

# The Airbus assembly hangar is under construction at Mobile Aeroplex.



FOR MORE INFORMATION:  
[www.madeinalabama.com](http://www.madeinalabama.com)  
[www.edpa.org](http://www.edpa.org)

The capabilities of Alabama's aerospace industry were on full display during an eventful day at the most recent Farnborough International Airshow, held in mid-July in even-numbered years at Farnborough Airport in Hampshire, England. Early on July 15, GE Aviation announced that its Auburn plant would launch mass production of a jet engine nozzle using its 3-D printing technology, a first for the aerospace giant. At noon, SES announced a \$70 million expansion of its Huntsville operation, which refurbishes helicopters. That afternoon, GKN Aerospace announced it had opened a composite design engineering center that will carry out advanced research at its Alabama plant.

The rapid-fire announcements at Farnborough reflect the momentum that Alabama's aerospace industry is gaining as the Airbus A320 Family Assembly Line moves toward completion in Mobile. In 2015, Airbus will begin assembling passenger jets at its Alabama facility, which will employ 1,000 skilled workers.

"Alabama will soon become one of only three states in the nation where large passenger aircraft are assembled," Alabama's Commerce Secretary Greg Canfield said. "Once that begins, Alabama will be involved in practically every aspect of the aerospace industry, from research and engineering to advanced materials and fabrication and assembly."

While Airbus' project represents a game-changer, the state's aerospace sector rests on a solid foundation centered around NASA's Marshall Space Flight Center and the top industry players that have gravitated to Alabama.

Boeing and Lockheed Martin have had Alabama operations for more than 50 years, and both continue to expand in the state. Boeing is creating a research center in Huntsville that will keep the company at the leading edge of technology, while Lockheed Martin is expanding a state-of-the-art missile factory in Troy.

The state is also home to Raytheon, Northrop Grumman, UTC, Bell Helicopters, Sikorsky, the United Launch Alliance and many others.

ORIGINAL EQUIPMENT MANUFACTURERS	SUPPLIERS/MROS	
Airbus	NASA Marshall Space Flight Center	Science and Engineering Services
Raytheon	Boeing	Commercial Jet Inc.
Lockheed Martin	GE Aviation	VT Mobile Aerospace Engineering
United Launch Alliance	GKN Aerospace	Vector Aerospace
Continental Motors	UTC Aerostructures	Safran Engineering Services
	Bell Helicopter	Teledyne Brown Engineering
	Sikorsky	Arista Aviation Services
	Northrop Grumman	L3 Army Fleet Support
	PPG Aerospace	ATK Aerospace Systems
	Aerojet Rocketdyne	MBDA Missile Systems

Dassault's Little Rock Completion Center is the main completion center for Falcon Jets worldwide.



FOR MORE INFORMATION:  
[www.arkansasedc.com](http://www.arkansasedc.com)  
[www.arkansasaerospace.com](http://www.arkansasaerospace.com)

Aerospace/aviation is Arkansas's leading export, in part because the state offers a very competitive environment for aerospace and aviation companies to operate. Aerospace exports from Arkansas totaled more than \$1.83 billion in 2013, up significantly from 2011 when they totaled \$486 million.

Arkansas possesses abundant available land for aerospace/aviation manufacturers. Major commercial airports are located in central and northwest Arkansas, and six regional airports are located throughout the state. These airports are part of a larger intermodal transportation network of highways, railways and waterways that provide easy access to major markets in the U.S. and around the world.

The Arkansas Aeroplex, a multi-modal transportation facility located near Interstate 55 on the grounds of the former Eaker Air Force Base, has 1.5 million square feet of space that includes an

office park, an aviation park with avionics repair benches, sheet metal shops, welding shops and painting equipment, and a distribution center. The Arkansas Aeroplex features six hangars, a test facility for jet engines, maintenance buildings with air compressors, and an 11,600-foot runway.

The Arkansas Association of Two-Year Colleges Aerospace Training Consortium offers aviation and aerospace programs to produce a continuous supply of aerospace/aviation workers. These programs include airframe and power plant technology, aviation maintenance technician, aviation management, aviation power plant maintenance, aviation technology, and electronics/avionics technology. In addition, Henderson State University offers a four-year bachelor's degree in aviation in which graduates are trained to fly commercial planes, manage airports, or manage aircraft fleets. The university's aviation department features 15 aircraft and a state-of-the-art flight simulator.

#### AEROSPACE COMPANIES

Actronix, Inc.  
 Aerojet Rocketdyne  
 American Stitchco, Inc.  
 CAVU Aerospace  
 Custom Aircraft Cabinets, Inc.  
 Dassault Falcon

Delta Group Electronics, Inc.  
 Galley Support Innovations  
 Hitco Carbon Composites, Inc.  
 Rose Aircraft Services, Inc.  
 Trutrak Flight Systems, Inc.  
 United Technologies Aerospace Systems  
 MBDA Missile Systems

Embraer's Phenom assembly facility and global customer center is located at Melbourne, Fla., airport.



