

**2014**  
*General Aviation Statistical Databook  
& 2015 Industry Outlook*



*General Aviation  
Manufacturers Association*



*General aviation is defined as all aviation other than military and scheduled commercial airlines.*

### General Aviation:

- Includes over **362,000** general aviation aircraft worldwide, ranging from two-seat training aircraft and utility helicopters to intercontinental business jets flying today, of which over **199,000** aircraft are based in the United States and over **103,000** aircraft are based in Europe.
- Supports **\$219 billion** in total economic output in the United States and supports **1.1 million** total jobs.
- In the U.S., flies almost **23 million** flight hours, of which two-thirds are flown for business purposes.
- Flies to more than **5,000** U.S. public airports, while scheduled airlines serve less than **500** airports. The European general aviation fleet can access over **4,200** airports.
- Is the primary training ground for most commercial airline pilots.



GAMA is an international trade association representing more than 85 of the world's leading manufacturers of general aviation airplanes and rotorcraft, engines, avionics, components, and related services. GAMA's members also operate repair stations, fixed-based operations, pilot and maintenance training facilities, and manage fleets of aircraft. For more information, visit GAMA's Web site at [www.GAMA.aero](http://www.GAMA.aero) and look for us on Facebook and LinkedIn.

## Welcome from GAMA Chairman

Welcome to GAMA's *2014 General Aviation Statistical Databook & 2015 Industry Outlook*, the leading industry resource on general aviation data.

This book contains the most up-to-date information available on general aviation (GA) shipments and billings, GA fleet and flight activity, the pilot community, airports and aeronautical facilities, GA safety information, and international GA data. It's a fascinating overview of our industry's current performance, and provides an in-depth look at just how vast and far-reaching the general aviation marketplace is today.

These first few pages provide a snapshot of GAMA's critical work in 2014. In the United States, our general aviation jobs rallies continued to bring the message of GA's economic importance to the public in U.S. states as diverse as Texas and North Dakota. We launched National GA Manufacturing Week to allow members to share more of their success stories with political and business leaders throughout the United States. The U.S. Congress repeatedly called on GAMA as the experts to testify on industry issues. Additionally, GAMA's global presence expanded with the introduction of a new office in Dubai, while the association played an active role in driving forward a European Union roadmap for better regulation of general aviation.



**GAMA Chairman Joe Brown, President of Hartzell Propeller**

As you read this book, it's clear that GAMA works tirelessly every day to promote and defend the value of general aviation manufacturing throughout the world. It's the reason why I'm proud to be a member of GAMA, and honored to be its Chairman in 2015. Thank you for your support of what I consider the world's greatest industry.

Best,

**Joe Brown**

GAMA Chairman and President, Hartzell Propeller

### GAMA's History and Mission

Founded in 1970, GAMA is devoted to one primary purpose: fostering and advancing the general welfare, safety, interests, and activities of general aviation. This includes promoting a better understanding of general aviation manufacturing and the important role it plays in creating good

jobs and economic opportunity, as well as supporting educational and charitable activities in communities around the globe.

Headquartered in Washington, DC, with offices in Brussels and Dubai, as well as representation in Beijing, GAMA represents the interests of its members to government leaders and agencies

throughout the world. These interests include safety regulations and standards, market access, development of aviation infrastructure, tax policy, environmental policy, and aviation security. GAMA works with industry associations and companies worldwide to promote the interests of general aviation.

GAMA represents more than 85 of the world's leading manufacturers of general aviation airplanes and rotorcraft, engines, avionics, components, and related services. In addition to building nearly all of the general aviation airplanes flying worldwide today, GAMA member companies also operate fleets of airplanes, fixed-based operations, pilot/technician training centers, and maintenance facilities worldwide.

#### GAMA Moment in History



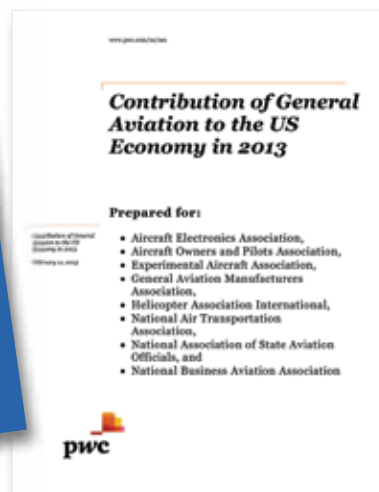
GAMA Chairman Frank E. Hedrick, left, of Beech meets with President Gerald R. Ford in 1976 to thank him for recognizing the significance of general aviation in air transportation.



## Highlights from the General Aviation Economic Impact Study

In 2014, GAMA and seven other general aviation associations\* hired PricewaterhouseCoopers (PwC) to determine the industry's total impact on the U.S. national and state economies. Using data from 2013, the most recent year available, PwC analyzed the data and issued the report, "Contributions of General Aviation to the US Economy in 2013." Highlights of the results follow. For the complete PwC study, as well as a 16-page report highlighting stories representing some of the hundreds of businesses and charitable organizations that make up the dynamic and exciting general aviation industry, please visit GAMA's Web site at [www.GAMA.aero](http://www.GAMA.aero).

- The total economic output supported by general aviation in the United States is **\$219 billion**.
- The general aviation industry supports **1.1 million** jobs, including direct, indirect, induced, and enabled jobs, in the United States.



- The general aviation manufacturing industry directly employs **102,600** people in the U.S., with an average salary of **\$112,000** per person.
- The total amount of labor income supported by general aviation in the U.S. is **\$69 billion**.
- **California, Texas, and Florida** are the top three states in total U.S. Gross Domestic Product (GDP) impact of general aviation.
- **Kansas, Connecticut, and Georgia** are the top three states in total economic output

supported by general aviation as a percent of total economic output in the state.

- **Kansas, Connecticut, and Alaska** are the top three states in total number of jobs supported by general aviation as a share of statewide employment.

\*Aircraft Electronics Association, Aircraft Owners and Pilots Association, Experimental Aircraft Association, Helicopter Association International, National Air Transportation Association, National Association of State Aviation Officials, and National Business Aviation Association

## TOP 10 STATES

### in terms of general aviation's total GDP impact per capita

1. Kansas	3. Alaska	5. North Dakota	7. Vermont	9. Minnesota
2. Connecticut	4. Arizona	6. Washington	8. Georgia	10. Oregon

### in terms of total jobs attributable to general aviation

1. California	3. Florida	5. Illinois	7. Arizona	9. New York
2. Texas	4. Georgia	6. Kansas	8. Ohio	10. Washington

## GAMA Highlights GA Jobs in Texas and North Dakota

In 2014, GAMA continued to share the importance of general aviation manufacturing to the U.S. economy by hosting jobs rallies in Texas and North Dakota.

