IPC J-STD-001, Class 3.

B030 – Special Processes

A special process is an operation performed on an item where the operation is not readily inspectable subsequent to its conclusion. Special processes have verifiable controls inherent to the process (i.e. plating, composites, nondestructive testing, etc.). Special processes shall be performed in accordance with specification(s) stated on the drawing and procurement documents.

Special processes should be performed by a Nadcap approved contractor (formerly NADCAP, National Aerospace and Defense Contractors Accreditation Program). The special processor should be approved by Nadcap for the special process on the date which the special process is performed. If a Supplier's sub-tier supplier performs the special process, the Supplier is responsible to flow down the requirements on sub-tier POs. Supplier's utilization of Nadcap approved sources does not relieve the Supplier from the obligations to ensure subcontracted sources are in full compliance with applicable specifications. Certificates of Compliance for special processes which state the Purchase Order number, part number, specification number, specification revision and the date the special process was performed shall be maintained on file and made available upon Gogo's request.

	Chicago, IL Bensenville, IL	SIZE A	CAGE CODE 1NQ67	DOCUMENT NUMBER D14521	REV N	SH 26 of 29
Title: Supplier Quality Requirements						

The master version of this document resides on the Gogo LLC Configuration Management Server.

Printed copies are considered uncontrolled, until verified as current by comparing with the master. It is the responsibility of the user to verify the most current revision.

B031 – Prohibited Materials/Substances

Note: Articles in production before 3/24/17 (the release date of Rev K of this document) are excluded from this requirement, unless otherwise agreed to in writing with Gogo.


Unless otherwise authorized in writing, Gogo prohibits certain materials/substances being contained in or on the product being supplied by the Supplier. Gogo further prohibits these materials/substances from being used during the following type of activities/processes, including, but not limited to: manufacture, processing (inclusive of Special Processing), assembly, integration, test, inspection, rework/repair, servicing, maintenance, handling and packaging. This requirement extends throughout Supplier's entire sub-tier supply chain for all items and processes comprising the product being supplied by the Supplier to Gogo and shall be flowed down by Supplier and Supplier's sub-tiers as necessary. In the event of conflict between Gogo's engineering drawing, specification or this clause, the engineering drawing shall take precedence.

Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)

Supplier shall comply with the European Community (EC) Regulation No. 1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) for the product being provided by the Supplier to Gogo. Upon Gogo's request, the Supplier must provide to Gogo satisfactory supporting evidence demonstrating Supplier's compliance with their obligations with regards to REACH.

Restriction of Hazardous Substances Directive (RoHS)

Supplier shall comply with the European Directive 2002/95/EC on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (commonly referred to as the Restriction of Hazardous Substances Directive or RoHS) for the product/service being provided by the Supplier to Gogo. Upon Gogo's request, the Supplier must provide to Gogo satisfactory supporting evidence demonstrating Supplier's compliance with their obligations with regards to RoHS.

	Chicago, IL Bensenville, IL	SIZE A	CAGE CODE 1NQ67	DOCUMENT NUMBER D14521	REV N	SH 27 of 29
Title: Supplier Quality Requirements						

The master version of this document resides on the Gogo LLC Configuration Management Server.

Printed copies are considered uncontrolled, until verified as current by comparing with the master. It is the responsibility of the user to verify the most current revision.

B032 – Notification of Change

The Supplier shall make Commercially Reasonable Efforts to notify Gogo in writing when any of the following occur:


- Merger/acquisition, relocation or closure of the Supplier's facility, including manufacturing facilities
- A change in manufacturing source(s), process(es), inspection method(s), location of manufacture, tooling or materials that can potentially affect fit, form or function
- Temporary or permanent transfer of work (e.g. change in machinery, location of manufacture, from the Supplier to an external provider or from one external provider to another external provider)
- Manufacturing facility layout modifications
- Major changes in Enterprise Resource Planning (ERP) system

Upon receipt of written notification from Supplier, Gogo may request, and Supplier shall provide, adequate assurances, including a comprehensive plan, detailing how Supplier intends to meet its performance obligations and delivery of conforming product, and at a minimum, shall include the following.

- Purpose of relocation, work transfer or other change
- Address of new location (as applicable)
- Risk identification and mitigation plan specific to Gogo's contracted products
- Schedule of move, minimizing impact to Gogo
- Coordinator / Point of Contact for the relocation or work transfer

All notifications shall be provided to: AviationQuality@gogoair.com

Note: Technical Data changes and revisions to be IAW clause B021.

	Chicago, IL Bensenville, IL	SIZE A	CAGE CODE 1NQ67	DOCUMENT NUMBER D14521	REV N	SH 28 of 29
Title: Supplier Quality Requirements						

The master version of this document resides on the Gogo LLC Configuration Management Server. Printed copies are considered uncontrolled, until verified as current by comparing with the master. It is the responsibility of the user to verify the most current revision.

B033 –Structural Components (SC)

Beginning 01 July 2019 all identified product shipped to Gogo shall be subject to this clause. This clause applies to all product manufactured by the Supplier or their sub-tier. No Exceptions.

A structural component is a component of structure that attaches the Gogo In Flight Connectivity System components to an aircraft's primary structure.

Component parts identified on Gogo's Drawings as the following, are considered Structural Components:

- Doublers
- Triplers
- Lugs
- Intercostals
- Brackets or Fittings
- Gussets
- Adapter Plate
 - For adapter plate dimensional inspection, primary attention shall be given to any Adapter Plate splice area, the center area of the Adapter Plate (area between the antenna mounts) and any component of the Adapter Plate identified as a bracket, splice or crossbar.

Identified Structural Components shall be inspected to confirm that the parts meet all **length, width, depth and thickness** dimensions listed on Gogo drawings.

Inspections may be conducted on 100% of product or using a sampling plan IAW clause B015. Raw data shall be supplied along with current process capability measurements (Cp, Cpk) for those characteristics. Supplier format for results is acceptable but must contain data requested above.


Results of these inspections shall be communicated to Gogo on a quarterly basis via email to AviationQuality@gogoair.com.

6 Related Documents

Document Title	Number
Procedure, Engineering Change Request	D14549
Procedure, Direct Ship Authorization	D20035
Environmental Stress Screening Plan	D26952

7 Forms and Records

Form/Record Title	Number
Form, Direct Ship Authorization Letter	D19399
Form, Supplier Request for Deviation/Waiver	D20157
Form, Supplier Disclosure Letter (SDL)	D20158

	Chicago, IL Bensenville, IL	SIZE	CAGE CODE	DOCUMENT NUMBER	REV	SH 29 of 29
		A	1NQ67	D14521	N	
Title: Supplier Quality Requirements						

The master version of this document resides on the Gogo LLC Configuration Management Server.

Printed copies are considered uncontrolled, until verified as current by comparing with the master. It is the responsibility of the user to verify the most current revision.