FOR MORE INFORMATION:  
[www.enterpriseoflora.com](http://www.enterpriseoflora.com)  
[www.perfectbusinessclimate.com](http://www.perfectbusinessclimate.com)



Florida has long been a gateway to space, an air traffic hub of the Americas and a major location for flight training and maintenance, repair and overhaul (MRO). The state is also home to leading manufacturers of aircraft and aircraft components, and one of the nation's largest military, defense and homeland security clusters. Florida hosts more than 2,000 aviation and aerospace companies and recently earned the distinction of America's No. 1 state for aviation manufacturing attractiveness by PricewaterhouseCoopers.

As the birthplace of the commercial aviation industry, Florida has a 50-year legacy of space launch and exploration and a designated region for commercial space activity in the "space coast" region of Brevard County. The space coast is home to NASA's Kennedy Space Center and offers close proximity to two of only eight licensed U.S. spaceports, as well

as availability of launch and landing facilities with 10 to 15 launches occurring annually in Florida. The state offers tax exemptions on commercial space activity and aircraft parts and machinery, making manufacturing in Florida a cost-effective option.

Florida's aviation and aerospace workforce is recognized as one of the best in the nation. In 2013, Pricewaterhouse Coopers ranked Florida No. 1 for aviation and aerospace talent and the U.S. Department of Labor statistics ranked Florida No. 2 in aviation, aerospace and space establishments. The state's workforce is bolstered by an abundance of training opportunities offered at over 1,000 public and private postsecondary, technical and trade schools. Add the statewide emphasis on science, technology, engineering and mathematics (STEM) programs, and Florida's aerospace talent pipeline will continue to grow and thrive.

**ORIGINAL EQUIPMENT MANUFACTURERS**

- Embraer
- Northrop Grumman
- Lockheed Martin
- Piper Aircraft
- Sikorsky

**SUPPLIERS/MROS**

- Kaman Aerostructures
- Triumph Aerostructures Vought Aircraft
- B/E Aerospace
- Pratt & Whitney
- Rockwell Collins
- Harris Corporation
- Honeywell
- DRS Technologies
- AAR
- Unison Industries

**Alenia North America**

- BAE Systems
- Chromalloy
- General Dynamics
- Raytheon
- L-3 Crestview Aerospace
- Fort Walton Machining
- HEICO
- Daher-Socata
- Flight Star Services

Maintenance on the U.S. Air Force C-130 is performed at Warner Robins Air Logistics Complex in middle Georgia.



FOR MORE INFORMATION:  
[www.aerospace.georgiainnovation.org](http://www.aerospace.georgiainnovation.org)

Aerospace is a key component of Georgia's economic development. . . over 500 businesses employ more than 85,000 people and contribute \$51 billion in annual economic impact to the state. In fact, aerospace products are the number one international export of Georgia.

Georgia's rich and robust aviation sector dates back to 1905, when Ben Epps successfully built and flew an aircraft of his own design and construction in Athens, Ga., just two years after the Wright brothers' first flight. The 1930s saw the formation of the first aeronautics school at the Georgia Institute of Technology and the emergence of the Atlanta Airport. The rapid growth in both air transportation and manufacturing during that time fueled Georgia's aerospace industry into one of the nation's top five aerospace export regions.

Since last year, seven companies have

located or expanded in Georgia, creating more than 800 jobs and investing \$150 million collectively. The civilian and military workforce at Warner Robins Air Logistics Complex in middle Georgia is the single largest industrial complex in the state, performing maintenance on U.S. Air Force C-5, C-17, C-130 and F-15 aircraft.

Georgia's diverse aerospace industry continues to grow and provides necessary assets across all aeronautic functions: design, manufacturing, operation and sustainment of both aviation and space flight vehicles.

With critical resources such as the Centers of Innovation for Aerospace and a highly technical and advanced workforce and education system, companies in the state are able to remain competitive and are now at the forefront of emerging technologies such as Unmanned Aircraft Systems (UAS), energy efficient aerospace practices and commercial space launch and operations.

<b>ORIGINAL EQUIPMENT MANUFACTURERS</b> Lockheed Martin Aeronautics Gulfstream Aerospace Pratt & Whitney Rockwell Collins	Meggitt Poymers & Composites Thrus Aircraft	Gulfstream Bombardier Stanbaugh Aviation Standard Aero Epps Aviation
	<b>MROS</b> Delta Tech Ops TIMCO	

A team assembles the Flight Model of the Cosmic X-Ray Background NanoSatellite (CXBN) in the Clean Room at the Space Science Center at Morehead State University.



FOR MORE INFORMATION:  
[www.ThinkKentucky.com](http://www.ThinkKentucky.com)

In a state known for its bourbon and horses, many are surprised to learn Kentucky's largest export industry is aerospace. Last year, the Commonwealth exported more than \$5.6 billion in cutting-edge aerospace products and parts—more than 20 percent of the state's total exports. The industry is pumping billions of dollars into Kentucky's economy and providing thousands of jobs.