More than 700 people attended the March 28 jobs rally at Bombardier's Dallas, Texas facility. Speakers included U.S. Senator John Cornyn, and U.S. Representatives Eddie Bernice Johnson, Sam Johnson, Pete Sessions, and Marc Veasey. Joining them were Peg Billson of BBA Aviation, Ed Dolanski of Aviall, Larry Flynn of Gulfstream, Robert Hastings of Bell Helicopter, David Paddock of Jet Aviation, Marc Paganini of Airbus Helicopters, Stan Younger of Bombardier, and Pete Bunce of GAMA.

As he looked out over the crowd, Senator Cornyn remarked, "I appreciate this industry and what each of you all do to contribute, not only to jobs but to public safety and to helping to grow our economy. It's absolutely critical."

On September 5, the University of North Dakota (UND) in Grand Forks was the site of GAMA's twelfth jobs rally. The event, held at the university's Odegard School of Aerospace Sciences, provided a unique opportunity to share the industry's many career opportunities with local university and high school students.



**U.S. Senator Heidi Heitkamp (D-ND) addresses a crowd of GA manufacturing employees, UND professors, and students at the GA rally in Grand Forks, ND.**



**U.S. Senator John Cornyn (R-TX) speaks at GAMA's GA Jobs Rally in Dallas, Texas.**

The crowd of about 300 people included general aviation manufacturing employees, UND professors, and students from UND and West Fargo High School, who flew to the rally on Duggy, an historic DC-3 airplane. U.S. Senators John Hoeven and Heidi Heitkamp, U.S. Representative Kevin Cramer, North Dakota Lt. Governor Drew Wrigley, and U.S. House General Aviation Caucus Co-Chair Sam Graves spoke about the importance of general aviation in creating jobs and the need for Science, Technology, Engineering & Mathematics (STEM) education. Industry speakers included Piper Aircraft's Simon Caldecott, Appareo Systems' Tony Grindberg, Cirrus Aircraft's Pat Waddick, UND Provost Thomas DiLorenzo, and Bunce.

"At the University of North Dakota and across my state, general aviation has been a burgeoning industry as North Dakota's population and economy grow by the day," Heitkamp said.

After the rally, GAMA and UND hosted a Career Fair for students. Fourteen companies and organizations took part in the event, including Appareo Systems, Cirrus Aircraft, GAMA, Honeywell, Piper Aircraft, Textron Aviation, and UTC Aerospace Systems.

The rally and career fair were covered by the local network TV affiliates for ABC, CBS, and Fox, and by *The Grand Forks Herald*.

## Leaders Celebrate National GA Manufacturing Week

Governors and members of the U.S. Congress visited GAMA members throughout the United States during National General Aviation Manufacturing Week, August 18-22. GAMA launched the initiative as a way for companies to show local political and business leaders the strong economic and jobs impact general aviation has in their states.

Georgia Governor Nathan Deal was one of the leaders who came to Gulfstream Aerospace Corp. in Savannah. "Georgia appreciates Gulfstream's presence here for a number of reasons," Deal said. "Not only have they provided jobs and investment here, but they have helped put Savannah on the global stage when it comes to doing business." Deal's visit was covered extensively by the local news media.

Tennessee Lt. Governor Ron Ramsey tried his hand at riveting while touring Bell Helicopter's facility in Piney Flats. Ramsey's visit was also featured in the local press.

U.S. Representative Kurt Schrader (D-OR) visited Rockwell Collins' facilities in Wilsonville, Oregon.



**Governor Nathan Deal (R-GA) praises Gulfstream Aerospace Corp. for creating jobs in Georgia.**



**Tim Taylor, President and CEO of FreeFlight Systems, Inc., testified in June regarding the importance of the ADS-B 2020 mandate and the successful implementation of NextGen.**

## GAMA Testifies Before U.S. Congress

GAMA members provided expertise on a variety of issues when they testified before the U.S. House of Representatives in 2014.

John Uczekaj, President and CEO of Aspen Avionics, spoke before the U.S. House Small Business Committee in February about the Federal Aviation Administration (FAA)'s impact on small businesses. The Albuquerque, New Mexico-based company, which was founded by two aviation enthusiasts in 2004 and has 47 employees, has had its systems installed in more than 6,000 general aviation aircraft worldwide, but still faces challenges in bringing new, safety-enhancing products to market.

"To be successful, businesses, and in particular small businesses, need to clearly understand the tasks and be able to expect the FAA to respond in a timely fashion," Uczekaj said. "The money saved by instituting clear procedures, consistent training, and detailed certification guidelines to FAA personnel would boost productivity, grow the industry, and secure jobs."

Tim Taylor, President and CEO of FreeFlight Systems, Inc., a 53-person company in Waco, Texas that designs, manufactures, and supports avionics capabilities, testified

in June about the need for the FAA to keep to its 2020 mandate requiring general aviation aircraft operators to equip with Automatic Dependent Surveillance-Broadcast (ADS-B) Out capabilities. ADS-B is the linchpin technology for NextGen to work effectively.

"Government and industry have worked in harmony to ensure that equipment is available at the right price and at the right time to provide immediate and long-term benefits to those who equip today," Taylor noted.

A month later, GAMA Vice Chairman Joe Brown, President of Hartzell Propeller, and GAMA President and CEO Pete Bunce testified about the state of U.S. aviation manufacturing before the U.S. House Aviation Subcommittee. They talked about the need to reform the FAA's certification process, to reauthorize the Export-Import (Ex-Im) Bank of the United States, and to maintain the United States' role as a worldwide leader in aviation.

"Anything we do in policy making that hurts our industry's time to market or entry into new markets will have an exponential impact on the incredibly diverse employers making up the U.S. aviation supply chain," Brown said.

Bunce also briefed members of the U.S. House General Aviation Caucus in June about issues critical to the industry's growth, including certification reform and reauthorization of the Ex-Im Bank. Additionally, Jim Hirsch, President of Air Tractor, Inc., spoke to staff of the U.S. House of Representatives in July about the Ex-Im Bank's importance to small businesses.

## GA Caucus Welcomes New Leaders

GAMA praised the selection of the new co-chairs of the U.S. Senate General Aviation Caucus, Senators John Boozman (R-AR) and Joe Manchin (D-WV), as well as new U.S. House General Aviation Caucus Co-Chair Congressman Marc Veasey (D-TX). Congressman Sam Graves (R-MO) will return as the other House Co-Chair. All four leaders are strong advocates for general aviation.

**TOP: John Boozman and Joe Manchin; BOTTOM: Sam Graves and Marc Veasey.**





## Student Winners of Aviation Design Challenge Build Glasair Sportsman Airplane

Four students, their teacher, and two chaperones from Sunrise Mountain High School in Las Vegas, Nevada spent an unforgettable two weeks building an airplane after winning the 2014 GAMA/Build A Plane Aviation Design Challenge.

The school topped the list of entries in the Science, Technology, Engineering & Mathematics (STEM) competition for U.S. high schools, which attracted 79 entries from schools in 33 states plus Washington, DC—nearly triple the number of applicants as 2013.

After learning of his school's win, Principal Grant Hanevold wrote to GAMA: "It was one of my fondest moments as a school principal. Thanks for providing this opportunity for my students, and for the generosity of your board. This competition, and ultimate victory, will be life-changing for my kids. I can't thank you and the board enough for what you do, and for the positive impact you are making in the life of a kid."

