



## Supply Chain Solutions Guide

# Table of Contents

## Material Solutions – Consumables/Expendables/Components

Product Categories.....	4
Used Serviceable Material .....	6
AOG Services.....	7
Kitting Services.....	8
Chemical Services .....	9
Drop Ship Programs .....	10
Inventory Management .....	12
Bin Management Solutions.....	16
Technical Support/Engineering Services .....	17
Logistics Services.....	18
Delegated Inspection Authority .....	19

## Repairs – Components/Rotables/Line Replacement Units

Rotables Exchange.....	20
Repair Management Services .....	21
Repair/Value Added Services.....	22
Engine Lease Pool.....	26

## Agreements & Integration

Long Term Agreements .....	27
e-Commerce .....	28
Integration Services .....	30

# About Us

## BOEING GLOBAL SERVICES

Boeing Global Services, headquartered in the Dallas, Texas area, was formed by integrating the services capabilities of the government, space, and commercial sectors into a single customer-focused business. Operating as a third business unit of Boeing, Global Services provides agile, cost-competitive services to commercial, government, business and general aviation customers worldwide. Visit us at [boeingservices.com](http://boeingservices.com) to learn more.

## PARTS & SUPPLY CHAIN SOLUTIONS

### Aviall

Aviall is a leading provider of aircraft parts, supplies, chemicals, tools and materials. For more than 85 Years, Aviall has supplied global aerospace and defense industries with trustworthy product lines. Aviall offers more than 2 million parts and provides diverse maintenance, repair, rotables, logistics and supply chain solutions. Visit us at [aviall.com](http://aviall.com) to learn more.

#### Contact Information

P.O. Box 619048 • 2750 Regent Blvd. • Dallas, TX 75261-9048

**North America and AOG:** 1-800-AVIALL-1 • **International Sales:** 1-972-586-1564

**Airline Sales:** 1-800-AVIALL-9 • **For online ordering, visit [aviall.com](http://aviall.com)**

## Boeing Distribution Services

Boeing Distribution Services is the world's premier provider of fasteners, chemicals, tools, lighting, metal products and composites – and the logistical solutions that help you manage your supply chain more efficiently. We focus on the high-volume, low-cost side of the aerospace supply chain to free you up to focus on what really matters: building aircraft and keeping them soaring in the skies. Visit us at [boeingdistribution.com](http://boeingdistribution.com) to learn more.

#### Contact Information

3760 W. 108th St. • Miami, FL 33018 • **Phone:** 1-305-925-2600

**Email:** [Customer.Questions@BoeingDistribution.com](mailto:Customer.Questions@BoeingDistribution.com)

**For online ordering, visit [BoeingDistribution.com](http://BoeingDistribution.com)**



## Product Categories

### **AVIALL**

Aviall offers an extensive market basket of aftermarket parts and products to support the aerospace industry. You'll have peace of mind knowing that you can find the materials and support needed for your operation.

#### **Products**

- Airframe/Hardware/Fasteners
- Chemicals/Environmental Health & Safety
- Electrical & Hydraulic Systems
- Engine Accessories & Filtration
- Landing Systems/Undercarriage
- Propulsion (Engine Programs)
- Specialty Products

#### **Quick Facts**

- More than 250 OEMs with agreements
- More than 2 million catalog part numbers
- \$2+ billion in inventory



## **BOEING DISTRIBUTION SERVICES**

No matter what your aircraft hardware needs are, Boeing Distribution Services is ready to ship what you need, where and when you need it. Our products are factory-new, fully traceable to the original manufacturer and delivered through a global network to provide seamless service wherever you may be.

### **Products**

- Fasteners
- Bearings
- Seals
- Honeywell™ Proprietary Parts
- Chemicals, Composites and Raw Materials
- Engineered Products
- Electrical
- Tooling
- Lighting

### **Quick Facts**

- More than 3,000 suppliers
- More than 1 million part numbers in stock
- \$1+ billion in inventory



## Used Serviceable Material

Aviall

Used Serviceable Material (USM) supports your operation by providing economical solutions for components enabling extended fleet effectiveness through diverse product offerings.