From airplane engines and parts to guided missiles to microsatellites being used by NASA, Kentucky's aerospace footprint is growing rapidly. Nearly two dozen parts manufacturers and suppliers have established or expanded operations in the state in the past two years. Many factors contribute to the intense interest in Kentucky. At the center of a 34-state area in the eastern U.S., Kentucky facilitates the distribution of goods and materials to a massive market. The state's borders are within 600 miles of more than 65 per-

cent of the nation's population.

Kentucky's airports also play a significant role. Consisting of five commercial airports and dozens of regional airports, the Commonwealth is home to two of the world's largest cargo hubs—UPS and DHL. The Northern Kentucky region is among the top ranked areas nationally for aerospace manufacturing, thanks in part to its proximity to the Cincinnati/Northern Kentucky International Airport.

This growth would not be happening without a skilled workforce and specialized training available for companies looking to locate. Fortunately, Kentucky's education system has embraced aerospace. Several of the state's premier colleges have programs specific to careers in the industry. Even high school students are joining the aerospace ranks thanks to a partnership with the Institute of Aerospace Education devoted to student success in science, technology, engineering and mathematics (STEM).

**AEROSPACE COMPANIES**

General Electric	Andrew Laser Works Corps	Helicopter Intergration Pllc
Raytheon Company	Boneal Inc	Honeywell International
Highlands Diversified Services Inc	Meggitt Aircraft Braking Systems	Space Science Innovations LLC
Messier-Bugatti USA LLC	Elizabeth Carbide Kentucky	Jet Tank Testing Inc
Parkway Products	Lockheed Martin	Avon Scientific
Meyer Tool Inc	Command Technology Inc	Pacific Scientific Company
	AAR Manufacturing Inc	Edgcombe/G & N Inc

# Bell Helicopter's new Bell 505 Jet Ranger X will be assembled in Lafayette, La.



FOR MORE INFORMATION:  
[www.nasa.gov/centers/marshall/michoud/#.VKNec1ru-9](http://www.nasa.gov/centers/marshall/michoud/#.VKNec1ru-9)

In August 2014, Bell Helicopter broke ground on its Lafayette Aircraft Assembly Center for the new Bell 505 Jet Ranger X helicopter, a market-defining aircraft in the commercial aviation sector. The Bell 505 represents the newest aircraft assembly operation in Louisiana, a state rich with aerospace heritage.

From the birth of Delta Airlines in the early 20th century to the ongoing production of spacecraft components at NASA's Michoud Assembly Facility in New Orleans, Louisiana's aerospace sector spans major MRO (Maintenance Repair Overhaul) facilities operated by Northrop Grumman and AAR Corp. at Chennault International Airport in Lake Charles.

Two of the federal government's most significant aviation bases are located in Louisiana: Barksdale Air Force Base near Shreveport hosts the Global Strike Command and 8th Air Force headquarters, while the Naval Air Station Joint

Reserve Base in Belle Chasse near New Orleans provides a strategic defense hub for the U.S.

Louisiana's coast provides an anchor for offshore oil and gas aviation services provided by PHI Inc., ERA Helicopters and Bristow Group. AvEx — Aviation Exteriors Inc. — is a world-class provider of aviation painting services at Acadiana Regional Airport in New Iberia, and global industry leaders Boeing and Lockheed Martin maintain significant operations at the NASA site in New Orleans.

Along with the state workforce development program, LED FastStart®, Louisiana offers a suite of competitive incentives designed to help aerospace manufacturers thrive. Among them is Louisiana's Aerospace Manufacturing Payroll Incentive, which provides up to a 12 percent payroll rebate more than 10 years for highly competitive projects that involve substantial job creation.

### ORIGINAL EQUIPMENT MANUFACTURERS

- Bell Helicopter
- Lockheed Martin
- The Boeing Company

### TOP SUPPLIERS/MROS

- Northrop Grumman
- AAR Corp.
- PHI Inc.
- Bristow USA LLC
- ERA Helicopters LLC
- Aviation Exteriors Inc.
- Jacobs Technology
- B-K Manufacturing Inc.

### Metro Aviation

- Mezzo Technologies
- P.E.K. Inc.
- Houma Avionics
- Raytheon Technical Services
- Rockwell Collins Inc.
- Stratus Systems Inc.
- Sierra Nevada Corp.

The Rolls-Royce outdoor jet engine test stand at the John C. Stennis Space is where the most advanced Rolls-Royce civil aircraft engines are tested.



FOR MORE INFORMATION:  
[www.aerospacemississippi.org](http://www.aerospacemississippi.org)  
[www.mississippi.org/locate-here/](http://www.mississippi.org/locate-here/)



Mississippi is home to more than 20 renowned aerospace companies, and NASA's John C. Stennis Space Center. Mississippi's innovative research and development and advanced testing opportunities ensure the state's aerospace companies maintain the competitive edge needed to successfully compete in today's global marketplace.