GAMA President and CEO Pete Bunce noted, "This story is exactly why GAMA and Build A Plane started this competition and why we are so passionate about it."

Schools used "Fly to Learn" curricula and training, including software powered by X-Plane, to learn the science of flight and airplane design. Each school then modified a Glasair Sportsman airplane to fly from one airport to another, and was scored on the plane's weight, fuel usage, and time of flight. Judges from GAMA's engineering team selected the winning school, taking into consideration the design features based on what the students applied from the curricula as it related to aerospace engineering principles.

Winning students Carlos Alvarado, Joshua Carlson, Kenny Ellis, and Jose Rodriguez, teacher Thitiya Pathakkhinang, and advisors Reza Karamooz and John Kanuch headed to Arlington, Washington, to build a Glasair Sportsman airplane from June



16–27. The plane, a metal and composite aircraft that seats four adults, is sold as a kit and can be assembled with assistance through Glasair's well-known "Two Weeks to Taxi" program.

The Sunrise Mountain team reported to Glasair at 7 a.m. each day—where their work included bucking rivets, sanding the airframe, fabricating and attaching fuel lines, and mounting the gear—and left around 6 p.m. On Day 11, the students were able to sit in the airplane as it taxied for the first time. The plane also passed an FAA inspection to receive its certificate of airworthiness.

A number of special guests visited the build to learn more about the students' experiences. They included U.S. House Aviation Subcommittee Ranking Member Rick Larsen (D-WA); Arlington, Washington Mayor Barbara Tolbert; GAMA Chairman Steve Taylor, President of Boeing Business Jets; members of the U.S. military; and KING-TV, the NBC affiliate in Seattle, Washington.



GAMA member companies sponsored the team's travel, lodging, meals, and visits to local aviation sites of interest, such as the nearby Boeing facility in Everett, Washington, the Museum of Flight, and Alaska Airlines' operations at Seattle-Tacoma International Airport. Glasair contributed two weeks of staff time to support the build.

**TOP: Kenny Ellis works on the wing; ABOVE: Carlos Alvarado tightens a bolt on the frame; BELOW: The team from Las Vegas consisted of four students, their teacher, and two chaperones.**



## FAA Eliminates Delays to Start of Aircraft Certification Projects

GAMA praised the Federal Aviation Administration's (FAA) decision to streamline its aircraft certification process and eliminate delays by replacing the current sequencing procedure with a new approach that better prioritizes the agency's direct involvement in certification projects.

The change, announced in September, will offer general aviation manufacturers much-needed predictability to bring new products and technologies to their customers. GAMA has been working with the FAA to forge a better approach to manage limited certification resources since the sequencing process took effect in 2005.

"We look forward to working with the FAA to ensure that the implementation of this new prioritization process meets its intended objectives to streamline the certification process and improve predictability," GAMA President and CEO Pete Bunce said. "We also want to thank the U.S. Congress for their efforts to highlight the problems with the sequencing process."



*It is critical to facilitate a successful transition to unleaded avgas.*

—PETE BUNCE

and the FAA comprise the PAFI Steering Group managing this project.

The FAA first assessed proposals for 10 candidate fuels on their expected impact to the existing fleet, production and distribution infrastructure, and the environment. The FAA also evaluated toxicological effects and the availability of the fuel to consumers in terms of cost to aircraft operations. The agency then narrowed the candidates to four fuels that met the acceptance criteria, with companies asked to supply 390 gallons of fuel for laboratory and rig testing. Fuels determined to be potentially viable replacements will move on to phase two, which is comprised of full-scale engine and aircraft testing. This second phase, which the FAA expects to complete in 2018, will produce airworthiness standardized data necessary to support fleet-wide certification.

GAMA President and CEO Pete Bunce said, "It is critical to facilitate a successful transition to unleaded avgas so that it provides environmental benefits, ensures the continued safety of the piston-engine fleet, and minimizes the economic impact on our industry. We also appreciate the strong support of FAA Administrator Michael Huerta and the U.S. Congress in funding this initiative."

## Unleaded Avgas Transition Progresses as Fuels Chosen for Testing

The Federal Aviation Administration (FAA) took two major steps toward transitioning to an unleaded aviation gasoline for piston-engine general aviation aircraft by evaluating 10 candidate fuels and then selecting four of them for initial testing at its William J. Hughes Technical Center in Atlantic City, New Jersey.

The fuels were submitted for consideration through the Piston Aviation Fuels Initiative (PAFI), a joint industry-government effort to facilitate the development and deployment of unleaded aviation fuel to replace the currently available 100 low-lead avgas. GAMA, other industry groups,

## Repair Station Rule Finalized

In January, the U.S. Department of Homeland Security finalized the repair station security rule, which the U.S. Congress first mandated in 2004. The rule is designed to improve the security of U.S. and non-U.S. repair stations.

"By finally putting this rule into place, the U.S. government is ending a decade of bureaucratic inaction, establishing risk-based security requirements for repair stations, and making it possible for U.S. certified repair station businesses to access and support markets throughout the world," GAMA President and CEO Pete Bunce said. "We are thankful to both the relevant authorizing and appropriating committees in the U.S. Congress who joined with us in demanding this bureaucratic foot-dragging finally end."



## Safety Initiatives Move Forward

The Federal Aviation Administration (FAA) is currently prototyping and testing new training and certification standards to assess pilots' knowledge and skills based on the work of an Aviation Rulemaking Committee (ARC) that GAMA chaired. The Airman Certification Standards seek to better reflect real-life scenarios pilots may experience in the cockpit than the previous knowledge tests, which were based more on memorization skills. The new tests are expected to be available in late 2015.

In addition, GAMA continued to lead several efforts managed by the General Aviation Joint Steering Committee, which seeks to improve general aviation safety in the United States. The group—which also includes the FAA, pilot organizations, instructors, mechanics, builders, and manufacturers—undertakes root-cause analysis of accidents to develop ways to promote safety based on education, training, and enabling new equipment in general aviation aircraft. Currently, the group is focusing on mitigating the risk of engine failures and implementing risk mitigation against loss of control.



## ADS-B GA Equipage Accelerates in 2014

Automatic Dependent Surveillance-Broadcast (ADS-B) equipage picked up in 2014, with more than 9,100 rule-compliant aircraft flying in the United States by the end of the year. The vast majority of these aircraft are general aviation.

Since the Federal Aviation Administration (FAA) announced in 2007 that ADS-B would be the future surveillance infrastructure for NextGen in the United States, GAMA has worked closely with the agency and stakeholders to ensure that appropriate performance requirements for ADS-B compliance are established for operations in regulated airspace. The equipment standards provide a graduated performance approach to equipage based on the size and complexity of the aircraft and the type of airspace in which the aircraft will fly. The framework for ADS-B implementation enables manufacturers to develop innovative equipment that provides cost-effective solutions for all types of aircraft.