### Benefits

- Economical solutions for components during a maintenance event
- Available for aircraft and helicopter platforms
- Contractual and transactional solutions available
- Approved supplier base of over 500 MRO providers

### Supporting the following platforms

#### Aircraft

- Boeing 737
- Boeing 747
- Boeing 767
- Boeing 777

#### Helicopter

- Bell 204
- Bell 205
- Bell 206
- Bell 206L
- Bell 212
- Bell 407
- Bell 412
- Airbus AS350B2

#### Engines

- GE CF6
- GE CF34
- CFMi CFM56
- Pratt & Whitney PW901
- Pratt & Whitney PW610
- Rolls-Royce M250



## AOG Services

Boeing Global Services provides 24/7/365 AOG support to decrease down times, enabling you to keep your operations running smoothly.

### Benefits

- Available worldwide 24/7/365
- Multilingual AOG Services team members
- Orders monitored 24/7/365 until delivery
- Access to inventory through Boeing Global Services' distribution network
- Must have an active account and a line of credit

### BOEING DISTRIBUTION SERVICES:

- AOG support on BoeingDistribution.com for select products and locations
- Tail number and location of aircraft needed to place order
- Parts delivered within 24 hours with tail number specified
- Same Day Support is available for urgent non-AOG situations
- Receive contract prices on contract parts
- To meet customers' urgent needs, orders can be placed online or by phone



## Kitting Services

Our kits are built to your specifications, resulting in greater levels of productivity by providing the parts your technicians need, exactly where they are needed. With more than 45,000 active kits in production, Boeing Global Services has the expertise to provide ideal kitting solutions.

### Benefits

- Unlimited parts, unlimited configurations
- Kits can be supplier specified, customer specified or components from multiple suppliers
- Single part number
- Customizable Bill of Materials (BOM)
- Fully traceable components
- Convenience kits can be made on-demand for frequent repair scenarios and component change
- Customized configurations to support customer fleets

### BOEING DISTRIBUTION SERVICES:

- Kit assembly at customer facility or Boeing Distribution Services facility
- Boeing Distribution Services interactive web-based configuration management (Kitting Portal)
- Improved forecast reliability through usage reports
- 40%-70% reduction of inventory on hand, POs and supplier management
- Guaranteed component stocking levels



## Chemical Services

Boeing's Chemical Services enable you to simplify and streamline your process, reduce cost, lower risk, and improve the performance and operating income of your operation. With extensive lines of products and innovative programs and management solutions, we help your business reduce total chemical lifecycle costs.

### **Benefits**

- Services include: Chemical logistics services, integrated material services, consolidated invoicing and program management
- Chemical Management Solutions available including a customer web portal by Boeing Distribution Services
- Hazmat Storage Solutions that reduce inventory cost and provide right sizing solutions
- Minimization of scrap rates and waste
- Robust and customizable reporting including chemical compliance assistance
- Full traceability of chemicals
- Packages arrive meeting 49CFR, IATA, IMDG/IMO and many other regulatory requirements
- Single source of contact



## Drop Ship Programs

### Boeing Distribution Services

#### **SYMPHONY™ DIRECT SHIP**

By partnering with suppliers, Boeing Distribution Services has created a proprietary inventory management system which provides a single point of contact for a variety of parts. When you place an order through Symphony™, it is automatically routed to the appropriate supplier and shipped directly to your location for a seamless experience.

#### **Benefits**

- Single point of contact at Boeing Distribution Services for all part needs
- “Direct Ship” eliminates process queue; parts are delivered directly to customers from Boeing Distribution Services’ Symphony™ partner
- Products stocked based on historical and forward-looking forecast
- Single point of contact for multiple approved suppliers to reduce supply base
- Efficiency through automation
- Full traceability of parts with seamless order and billing process



Aviall

## SUPPLIER CONNECT

Supplier Connect is a drop ship program in which orders are placed with Aviall and then shipped directly to you from a supplier's inventory. By providing access to inventory at supplier locations, Aviall enables you to optimize your buying experience.

### Benefits

- Expanded scope of parts availability
- Customers can order from one source instead of multiple sources
- Aviall facilitates customer order processing, questions and returns
- Shipments are sent directly from the supplier's warehouse

*Supplier Connect orders are currently available for all **North America** customer locations.*



# Inventory Management

Aviall

## ON-SITE WAREHOUSE

On-Site Warehouse (OSW) is a customized consignment program that places inventory at your location, improving material availability while reducing the overall cost per transaction. Inventory availability is supported with automatic shipments from our central warehouse, triggered by calculated Min/Max stock levels and shipped to your site.