Mississippi offers numerous available sites, and its transportation network provides easy access to domestic and international markets. The state's customized incentives packages include the Aerospace Incentives Program, which provides tax incentives to aerospace-related businesses.

In 2013 and 2014, Mississippi saw significant growth in the aerospace sector with industry leaders like Raytheon, Rolls-Royce, General Atomics and Aurora Flight Sciences announcing significant expansions within the state.

To meet an increased demand

for its products, GE Aviation opened its second Mississippi manufacturing facility in Ellisville in 2013, investing \$56 million and creating 250 new jobs. GE Aviation's team members produce advanced composite components at the Ellisville facility.

Also in 2013, Rolls-Royce opened its second outdoor jet engine test stand at NASA's John C. Stennis Space Center in south Mississippi. And General Atomics has expanded its Lee County facility seven times in the past years.

In conjunction with Mississippi's nine public universities and 15 community colleges, the state also provides customized workforce training programs and research and development opportunities. Established in 1948, the Rasper Flight Research Laboratory at Mississippi State University is the largest university flight lab of its kind in the U.S. The

state's best-in-the-nation Digital Interactive Media and Software Development Incentive provides a unique advantage to the aerospace industry. Applicable to avionics development, such as navigation, communications, radar, defense and other embedded systems, the incentive provides a 35 percent refundable tax credit for payroll expenditures and a 25 percent refundable tax credit for qualified production expenditures.

Bell Helicopter CEO John Garrison said, "We considered several sites for this new facility, and Louisiana's proposal demonstrated the state's commitment to economic development. The state's established aerospace industry and exceptional workforce training programs were also key factors in our decision to make Louisiana a partner in expanding our manufacturing footprint."

#### ORIGINAL EQUIPMENT MANUFACTURERS

Aurora Flight Sciences  
 Northrop Grumman  
 Airbus Helicopters  
 GE Aviation  
 Raytheon  
 Stark Aerospace

#### TOP SUPPLIERS/MROS

Air Cruisers  
 Aerojet Rocketdyne  
 ATK Space Systems and Sensors  
 Eaton Aerospace  
 Electro National Corp.  
 General Atomics  
 L-3 Communications Vertex  
 Aerospace LLC

Lockheed Martin Space Systems Co.  
 Miltec Corp.  
 Rolls-Royce North America  
 Seemann Composites, Inc.  
 SELEX Galileo  
 Rockwell Collins Inc.  
 Stratus Systems Inc.  
 Sierra Nevada Corp.

St. Louis, Mo., is home to the Boeing Defense Space and Security headquarters and to its F-15 aircraft.



FOR MORE INFORMATION:  
[www.missouripartnership.com/Missouris-advantages-for-the-aerospace-industry](http://www.missouripartnership.com/Missouris-advantages-for-the-aerospace-industry)  
[www.business.mo.gov](http://www.business.mo.gov)

From Charles Lindbergh to McDonnell Aircraft Corporation, Missouri has been at the forefront of the global aerospace industry for more than eight decades. Nearly 70 aerospace companies operate facilities in Missouri, with eight locating their world headquarters in the state, including Boeing’s Defense Space & Security HQ in St. Louis. Missouri’s aerospace companies provide a broad portfolio of products and services to companies around the globe. In fact, aerospace made up Missouri’s top export category in 2013, contributing \$445.6 million to the economy.

Missouri’s large, highly-skilled workforce also gives aerospace companies a competitive edge. Nearly 74,000 Missourians work in the aerospace industry. Meanwhile, with 140 degree-granting institutions in Missouri and 5,000 engineering related degrees awarded each year, the state’s talent pool continues to grow.

To further enhance and expand the aerospace workforce, Gov. Jay Nixon has provided ongoing support for training, including the highly innovative, nationally recognized pre-employment program for Boeing, which has grown to include Boeing suppliers such as GKN Aerospace, West Star Aviation, and Precision Prototype Manufacturing.

Missouri’s central location also provides aerospace companies with the resources to grow and connect with global markets. For example, in 2013 Boeing announced two expansion projects at its St. Louis campus, creating 800 new research and IT jobs.

Last summer, Gov. Jay Nixon signed legislation extending the state’s sales tax exemption law on aircraft parts to support aerospace companies’ expansion efforts. Recently, Aviation Technical Services, one of the world’s largest suppliers of airframe maintenance, opened a new facility in Kansas City creating 500 jobs.