Since the publication of the standards, manufacturer innovation has driven down costs, as new capabilities and fully integrated solutions meet the demands of the marketplace. There are over a dozen products on the market right now and more are expected to be launched in 2015.

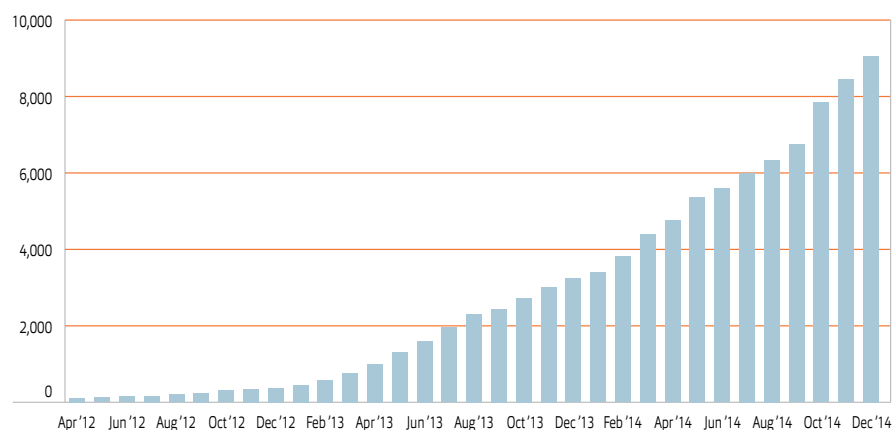
The FAA announced in 2010 that all aircraft must equip with ADS-B by January 1, 2020.

The FAA has achieved the program's milestones and reinforced in 2014 that 2020 is the deadline for equipage. To ensure the successful implementation of the rule—specifically how to equip thousands of aircraft effectively—the FAA established the Equip 2020 program in October 2014 to provide a forum through which industry can work with the agency to address inconsistencies in the regulatory guidance, identify remaining obstacles to equipage, and provide a mechanism to educate the aviation community about ADS-B.

ADS-B is being deployed worldwide in support of air traffic modernization programs. Its benefits include enhanced surveillance for general aviation at lower altitudes, increased safety by reducing the risk of collisions with other aircraft, and free in-cockpit weather and flight information deployed throughout the United States.

The FAA has estimated that approximately 100,000 to 160,000 general aviation aircraft in the United States will equip by 2020. GAMA continues to lead the GA ADS-B working group, which is exploring additional opportunities to ensure ADS-B solutions exist for all aircraft and is working with the FAA and the operator community toward successful implementation of this critical NextGen program.

ADS-B Equipped Aircraft (April 2012–December 2014)



## Rethinking General Aviation in Europe

As European Union institutions, member states, and the European Aviation Safety Agency (EASA) continue to recognize the importance of a strong and vibrant general aviation sector in Europe, GAMA is working to significantly improve the regulatory environment there while also building greater awareness of the industry's potential with key regulators and policymakers.

Specifically, GAMA and its sister organizations have championed the rapid implementation of a roadmap to move toward more proportionate regulation of initial airworthiness, operations, licensing, and maintenance for all segments of the general aviation marketplace. GAMA is a member of the regulatory committee created to provide industry input to reforming general aviation in Europe.

GAMA has placed great emphasis on the importance of not limiting this exercise to the lightest end of general aviation but to ensure that, over time, the more complex operations and aircraft—including business aviation and rotorcraft—will see a similar level of improvement. Across Europe, individual authorities, EASA, and policymakers are accepting the general aviation community's message that a one-size-fits-all regulatory policy will not work. The roadmap heralds the promise of a more proportionate regulatory environment.

## EASA Dedicates Safety Conference to General Aviation

In October, the European Aviation Safety Agency (EASA) dedicated its annual safety conference for the first time to better regulation of general aviation in Europe. With a record attendance of 350 people, the two-day meeting in Rome, Italy looked at improving all aspects of general aviation, such as operations, licensing, maintenance, and initial airworthiness.

GAMA played a key role in planning the conference, which attracted Transport



**European Commission official Filip Cornelis speaks at the first ASTM General Aviation Standards Committee meeting in Brussels.**

Ministers from both the United Kingdom and Italy. The conference was formally supported by the Italian government, which held the Presidency position of the Council of the European Union at the time. GAMA President and CEO Pete Bunce spoke on the opening panel.

## GAMA Hosts GA Workshop

In September, GAMA hosted high-level speakers from both the European Commission and the European Aviation Safety Agency (EASA) in Brussels, Belgium to discuss the future of general aviation aircraft design in Europe. GAMA hosted the workshop, "Shaping the Future of General Aviation Products in Europe," in partnership with ASTM International, a global standards body, to mark the occasion of the first ASTM General Aviation Standards Committee meeting held in Brussels.

Filip Cornelis, who leads the Air Safety Unit of the European Commission, which oversees EASA, stressed the Commission's strong support for the modernization of small airplane design rules, CS-23, to keep pace with technological developments. Yves Morier, who heads the general

aviation division of EASA, said the agency is committed to removing unnecessary regulatory burdens from general aviation.

Both speakers cited the CS-23 initiative as an example of Europe's new approach to better regulating general aviation and the value of global cooperation. The CS/Part 23 initiative will see the world's leading authorities modernize their own certification rules, led jointly by the Federal Aviation Administration (FAA) and EASA. The globally agreed-upon standards are set within the ASTM committee.

## GAMA Champions Commercial Operations of Single-Engine Turbine Airplanes in Europe

After 20 years of debate, Europe is on the cusp of opening a long-awaited market for general aviation airplanes: single-engine commercial operations.

Currently, the operation of Single-Engine Turbine airplanes in Instrument Meteorological Conditions (SET-IMC) or at night is prohibited in Europe, despite being long established in countries like the United States, Canada, and Australia. While a limited number of exemptions in specific European countries allow commercial flights, just 12 airplanes are currently used to conduct these operations in Europe—compared to 673 airplanes in the U.S.

GAMA and its member companies have long advocated for an appropriate regulatory framework that recognizes the reliability of single-engine turbine airplanes. This change would also make Europe compliant with the International Civil Aviation Organization. In 2013, the European Aviation Safety Agency began to develop a regulatory framework for these operations, and a draft rule was published in fall 2014.

*GAMA is working to improve the regulatory environment in Europe and build greater awareness of the industry's potential.*





GAMA President and CEO Pete Bunce, right, answers a question from CEPA Chairman Roger Whyte during an interview at CEPA Expo.

### GAMA Urges Implementation of APEC Core Principles in Asia-Pacific Region

Transport Ministers of the 21 economies of the Asia-Pacific Economic Cooperation (APEC) forum in September 2013 approved a set of core principles for the regulation of business aviation. GAMA continues to advocate within the Asia-Pacific region for full implementation of these important principles. GAMA made the case for prompt implementation of APEC's principles at the International Business and Charter Aviation Summit in Jakarta in October 2014, and in a meeting with the Acting Director General of the Indonesian civil aviation authority. Because of its large and diverse economy, the size of its market, and its geography, Indonesia stands to benefit greatly from a general aviation sector unhindered by rules designed for airlines.