### Benefits

- On-site material availability
- Customizable to customer
- Automated replenishment process
- Reduced inventory holding costs
- Aviall manages stocking levels
- Reduced freight costs
- Customer maintains their systems
- Dedicated program team provides customer service for OSW products

*The OSW program is available to customers who qualify.*



Aviall

## MOBILE INVENTORY REPLENISHMENT (RESTOCKME)

RestockMe provides full access to Aviall's entire product portfolio, while still providing all necessary documentation and traceability. Orders can be placed in as little as 10 seconds. RestockMe is available on six out of seven continents around the world.

### Benefits

- No charge application that allows customers to place orders quickly and efficiently using their mobile device
- Simple and easy to use
- Optimized for managing and replenishing fast-moving inventory items
- Application can be downloaded to customer devices with self-service instructions



## Inventory Management (Continued)

### Boeing Distribution Services

#### INVENTORY MANAGEMENT & DEMAND PLANNING

Boeing Distribution Services' inventory-planning tool is based on your consumption and standard industry lead times, factoring in supplier delivery performance. Our system has the ability to interface electronically with your forecasting tools, resulting in more accurate data and lower costs.

A dedicated team analyzes global consumption and trends, and compares data for more precise demand-planning. We generate detailed reports such as High-Low Scan, 3- and 6-Month Consumption and JIT Inventory Management.

#### Integrated Planning Solutions

- **Demand Planning:** Analysis based on global consumption, lead times and industry trends, which allows for interfacing with your forecasting tools
- **Min/Max Daily Replenishment:** Automatically triggered replenishment based on a pre-determined Min point (not to exceed the pre-determined Max point); triggered via manual PO or EDI
- **Reporting:** Detailed usage reports including On Time Delivery, Pipeline Health, Scan Activity and Historic Consumption reports for the entire Boeing Distribution Services product portfolio



Aviall

## FORECASTING & PLANNING

Service Parts Management software is used for inventory planning to optimize and integrate tactical and execution decisions while aligning and scaling these decisions across the organizations.

### Benefits

- Increased parts availability
- Diverse forecasting strategies
- Time phased supply/demand matching
- Purchase order administration
- Distribution requirements planning
- Weekly, automatic replenishment to customer service centers
- Smoothed demand enables refinement of planning and procurement processes



## Bin Management Solutions

### Boeing Distribution Services

We know how difficult it can be to strike the right balance between cost and availability. Boeing Distribution Services can help relieve that pressure. With more than 30 years of experience and over 800,000 bins in programs around the world, we offer proven Just-In-Time (JIT), Vendor Managed Inventory (VMI), Point-of-Use (POU) and Direct Line Feed (DLF) services globally.

#### Benefits

- Customer inventory burn-down solutions
- Dedicated inventory
- Customer web portal capabilities including quality certifications and bin map review
- Forecasting and planning tools
- Customer controlled inventory levels and replenishment cycles
- Multi-configured custom solutions
  - JIT/DLF/POU support
  - Kitting solutions
  - 3PL programs
  - Kanban support



## Technical Support/ Engineering Services

## Boeing Distribution Services

If you are searching for an alternate, replacement or hard-to-find part, there is no need to look any further than Boeing Distribution Services. A team of fastener and consumables experts is ready to assist in identifying parts to suit your specific needs. By utilizing a proprietary inventory-management database, Boeing Distribution Services can find your current part within minutes, or analyze part specifications and match alternatives with ease.

### **Benefits**

- Alternate/replacement parts and part standardization
- Avoid stock outs
- Mitigate obsolete parts
- Recommendations when only part type and parameters are known
- Actively plan new products
- Define new products and locate supplier (engineered parts and chemical products)
- Increase cost savings and operational and logistics readiness



## Logistics Services

### Boeing Distribution Services

By combining kitting expertise and the ability to manage multiple suppliers, Boeing Distribution Services streamlines the ordering and delivery process for customers' complex programs. Quality Delegated Inspection Authority allows Boeing Distribution Services to inspect incoming products from all suppliers, bypassing quality inspection and shipping the parts directly where they're needed.

#### THIRD-PARTY LOGISTICS (3PL)

##### **"You Own the Parts"**

- Integrated operation warehousing and transportation services
- Management of both incoming and outbound inventory from multiple suppliers
- Streamline ordering and delivery process
- Bypass quality inspection by granting Boeing Distribution Services Delegated Inspection Authority

#### FOURTH-PARTY LOGISTICS (4PL)

##### **"Boeing Distribution Services Owns the Parts"**

- Complete Supply Chain solution
- Planning
- Forecasting
- Procurement
- Inventory management
- Quality inspection
- Logistics services
- 3rd-party contracting
- Single point invoicing for multiple suppliers



## Delegated Inspection Authority

Boeing Distribution Services

Boeing Distribution Services has been granted Quality Assurance Inspection Authority by our customers and authorized by the FAA. This allows Boeing Distribution Services to inspect incoming products from all suppliers and ship them directly where they're needed for efficiency and accuracy every time.