<b>ORIGINAL EQUIPMENT MANUFACTURERS</b> Boeing Defense Space & Security	Pas Technologies	Landing Gear Parts
	Patriot Machine Inc.	O & F Machine Products
<b>TOP SUPPLIERS/MROS</b> May Technology LMI Aerospace Growth Industries Heizer Aerospace	Valent Aerostructures	Precoat Metals
	Aviation Technical Services	Qineti North America
	Essex Manufacturing Division	RTI Advanced Forming
	GKN Aerospace	Seyer Industries
	Jet Midwest	Triumph Structures
	Kemco Aerospace Manufacturing	United Engineering Co.



Technicians assemble a General Electric jet engine in Durham, N.C.



FOR MORE INFORMATION:  
[www.ThriveNC.com/aerospace](http://www.ThriveNC.com/aerospace)

North Carolina, the birthplace of powered flight, remains a growing center for aerospace with more than 180 aerospace and aviation companies engaged in manufacturing and services. World-class companies such as Curtis-Wright, GE Aviation, Honda Aircraft Company, Honeywell, Northrop Grumman, Spirit AeroSystems, Turbomeca (SAFRAN) and UTC Aerospace are located in North Carolina, employing nearly 10,000 skilled workers in the sector.

Innovation is a hallmark of North Carolina's aerospace industry. GE Aviation is nearing completion of a new 170,000-square-foot facility in Asheville which will be the world's first plant to mass-produce engine components using advanced ceramic matrix composite (CMC) materials. The CMC technology is revolutionary from a weight and fuel-savings standpoint and customers are clamoring for the performance advantages. The company already has a backlog of \$161 billion in orders. Cutting-edge composites are also featured at Spirit AeroSystem's Kinston facility, where major elements of

the new Airbus A350 XWB are being manufactured.

In Greensboro, the Honda Aircraft Company reached an important milestone in June as the first production version of its new HondaJet flew for the first time. The company has been executing a vigorous flight-testing program for several years for its new light jet, aiming for final aircraft certification and entry into service in 2015. Production is already at a steady pace at the company's North Carolina headquarters.

Supporting all of this innovative activity across the state is a manufacturing-savvy workforce known for high productivity and backed up by a workforce training infrastructure that's second to none. Also fueling the talent pipeline are North Carolina's seven military installations, with people entering civilian life after training in fields such as aviation and avionics, communications, electronics, and engineering.

The state's many incentives, from business resources and human resources to natural resources, combine to offer companies the competitive advantages they seek when choosing a business location.

**ORIGINAL EQUIPMENT MANUFACTURERS**

GE Aviation  
 Honda Aircraft Company  
 Spirit Aerosystems

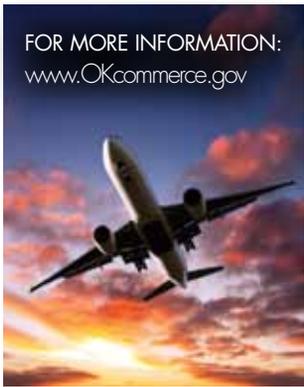
**TOP SUPPLIERS/MROS**

ATI  
 B/E Aerospace  
 Curtiss-Wright Controls

Cyril Bath  
 DRS Technologies, Inc.  
 Honda Aero, Inc.  
 Honeywell  
 IMET Alloys Inc.  
 Kearfott Guidance and Navigation  
 Kidde Aerospace  
 Lord Corporation  
 Michelin Aircraft Tire Corporation  
 NLA Diagnostics

Northrop Grumman Synoptics  
 PEMMCO Manufacturing  
 Purolator Advanced Filtration  
 SAFRAN Turbomeca Manufacturing  
 Spirit AeroSystems  
 TIMCO  
 UTC Aerospace  
 Seyer Industries  
 Triumph Structures  
 United Engineering Co.

BizJet, based in Tulsa, opened a new engine teardown facility in April.



Aerospace and defense is one of Oklahoma's strongest industry ecosystems. Oklahoma is home to the largest military and commercial aircraft maintenance, repair, and overhaul (MRO) operations in the United States.

The FAA trains close to 20,000 students, while Fort Sill trains 32,000 military students annually. The aerospace and defense ecosystem employs 120,000 workers. Oklahoma is home to 137 public-use airports in 123 different cities including three commercial service airports, two of which are international airports with Foreign Trade Zone designations.

Oklahoma's aerospace proposition is further supported by assets unique to the state, such as the FAA Mike Monroney Aeronautical Center located in Oklahoma City, which is the central training and support facility in the U.S. for the FAA and the U.S. Department of Transportation. The center employs 5,500 federal and private contractors and trains more than 20,000 students a year.

Oklahoma's aerospace proposition is further supported by assets unique to the state such as:

- The Oklahoma City Air Logistics

Center at Tinker Air Force Base is one of the largest depots in the U.S. Department of Defense generating \$4.5 billion in economic activity annually.