### GAMA Deepens Cooperation with China's Civil Aviation Authority

GAMA was honored to host two delegations led by senior officials from the Flight Standards and the Airworthiness and Certification Departments of the Civil Aviation Administration of China (CAAC) in the summer. The Chinese officials, senior GAMA staff, and GAMA member companies' senior representatives explored ways the industry and the CAAC can collaborate to help the CAAC efficiently carry out its important work of ensuring aviation safety while making sure that general aviation in China can continue to grow. The meetings resulted in a better understanding by member companies of the procedures required by Chinese aviation laws and regulations, and the two sides agreed to continue to work together to help general aviation grow in China.

### GAMA Committed to Business Aviation Growth in Central Europe

In November, GAMA President and CEO Pete Bunce reaffirmed the importance of general aviation growth in Central and Eastern Europe during a keynote address at the Central Europe Private Aviation (CEPA) Expo in Prague, Czech Republic. He highlighted the important role that business aviation plays in connecting European countries and promoting economic activity, while also recognizing the need for a more proportionate regulatory approach.

"In Europe, the fortunes of general and business aviation are tied very much to the economy," Bunce said in an interview with CEPA Chairman Roger Whyte. "There is a general recognition within Europe that business aviation needs to be regulated differently, so we are excited about the changes we are seeing at the European Aviation Safety Agency."

### New GAMA Office Opens in Middle East/North Africa

GAMA expanded its international presence in April when it opened a new office for the Middle East/North Africa region in Dubai, UAE. The office is co-located with the Middle East and North Africa Business Aviation Association (MEBAA). GAMA and MEBAA plan to work with regional

*In Europe, the fortunes of general and business aviation are tied very much to the economy.*

—PETE BUNCE

authorities to ensure that the regulatory framework for business aviation operations in the region takes account of the special characteristics of this vital sector.

General aviation has grown significantly in the region in recent years. General aviation fixed-wing airplane deliveries to the region increased from less than 5 percent of total deliveries in 2007 to 9 percent in 2013.

"GAMA is excited to establish a presence in this important part of the world and to work with our partners at MEBAA to ensure that business aviation in the region develops to its full potential in an appropriate regulatory environment that is focused on safety," GAMA President and CEO Pete Bunce said.

MEBAA Founding Chairman Ali Al Naqbi added, "We look forward to a productive period ahead as we work together to develop new ways of treating business aviation as the productivity and business tool that it is."

GAMA's sole focus is on facilitating the growth and vitality of general aviation (GA) around the world. In 2015, our agenda will build upon past success by promoting policies and objectives that support a dynamic and sustainable global general aviation manufacturing industry. Our products link nations and their communities, facilitate business, create jobs, and fulfill an integral role in global transportation and aeromedical/humanitarian relief missions.

The foundation of GAMA's organizational strength is its members and their thousands of employees with expansive footprints throughout the global marketplace. We actively coordinate with our board of industry executives and leaders on key worldwide aviation policy initiatives. GAMA serves its membership by providing timely information and analysis about general aviation issues and by effectively representing the industry before regulators and policymakers globally. GAMA also communicates the economic contributions and societal benefits of general aviation to the media, government officials, and the communities GA serves.

## GAMA's specific goals for 2015 include:

### Raising GA safety levels worldwide

- Enable the development of new general aviation products and the adoption of new safety technologies for small airplanes and rotorcraft through transformative initiatives, such as the restructuring of regulatory standards, establishing consensus standards-based methods of compliance, and facilitating equipage of the existing fleet
- Encourage policies that promote a better, safer, and more efficient certification process that effectively and efficiently utilizes industry and government resources
- Advocate and highlight best practices in safety management for the airworthiness and operation of GA aircraft
- Advance data-driven general aviation safety programs worldwide to raise safety levels and reduce the number of fatal GA accidents
- Facilitate the use and retrieval of electronic flight data to inform aviation safety activities and promote GA safety-risk analysis practices globally

### Improving governmental effectiveness and efficiency, and removing unnecessary regulatory burdens

- Implement meaningful certification reform to promote safety, sustain jobs, improve resource allocation, and enhance worldwide competitiveness
- Promote certification initiatives with authorities to strengthen airworthiness compliance activities and system safety oversight, and ensure support for industry development of new aviation products and technologies
- Work with authorities and aviation stakeholders to ensure the success of NextGen and Single European Sky activities and progress the Federal Aviation Administration's Automatic Dependent Surveillance-Broadcast program
- Work to establish consistent and appropriate airworthiness standards for business aircraft cabin interiors
- Improve repair station flexibility by adopting modern business practices and eliminating redundant audits
- Strive to ensure that security programs are risk-based and enhance security without adversely impacting the utility of GA

### Building global awareness about the economic impact and societal benefits of GA

- Highlight GA's economic contribution through GA rallies and the annual "GAMA Hill Day" in the U.S., as well as engagement with members of the U.S. Administration and Congress, the European Parliament and Commission in Brussels, and other global forums
- Promote industry's substantial economic and jobs impact to policymakers, the public, and the media
- Expand social media efforts to bring awareness to and promote GA activities
- Spotlight GA efforts to enhance workforce development, highlight Science, Technology, Engineering & Mathematics (STEM) education, support U.S. military veterans, and promote economic growth and job creation

- Support U.S. Congressional Committees and Caucuses, the European Parliament's Transport Committee, and other efforts to strengthen understanding of our industry and its importance to individual nations and the global economy

### Strengthening access and markets for GA globally

- Promote policies that facilitate the import and export of general aviation products, including the role of Export Credit Agencies
- Ensure effective safety cooperation by strengthening bilateral safety agreements and improving the efficiency of type validation processes between states of design, and promote streamlined global acceptance of type-certificated products and appliances in accordance with International Civil Aviation Organization (ICAO) airworthiness standards
- Work to implement in selected regional markets the core business aviation principles adopted in 2013 by Ministers of the Asia-Pacific Economic Cooperation forum; work similarly to advance regulatory reform for business aviation operations in the North Africa/Middle East region
- Advocate for improvements to European aviation regulations that conform to the European Union's GA Safety Strategy
- Sustain and grow general aviation access to airspace and airports

### Advocating for government policies that strengthen GA

- Emphasize the need for sound tax and trade policies worldwide to foster the growth of GA
- Strive for appropriate oversight, accountability, and funding for aviation safety regulators
- Partner with government and other industry stakeholders to prioritize aviation investments and leverage technology to reduce costs and improve service delivery
- Promote efforts that facilitate growth of the pilot population worldwide
- Work with government and industry groups to ensure environmental measures currently being developed for adoption at the 39th ICAO General Assembly in 2016 do not constrain general aviation globally





<b>CHAPTER 1</b> <i>General Aviation Shipments and Billings</i> .....	13
<b>CHAPTER 2</b> <i>U.S. and Canada General Aviation Fleet and Flight Activity and Forecast</i> .....	23
<b>CHAPTER 3</b> <i>European Fleet Data</i> .....	36
<b>CHAPTER 4</b> <i>Asia-Pacific Fleet Data</i> .....	42
<b>CHAPTER 5</b> <i>Select Other GA Aircraft Registry Data for Large Fleets</i> .....	44
<b>CHAPTER 6</b> <i>U.S. Pilot and Airmen Certificate Statistics</i> .....	45
<b>CHAPTER 7</b> <i>Airports and Aeronautical Facilities</i> .....	50
<b>CHAPTER 8</b> <i>Safety and Accident Statistics</i> .....	54
<i>2014 Executive Committee</i> .....	58
<i>GAMA Staff</i> .....	59
<i>GAMA Member Companies</i> .....	60

GAMA expanded the data coverage of the *2014 General Aviation Statistical Databook & 2015 Industry Outlook*. The updated document provides additional detail about aircraft shipments and expands fleet data for Europe and the Asia-Pacific region, both important markets for general aviation. The databook also contains a detailed review of the U.S. pilot population, information about airports and infrastructure, and statistics about safety in the United States and Europe.