### **Benefits:**

- Eliminate receiving inspection
- Cost reduction
- Record retention expenses
- Inspection expenses (inbound and outbound)
- Peer-to-peer engineering support
- Supplier oversight
- Increase in throughput
- Better alignment of configuration



## Rotables Exchange

Aviall

Aviall offers a diverse capabilities list and core rotables exchange pool supporting aircraft fleets.

### Benefits

- Reduce maintenance down time and inventory investment
- Comprehensive rotatable exchange pool
  - Wheels & Brakes
  - Engine Spares & Accessories
  - Air Frame Components
  - Helicopter Rotables
- Access to worldwide inventory of spares
- One time incident repairs or regular repairs
- Available to manage customer property overhaul
- Brokering/sourcing of serviceable, repaired, overhauled and exchange units
- Over 500 MRO providers
- FAA Certified Repair Centers



## Repair Management Services

Aviall

Repair Management Services is a third party repair management program that acts as a single source with access to a wide repair station supply base approved under the Boeing Supplier Quality System. You receive OEM-quality repair on airframe components, avionics, engines and accessories, ground support equipment and tooling. This service conforms to OEM standards and requirements including warranty administration.

### **Benefits**

- Single point of contact for repair management
- Component repairs are tracked throughout the repair process from customer point of origination to point of use location
- Repair/overhaul rates negotiated using Boeing strategic sourcing
- Provides end of life support for components no longer produced as new parts



## Repair/Value Added Services

Aviall

Aviall's network of professional repair stations provide local service and global support with a variety of solutions ranging from Battery Repair to Paint Mixing.

### **BATTERY REPAIR**

#### **Aircraft Batteries Serviced**

- Ni-Cad
- Lead-acid
- Lithium-ion
- Emergency battery packs, avionics power supplies

#### **Manufactured Products**

- Battery service tools
- Temp sensors
- Battery packs
- Ground support/battery carts

#### **Services**

- Battery charger calibration and repair
- Authorized repair and warranty repair distributor for JFM Engineering and Marathon Norco/Christie battery equipment
- Battery school - Saft and Marathon approved Ni-Cad 40 hour battery training course



## **WHEEL AND BRAKE REPAIR**

- EASA dual release
- Onsite NDT (non-destructive testing) capabilities
- Machining capabilities
- Diversified overhauled exchange brake pool
- Carbon stack exchange program
- Wheel overhaul with maintenance tracking
- Tire pool management
- Vast inventory of new assemblies and replacement parts



## Repair/Value Added Services (Continued)

Aviall

### HOSE FABRICATION

- Specializing in hose assemblies fabricated under the authority of the Parker Stratoflex division TSO
- Certified for hydraulic, pneumatic, coolant, AC lines, oil, fuel and other high pressure aircraft applications
- Hoses fabricated for fixed wing and rotor wing aircraft, both piston and turbine powered
- Supporting OEM production requirements
- Capabilities include standard and custom-fit hoses, hose kits, custom kits and duplication of existing hoses



## **PAINT MIXING**

Aviall's paint program offers some of the best products and services available. The suppliers represented are all leading aerospace paint manufacturers with proven industry experience. Additionally, Aviall offers a variety of paint related products such as primers, strippers, tapes, sealants, spray guns and safety gear.

- Paint mixed according to manufacturer formulas
- Custom color matching
- Technical support available
- Right sizing and custom kits available



## Engine Lease Pool

Aviall

Aviall is a provider of lease engines powering commercial, business aviation and general aviation aircraft with the goal of minimizing aircraft downtime and increasing customer satisfaction.

### Benefits

- Decrease downtime and the impact of scheduled and unscheduled events
- Flexible lease terms to fit any customer's needs
- Increase overall fleet utilization
- World class AOG services and global logistics network
- Strategically expanding capabilities and lease pool through OEM collaboration, exchanges and sales

### Supporting the following engine models

- Arriel 1D1
- CF34-3
- PW610



## Long Term Agreements

By entering into a long term agreement with Boeing Global Services, you will always have access to the parts you need at a low, fixed price.