- Comprehensive UAS infrastructure, which includes the world's first university graduate degree in UAS and dedicated hangar, runways, urban testing facilities, and military airspace available for UAS testing.
- Oklahoma's Spaceport is one of only a few in the country, and has one of the longest runways in North America - 13,500 feet.
- Twelve colleges and universities with aerospace programs and six technical centers with dedicated training for the aerospace industry.
- A Training for Industry Program (TIP), which provides customized employee training for no or low cost to companies.
- Oklahoma's five military installations (Altus AFB, Fort Sill, McAlester Army Ammunition Plant, Tinker AFB, and Vance AFB) are economic engines employing Oklahomans.
- With three Air Force Bases, Oklahoma is ranked the 9th best state for military retirees in 2014.

ORIGINAL EQUIPMENT MANUFACTURERS	TOP SUPPLIERS/MROS	
Tinker Air Force Base	Aero Dynamics	Pryer Machine
Boeing	Cherokee Nation Industries	Spirit Aerosystems
Northrop Grumman	Dow Aero Logistics	Vertical Aerospace
GE	Electro Enterprises	AAR
Lockheed Martin	First Wave MRO	American Airlines
Pratt & Whitney	Frontier Electronic Systems	General Dynamics
Flight Safety Int'l (Simulators)	Honeywell Aero Tulsa	Labarge
	Malone's CNC Machining	LMI Aerospace, SAIC, ASCO
	LIMCO	Lufthansa Technik (Bizjet)
	Profab	The Nordam Group



An aerial view of Boeing's South Carolina production facility includes the 787 final assembly building with solar panels on the rooftop.



FOR MORE INFORMATION:  
[www.SCcommerce.com](http://www.SCcommerce.com)

In the last decade, South Carolina has cemented its position as one of the nation's leaders in aerospace, with a thriving network of more than 200 aerospace and aviation-related companies and suppliers distributed across the state. A 2014 report by Avalanche Consulting showed the Palmetto State ranks first in the nation for aerospace job growth — surging by an astounding 613 percent in the last five years. This boost can be directly linked to Boeing's presence as an anchor in South Carolina.

Since Boeing first selected the Palmetto State for its final assembly and delivery facility in 2009, suppliers and service providers have been locating and growing in the state at a steady pace. Boeing alone uses 350 South Carolina businesses as suppliers and has purchased more than \$700 million in products from those companies. Toray

Industries' 2014 announcement that it would establish a \$1 billion, consolidated carbon fiber manufacturing plant in the state is further evidence of the strength of the aerospace supply chain there.

The state's aviation and aerospace industry has also been buoyed by South Carolina's exponential manufacturing growth and robust automotive industry. The Palmetto State's aviation manufacturing sector and its supplier base employ more than 23,000 workers and include industry leaders like Champion Aerospace, GKN, Eaton, GE, Honeywell, Lockheed Martin, Michelin Aircraft Tire and SKF.

The list continues to grow as more and more of the industry's top companies and service providers — like Senior Aerospace, Kaman Engineering Services and more — locate to South Carolina, attracted by its innovative research, skilled workforce and business-friendly climate.

ORIGINAL EQUIPMENT MANUFACTURERS		
Boeing South Carolina	JPS Industries	Apex Tool Group
Advanced Composite Materials	Nasmyth Precision Products	ATI Allvac
Aero Precision Products	Porvair Filtration Group	BGF Industries
AF Gloenco (Ameriforge)	SKF Aero Bearing Service Center	Huffman Corporation
AMBAC International	SKF Aero Engine	Cutting Edge Composites
ArctiChill	Tiger Enterprises & Trading	DeRoyal Industries
Avionics Seaonics International	United Interiors International	KEMET Electronics
Boyd Corporation	United Technologies Corp - Aerospace	Michelin North America
Carbures	UTC Delavan Spray Technologies	Powertec Industrial Motors
Cargo Composites	Venture Aerobearings	Safety Components
Champion Aerospace	Winbro Group Technologies	Tobul Accumulator
Cytec Carbon Fibers	<b>TOP SUPPLIERS/MROS</b>	Woven Electronics
GE Aviation	InterTech Group	Zeus Industrial Products
GKN Aerospace-South Carolina	3M Company	Cutting Edge Composites
JPS Composite Materials	AEB International	Flexible Technologies
	Aluminum Ladder Company	Highland Industries

The U.S. Air Force Arnold Engineering Development Center in Tullahoma is the largest flight simulation facility in the nation.



FOR MORE INFORMATION:  
[www.TNECD.com](http://www.TNECD.com)

Tennessee connects companies with major research assets, strong advanced manufacturing capabilities and a skilled workforce to form a significant aerospace and defense cluster.

Among the major aerospace employers are Vought Industries, Eaton Corp., Standard Aero Alliance, Boeing, Honeywell and Goodrich. The state is also home to several defense-related companies, including gun and ammunition manufacturers such as Barrett Firearms Manufacturing (Murfreesboro), BAE Systems Ordnance (Kingsport) and Beretta USA Corporation (Gallatin). All together, 47 establishments in Tennessee are engaged in aerospace and defense manufacturing, employing 7,023 people statewide.