## Aircraft Billings and Shipments

The general aviation industry delivered 3,425 new type-certificated airplanes and rotorcraft in 2014 for a total value of \$29.4 billion. Airplane shipments were mostly stable while the rotorcraft industry experienced a slowdown in new aircraft deliveries.

## Airplane Billings and Shipments

In 2014, total airplane shipments increased to 2,454 airplanes while billings rose to \$24.5 billion, the second highest number recorded. The delivery performance, however, was mixed within the airplane segments.

Business jet shipments rose slightly in 2014 to 722 airplanes, an increase of 6.5 percent. The industry's continuing product development and innovation helped achieve this positive delivery performance. Business jet deliveries, however, remain mostly in line with the rate of deliveries over the past four years.

GAMA has tracked the destination of airplane deliveries by type since 2007. The 2014 business jet shipment data maintains the North American market at 52.2 percent as the largest and in line with its 2013 market share. Europe remained the second largest market for business jets at 19.5 percent of the shipments, an increase from 2013. The Asia-Pacific market accounted for 10.9 percent of unit deliveries, Latin America 9.4 percent, and Middle East and Africa 7.9 percent.

The delivery of turboprops slowed in 2014 to 603 from the 645 airplane delivery peak in 2013, a 6.5 percent decrease. The market share for turboprops shrunk slightly for North America in 2014 compared to 2013, from 57.1 percent to 51.3 percent. Similarly, the European market for turboprops dropped

from 10.5 percent market share to 7.7 percent in 2014. The market share grew for Asia-Pacific at 19.4 percent, Latin America at 15.3 percent, and Middle East and Africa at 6.3 percent, offsetting the decline in these airplanes' traditional markets.

Piston airplane deliveries rose from 1,030 airplanes in 2013 to 1,129 airplanes in 2014. The piston airplane market strengthened in North American and European markets, growing to 55.1 percent and 19.7 percent, respectively, in 2014. The market share shrank for Asia-Pacific at 12.1 percent, Latin America at 8.9 percent, and Middle East and Africa at 4.3 percent.

## Rotorcraft Billings and Shipments

GAMA expanded the shipment report to also include rotorcraft in 2011. The report currently captures six civil rotorcraft manufacturers, which account for the vast majority of civil aircraft delivered worldwide. The manufacturers identified in the report delivered \$4.9 billion in civil rotorcraft in 2014 compared to \$5.3 billion in 2013. Shipments of turbine rotorcraft declined 22.4 percent to 741 units in 2014. Piston-powered rotorcraft also declined by 31.3 percent to 230 units compared to 335 aircraft in 2013.

## Turbine Aircraft Operators

According to JETNET, LLC., the worldwide business aircraft fleet grew in 2014. There were 34,755 turbine airplanes at the end of 2014 compared to 33,861 airplanes in 2013. The turbine and piston rotorcraft fleet also grew in 2014 and reached 29,669 aircraft worldwide. There were 20,926 turbine business airplane operators and 13,980 rotorcraft operators.

The fractional aircraft fleet declined further in 2014, according to JETNET, LLC., to 823 aircraft, while the number of owners stabilized and grew slightly from 4,365 in 2013 to 4,402 aircraft in 2014.

## Expanded Fleet Data

According to the Federal Aviation Administration (FAA), the U.S. general aviation aircraft fleet included 199,927 active aircraft at the end of 2013, the last year with available data. GAMA continues to work to develop an improved overview of the GA fleet in other regions. The data

in Chapter 3 of the databook includes statistics from 24 European countries and covers approximately 103,000 registered aircraft. The Asia-Pacific data has also been expanded from prior years and now includes data from five countries. This information can be found in Chapter 4.

## U.S. Pilot Population

The U.S. pilot population continues to decline in size. There were 593,499 active pilots in the United States at the end of 2014. The number of active private pilots and commercial pilots both decreased, while the active population of Air Transport Pilots rose slightly. There are currently 174,883 active private pilots compared to 235,994 pilots a decade ago. More information on the pilot population is in Chapter 6.

## Safety Data

The databook contains safety data from both the United States and Europe. According to preliminary data from the FAA, the number of fatal general aviation accidents in the United States rose in 2014 to 250 accidents compared to 221 accidents in 2013. The 2013 data accounted for the lowest rate of fatal accidents in the United States at 1.05 fatal accidents per 100,000 hours flown according to the U.S. National Transportation Safety Board. GAMA continues to work with the FAA toward the agency's goal of reducing the number of fatal accidents in the United States to no more than one fatal accident per 100,000 hours by 2018.

Data from the European Aviation Safety Agency (EASA) covers 2006 through 2013. According to EASA, the number of fatal accidents in Europe declined between 2012 and 2013 by 6 percent to 139 accidents. For more safety and accident statistics, please see Chapter 8.

*Additional data can be accessed online at [www.GAMA.aero](http://www.GAMA.aero). If you have questions about GAMA's databook, you can contact the staff at +1-202-393-1500.*

*Note: AgustaWestland Q4 2014 data was not available at the time of publication. Q4 data will be released on March 18, 2015 by AgustaWestland. GAMA will update the 2014 shipment report then at [www.GAMA.aero](http://www.GAMA.aero). For the purpose of comparison in the market overview, GAMA excluded 2013 Q4 data for AgustaWestland in the data above.*