### Benefits

- Firm and fixed pricing structure
- Preferred pricing available for select LTA agreements
- Procurement efficiencies; No supplier management or oversight required
- Healthy inventory pipeline; Reduction of shortages

### BOEING DISTRIBUTION SERVICES:

- Dedicated inventory per LTA requirements
- No minimum purchase required for the parts Boeing Distribution Services regularly stocks
- No penalty for over- or underestimating yearly consumption of parts Boeing Distribution Services regularly stocks



## e-Commerce

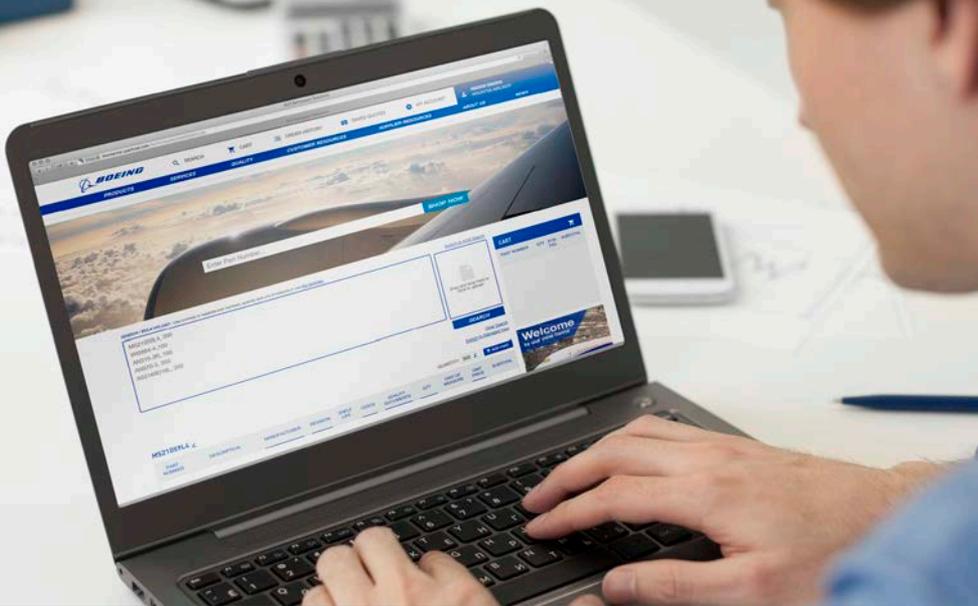
Boeing Global Services allows you to seamlessly transact business through e-Commerce websites.

### **AVIALL.COM**

The aviall.com user interface offers enhanced self-service capabilities with a comprehensive search function. You can compare prices, check availability, process orders, track status and more.

### **Benefits**

- Easily and quickly browse Aviall's extensive product offerings
- Go from search to shop within the same platform
- Access standard reports to track order history, quote status, and invoices no matter the order channel
- Quickly see product availability and lead times
- Save time with saved lists or quickly see previously purchased products in search results
- Access support knowledge base to get answers fast
- Research solutions and services offered by Aviall



## **BOEINGDISTRIBUTION.COM**

Boeing Distribution Services' e-Commerce provides quick and easy access to view and price global inventory.

### **Benefits**

- 24-hour access to more than \$1 billion of global inventory
- Upload up to 1,000 part numbers in a single search – or simply copy and paste a list
- Refine part search based on specific manufacturer, shelf life, DFAR, test report or certification requirement
- Quote and purchase within 5 clicks
- Check real-time order status and track shipments
- Save a quote for 30 days or choose Same Day Shipping
- Schedule delivery to multiple locations via multiple carriers
- AOG Support available for select products and locations



## Integration Services

Boeing Global Services offers a selection of electronic data using various industry tools along with customized web-based products.

- **Aeroexchange:** Aviall connects with both customers and suppliers through multiple product suites including AeroBuy, AeroRepair, AeroConsign and AeroAOG
- **Flightdocs:** Directly purchase parts from Aviall through Flightdocs' integrated inventory and purchasing system
- **Direct EDI (X12/Spec2K):** Direct EDI integration enables customers to transact through multiple formats including X12
- **Web Services:** Web Services enables customer integration, particularly in support of the GOLD application used by Boeing Defense
- **IMS:** Aviall enables customer support self-service including access to documents such as safety data sheets and packing slips
- **API:** Application program interface enables customers to create a shopping cart punch out