Anchoring the state's aerospace cluster is the U.S. Air Force Arnold Engineering

Development Center (AEDC), the largest flight simulation facility in the country. On its 4,000-acre complex in Tullahoma, the center operates 43 aerodynamic and propulsion wind tunnels, as well as highly advanced rocket and turbine engine test cells, space environmental chambers, arc heaters, ballistic ranges and other specialized units.

Supporting the aerospace sector is a roster of research assets that include the University of Tennessee Space Institute (UTSI) in Tullahoma and Oak Ridge National Laboratory (ORNL) in Oak Ridge.

Tennessee's higher education institutions spent more than \$237 million toward R&D in aerospace-related fields in 2012. The UTSI, a graduate education and research institution and part of the University of Tennessee, has awarded more than 2,000 advanced degrees, including 250 doctoral degrees.

**AEROSPACE PARTS & MROS**

- Babcock & Wilcox
- Triumph Aerostructures-Vought
- Aeronautical Accessories, Inc.
- Embraer Aircraft Maintenance Services
- Honeywell International Inc.
- Kilgore Flares Company
- BAE Systems
- Bell Helicopter Textron Inc.
- Standard Aero Alliance Inc.
- UTC Aerospace Systems

- Eaton Corp
- Delfasco, LLC
- Universal Technologies Inc.
- American Ordnance
- Floats & Fuel Cells Inc
- Aerojet Ordnance Tennessee, Inc.
- Canberra Industries, Inc.
- Security Signals, Inc.
- Aces Systems Inc
- The Conrad Company

# Space Exploration Technologies Corporation (or SpaceX) has recently chosen Texas for its permanent launch facility.



As home to the headquarters of two international airlines and two of the world's busiest airports, as well as NASA's world-famous Johnson Space Center, Texas is key for many global aerospace and aviation companies.

The broad range of aerospace activities in Texas includes fighter jet and helicopter assembly, navigation instrument development, advanced spaceflight research, military pilot training, and commercial space. The aerospace and aviation industry directly employs more than 153,000 Texas workers at

1,300 firms. The output of the Texas aerospace manufacturing sector ranks second in the nation, and 17 of the 20 largest aerospace manufacturers in the world, including Boeing, EADS, and Lockheed Martin, have major operations in Texas.

Geographically, the aerospace and aviation industry has a substantial presence in many regions of the state. In North Texas, the Dallas-Fort Worth region

boasts the state's largest concentration of aerospace manufacturing workers, as well as the headquarters of American Airlines and Southwest Airlines. San Antonio, sometimes referred to as "Military City USA," is home to tens of thousands of U.S. Air Force personnel, headquarters of the U.S. Air Force Air Education Training Command, and is a major national hub for aircraft maintenance and overhaul. On the Gulf Coast, Houston is the legendary home to NASA mission control and dozens of related spaceflight contractor firms.

Elon Musk, SpaceX founder, recently announced his selection of Boca Chica Beach — approximately 20 miles east of Brownsville — to serve as the location for the company's permanent rocket launch facility. Brownsville will now be home to future launches of the Falcon 9 and Falcon Heavy orbital vertical launch vehicles. This facility will create 300 jobs, pump \$85 million in capital investment into the local economy, and serve as the nation's first commercial rocket launch facility. Elsewhere in the state, one of the world's largest helicopter repair facilities resides in Corpus Christi, while the cities of Waco, Amarillo, El Paso, Wichita Falls, McAllen, and Harlingen all support manufacturing facilities for various Fortune 500 aerospace companies.

FOR MORE INFORMATION:  
[www.texaswideopenforbusiness.com/industries/aero-space-aviation-defense](http://www.texaswideopenforbusiness.com/industries/aero-space-aviation-defense)



### ORIGINAL EQUIPMENT MANUFACTURERS

- Lockheed Martin
- L-3 Communications
- Bell Helicopter
- The Boeing Company
- Raytheon
- United Technologies Corp.
- Triumph Group
- Air Bus Helicopters
- BAE Systems
- SAFRAN (Turbomeca & CFAN)
- Honeywell International
- General Dynamics
- Gulfstream Aerospace
- Rockwell Collins
- Zodiac Aero

### TOP SUPPLIERS/MROS

- Boeing Global Services
- Lockheed Martin Commercial Engine Solutions
- L-3 Mission Integration
- L-3 Platform Integration
- Elbit Systems (M7 Aerospace)
- Pratt & Whitney (UTC subsidiary)
- Standard Aero
- BBA Aviation (Dallas Airmotive)
- ST Aerospace
- Bombardier
- Texas Aero Engine Service
- Cessna Aircraft
- General Electric
- Beechcraft
- BBA Aviation
- Chromalloy Gas Turbines

## Orbital Sciences rocket assembly at Wallops Flight Facility is located on the Eastern Shore of Virginia.



FOR MORE INFORMATION:  
[www.yesvirginia.org/KeyIndustries/Aerospace](http://www.yesvirginia.org/KeyIndustries/Aerospace)

More than 250 aerospace firms call Virginia home, drawn to the Commonwealth by a skilled workforce, strong economic growth, pro-business environment and excellent quality of life. Virginia's central location on the Atlantic Coast provides interstate and rail access to the Northeast, Southeast and Midwest, and the Port of Virginia and Washington-Dulles International Airport offer access to international markets. Virginia's role in the aerospace industry dates back to 1917, when the nation's first civil aeronautics laboratory was established in Hampton. . .it is now known as the NASA Langley Research Center.