## General Aviation Shipments and Billings



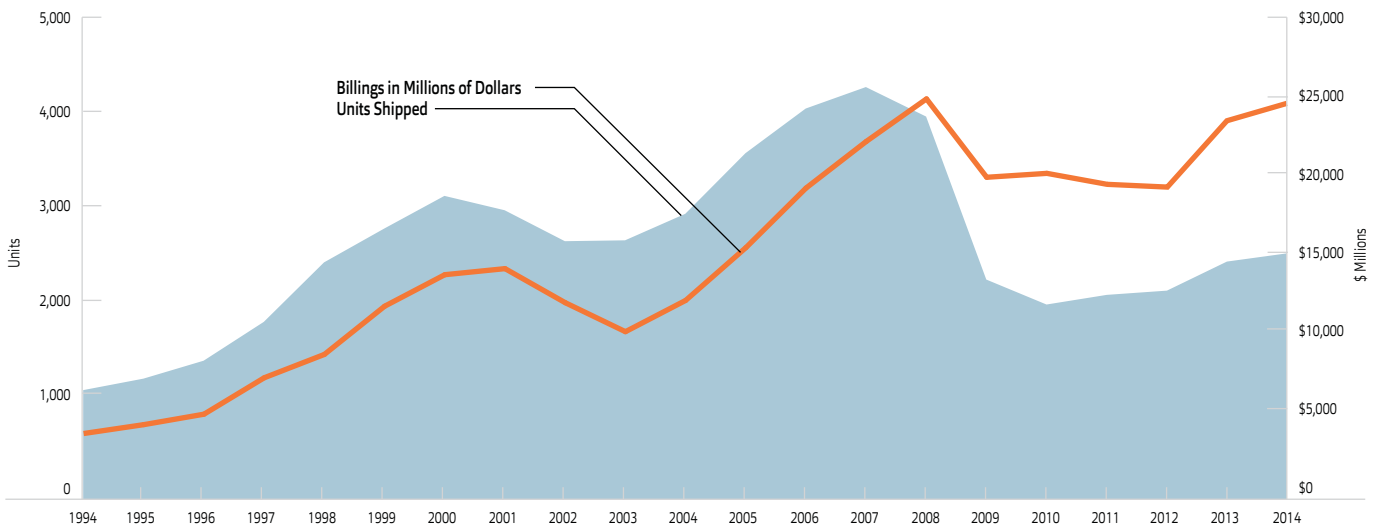
### 1.1 General Aviation Airplane Shipments by Type of Airplane Manufactured Worldwide (1994–2014)

Year	Grand Total	Single-Engine Piston	Multi-Engine Piston	Total Piston	Turboprop	Business Jet	Total Turbine
1994	1,132	544	77	621	233	278	511
1995	1,251	605	61	666	285	300	585
1996	1,437	731	70	801	320	316	636
1997	1,840	1,043	80	1,123	279	438	717
1998	2,457	1,508	98	1,606	336	515	851
1999	2,808	1,689	112	1,801	340	667	1,007
2000	3,147	1,877	103	1,980	415	752	1,167
2001	2,998	1,645	147	1,792	422	784	1,206
2002	2,677	1,591	130	1,721	280	676	956
2003	2,686	1,825	71	1,896	272	518	790
2004	2,962	1,999	52	2,051	319	592	911
2005	3,590	2,326	139	2,465	375	750	1,125
2006	4,054	2,513	242	2,755	412	887	1,299
2007	4,277	2,417	258	2,675	465	1,137	1,602
2008	3,974	1,943	176	2,119	538	1,317	1,855
2009	2,283	893	70	963	446	874	1,320
2010	2,024	781	108	889	368	767	1,135
2011	2,120	761	137	898	526	696	1,222
2012	2,164	817	91	908	584	672	1,256
2013	2,353	908	122	1,030	645	678	1,323
2014	2,454	986	143	1,129	603	722	1,325

Starting in 2011, the data includes the addition of agricultural airplanes, new piston airplane manufacturers, and some helicopter manufacturers. The data cannot be directly compared to 2010 and earlier entries. Refer to Tables 1.4b and 1.4c for make and model detail.

Source: GAMA

FIGURE 1.1 General Aviation Airplane Shipments and Billings Worldwide (1994–2014)



Source: GAMA

## 1.2 Estimated Billings (in Millions of Dollars) for General Aviation Airplane Shipments by Type of Airplane Manufactured Worldwide (1994–2014)

Year	Grand Total	Single-Engine Piston	Multi-Engine Piston	Total Piston	Turboprop	Business Jet	Total Turbine
1994	3,749	n/a	n/a	111	714	2,924	3,638
1995	4,294	n/a	n/a	169	774	3,351	4,125
1996	4,936	n/a	n/a	191	864	3,881	4,745
1997	7,170	n/a	n/a	238	913	6,019	6,932
1998	8,604	n/a	n/a	377	1,011	7,216	8,227
1999	11,560	n/a	n/a	440	930	10,190	11,120
2000	13,496	n/a	n/a	512	1,323	11,661	12,984
2001	13,868	n/a	n/a	541	1,210	12,117	13,327
2002	11,778	n/a	n/a	483	868	10,427	11,295
2003	9,998	n/a	n/a	545	837	8,616	9,453
2004	12,093	n/a	n/a	692	997	10,404	11,401
2005	15,156	n/a	n/a	805	1,189	13,161	14,350
2006	18,815	n/a	n/a	857	1,389	16,555	17,958
2007	21,837	n/a	n/a	897	1,593	19,347	20,940
2008	24,846	n/a	n/a	945	1,953	21,948	23,901
2009	19,474	n/a	n/a	442	1,589	17,443	19,032
2010	19,715	n/a	n/a	415	1,300	18,000	19,300
2011	19,042	n/a	n/a	441	1,365	17,235	18,600
2012	18,895	n/a	n/a	428	1,359	17,108	18,467
2013	23,450	n/a	n/a	571	1,821	21,058	22,879
2014	24,499	n/a	n/a	635	1,849	22,015	23,864

Source: GAMA

## 1.3 Customer Delivery Region (in Percent of Total) for General Aviation Airplane Shipments by Type of Airplane Manufactured Worldwide (2007–2014)

Year	Piston					Turboprop					Business Jet				
	North America	Europe	Asia-Pacific	Latin America	Middle East & Africa	North America	Europe	Asia-Pacific	Latin America	Middle East & Africa	North America	Europe	Asia-Pacific	Latin America	Middle East & Africa
2007	66.5	16.3	9.2	5.4	2.7	57.2	16.3	8.6	14.4	3.4	58.3	24.9	4.2	7.5	5.2
2008	68.1	15.2	7.5	7.3	2.0	57.3	21.9	6.0	7.4	7.4	53.8	25.9	4.7	9.4	6.3
2009	59.4	21.2	9.5	6.8	2.8	57.8	17.5	8.7	8.1	7.8	49.4	26.3	8.6	9.2	6.4
2010	53.4	18.6	13.7	8.8	5.5	43.2	15.2	16.8	14.7	10.1	42.1	22.8	11.8	14.3	9.0
2011	57.7	12.0	15.6	10.0	4.6	52.6	14.1	14.4	13.6	5.3	50.0	20.2	12.9	10.1	6.8
2012	50.4	19.6	16.3	9.7	4.1	48.6	12.6	17.4	14.5	6.9	49.7	20.8	11.8	11.6	6.1
2013	52.8	17.2	15.1	10.0	5.0	57.1	10.5	14.0	13.2	5.3	52.4	15.6	11.9	11.1	9.0
2014	55.1	19.7	12.1	8.9	4.3	51.3	7.7	19.4	15.3	6.3	52.2	19.5	10.9	9.4	7.9