Virginia's Aerospace industry employs over 30,300 people and includes the production of aerospace equipment as well as aerospace research and development at private, academic and government facilities. The industry is supported by 390 machine shops employing 5,400 people. The direct economic output of the aerospace sector is \$7.2 billion. Aerospace also supports \$4.6 billion in additional economic activity in Virginia.

Global aerospace leader Rolls-Royce is ramping up its new Crosspointe campus in Prince George County, which includes multiple manufacturing facilities, aerospace suppliers and a world-class applied research collaborative, the Commonwealth Center for Advanced Manufacturing (CCAM).

The National Institute of Aerospace is a research and graduate education institute created to conduct leading-edge aerospace and atmospheric research, develop new technologies, and help prepare the next generation of scientists and engineers. Research at NIA is sponsored by aerospace companies and government agencies. NIA is a strategic partner of NASA Langley Research Center and works through a consortium of research universities including Virginia Tech, University of Virginia, Old Dominion University, and The College of William and Mary.

In the past 10 years, 67 aerospace industry projects have been announced, creating more than 7,400 new jobs and generating investments worth more than \$1.76 billion.

### AEROSPACE PARTS & MROS

Aerojet Rocketdyne  
 Orbital Sciences  
 Rolls-Royce  
 Goodyear Tire & Rubber

### TOP SUPPLIERS/MROS

Advex  
 AERIAL Machine and Tool

Alcoa Howmet  
 Butler Parachute Manufacturing  
 Capital Aviation Instruments & Avionics  
 Carson Helicopters  
 Dynamic Aviation  
 EURO COMPOSITES  
 Kollmorgen  
 L-3 Flight International  
 Marion Mold & Tool

Measurement Specialties  
 Modern Machine & Tool  
 Moog  
 RTI Martinsville  
 Summit Helicopters  
 Synchrony  
 Triumph Aerospace Systems  
 UMA  
 Wilkerson Aircraft Tires

Bombardier Aerospace, the world's third largest manufacturer of civil aircraft, operates a major maintenance facility in West Virginia.



FOR MORE INFORMATION:  
[wvcommerce.org](http://wvcommerce.org)

The aerospace industry is a growing sector in West Virginia's economy. In the past 10 years, the number of establishments has expanded by 24.1 percent. Employment in the aerospace industry has increased by 21.6 percent.

Aerospace companies have been drawn by West Virginia's pro-growth business climate, such as:

- Strategic location within an eight-hour drive to more than half the U.S. population and more than one-third of the Canadian market
- Workforce, which has earned a reputation for high productivity and low turnover
- Low cost of doing business — 14 percent below the national average
- Tax reforms, which have removed more than \$482 million of business tax burden in the past seven years

The Special Aircraft Property Valuation Act provides a property tax reduction for eligible aircraft. Aircraft owned or leased by commercial airlines, charter carriers, private carriers and private companies are valued for property tax purposes at fair market salvage value

or 5 percent of the original cost of the property, whichever is lower.

The North Central West Virginia Airport in Bridgeport is a critical economic driver of the aero industry in West Virginia. An economic impact study prepared for the facility concludes that the North Central West Virginia Airport contributes "an estimated \$394.6 million economic benefit to the regional economy."

The airport's roster includes respected industry names such as Aurora Flight Sciences, Bombardier Aerospace, Lockheed Martin, Pratt & Whitney Engine Services, and two world-class training facilities — the Robert C. Byrd Institute for Advanced Flexible Manufacturing and the Robert C. Byrd National Aerospace Education Center.

Bombardier Aerospace, the world's third largest manufacturer of civil aircraft, offers comprehensive aftermarket aircraft services with a main maintenance facility in West Virginia. "The workforce is a major ingredient in why we're so successful here in West Virginia. We have a great customer satisfaction metric coming out of this facility," says Bombardier Aerospace General Manager Stephen McCoy. "We've grown from a workforce of 10 to more than 400."

#### TOP SUPPLIERS/MROS

Aurora Flight Sciences  
 B/E Aerospace  
 Bombardier Regional Aircraft Services

Engine Airframe Solutions Worldwide  
 FCX Systems  
 Goodrich Sensors & Integrated Systems  
 HQ Aero

KCI Aviation  
 Lockheed Martin  
 Pratt & Whitney Engine Services