Source: GAMA





## 1.4a Worldwide Business Jet Shipments by Manufacturer (2000–2014)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Airbus</b>	<b>0</b>	<b>5</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>11</b>	<b>13</b>	<b>11</b>	<b>13</b>	<b>15</b>	<b>10</b>	<b>9</b>	<b>6</b>	<b>5</b>
Airbus Corporate Jet (all models)	-	5	2	0	0	9	10	12	9	11	-	-	-	-	-
ACJ318	-	-	-	-	-	-	-	-	-	-	2	2	2	1	0
ACJ319	-	-	-	-	-	-	-	-	-	-	8	6	6	4	1
ACJ320	-	-	-	-	-	-	-	-	-	-	3	1	0	0	4
ACJ321	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0
ACJ330	-	-	-	-	-	-	-	1	1	1	1	1	1	0	0
ACJ340	-	-	-	-	-	-	1	0	1	1	1	0	0	0	0
<b>Avcraft (prev. Fairchild)</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>9</b>	<b>9</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Envoy 3	-	4	4	9	9	1	-	-	-	-	-	-	-	-	-
<b>Boeing Business Jets</b>	<b>14</b>	<b>16</b>	<b>11</b>	<b>7</b>	<b>3</b>	<b>4</b>	<b>13</b>	<b>7</b>	<b>6</b>	<b>6</b>	<b>12</b>	<b>8</b>	<b>12</b>	<b>7</b>	<b>10</b>
Boeing Business Jet	14	11	9	4	2	3	12	7	3	3	4	8	2	5	3
Boeing Business Jet 2	-	5	2	3	1	1	1	0	1	0	2	0	2	1	2
Boeing Business Jet 3	-	-	-	-	-	-	-	-	2	1	4	0	0	0	0
Boeing Business Jet 747	-	-	-	-	-	-	-	-	-	-	-	-	8	0	0
Boeing Business Jet 767	-	-	-	-	-	-	-	-	-	1	0	0	0	0	0
Boeing Business Jet 777	-	-	-	-	-	-	-	-	-	1	2	0	0	0	1
Boeing Business Jet 787	-	-	-	-	-	-	-	-	-	-	-	-	-	1	4
<b>Bombardier Business Aircraft</b>	<b>207</b>	<b>179</b>	<b>101</b>	<b>70</b>	<b>130</b>	<b>188</b>	<b>213</b>	<b>224</b>	<b>247</b>	<b>173</b>	<b>150</b>	<b>182</b>	<b>179</b>	<b>180</b>	<b>204</b>
Learjet 31A	27	17	9	2	-	-	-	-	-	-	-	-	-	-	-
Learjet 40/XR	-	-	-	-	17	21	26	57	48	33	16	24	24	1	-
Learjet 45/XR	71	63	27	17	22	28	30	-	-	-	-	-	-	-	-
Learjet 60/XR	35	29	17	12	9	18	15	23	26	13	12	19	15	10	1
Learjet 70/75	-	-	-	-	-	-	-	-	-	-	-	-	-	18	33
Challenger 300/350	-	-	-	1	28	50	55	51	60	33	29	37	48	55	54
Challenger 604/605	39	41	31	24	29	36	29	35	44	36	38	43	34	32	36
Global 5000	-	-	-	-	4	17	18	46	52	51	49	53	54	62	80
Global 6000/Express	35	29	17	14	20	13	22	-	-	-	-	-	-	-	-
CL 850/870/890	-	-	-	-	1	5	18	12	17	7	6	6	4	2	0
<b>Dassault Falcon Jet</b>	<b>73</b>	<b>75</b>	<b>66</b>	<b>49</b>	<b>63</b>	<b>51</b>	<b>61</b>	<b>70</b>	<b>72</b>	<b>77</b>	<b>95</b>	<b>63</b>	<b>66</b>	<b>77</b>	<b>66</b>
Falcon 50EX	18	13	10	8	5	5	5	2	1	-	-	-	-	-	-
Falcon 900B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Falcon 900C	6	6	4	3	3	1	-	-	-	-	-	-	-	-	-
Falcon 900EX	23	21	17	6	1	-	-	-	-	-	-	-	-	-	-
Falcon 900DX	-	-	-	-	-	2	4	10	4	1	3	-	-	-	-
Falcon 900EX EASy	-	-	-	4	14	16	16	18	19	17	17	1	-	-	-
Falcon 900LX	-	-	-	-	-	-	-	-	-	-	4	11	7	11	8
Falcon 2000	26	35	35	12	11	6	6	1	-	-	-	-	-	-	-
Falcon 2000DX	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-
Falcon 2000EX	-	-	-	16	10	-	-	-	-	-	-	-	-	-	-
Falcon 2000EX EASy	-	-	-	-	19	21	30	33	24	3	-	-	-	-	-
Falcon 2000LX	-	-	-	-	-	-	-	-	-	23	30	20	22	8	-
Falcon 2000LXS	-	-	-	-	-	-	-	-	-	-	-	-	-	3	18
Falcon 2000S	-	-	-	-	-	-	-	-	-	-	-	-	-	12	13
Falcon 7X	-	-	-	-	-	-	-	6	21	32	41	31	37	43	27
<b>Eclipse Aerospace, Inc.</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>98</b>	<b>161</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>
Eclipse 500	-	-	-	-	-	-	1	98	161	-	-	-	-	-	-
Eclipse 550	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
<b>Embraer</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>13</b>	<b>13</b>	<b>20</b>	<b>27</b>	<b>36</b>	<b>38</b>	<b>122</b>	<b>145</b>	<b>99</b>	<b>99</b>	<b>119</b>	<b>116</b>
Phenom 100	-	-	-	-	-	-	-	-	2	97	100	41	29	30	19
Phenom 300	-	-	-	-	-	-	-	-	-	1	26	42	48	60	73
Legacy 500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Legacy 600/650	-	-	8	13	13	20	27	36	36	18	11	13	17	21	18
Lineage 1000 /E190 Head of State	-	-	-	-	-	-	-	-	-	5	5	3	2	4	3
Shuttles (ERJs and E-Jets)	-	-	-	-	-	-	-	-	-	1	3	0	3	4	0
<b>Emivest (prev. Sino Swearingen)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
SJ30-2	-	-	-	-	-	-	1	1	0	2	0	0	0	0	0
<b>Gulfstream Aerospace Corporation</b>	<b>88</b>	<b>101</b>	<b>85</b>	<b>74</b>	<b>78</b>	<b>89</b>	<b>113</b>	<b>138</b>	<b>156</b>	<b>94</b>	<b>99</b>	<b>99</b>	<b>94</b>	<b>144</b>	<b>150</b>
G100/150 (prev. IAI Astra)	11	5	9	24	22	26	42	59	68	19	24	21	11	23	33
G200 (prev. IAI Galaxy)	6	25	15	-	-	-	-	-	-	-	-	-	-	-	-
G300/350/400/450 (prev. GIV/GIVSP)	37	36	29	-	-	-	-	-	-	-	-	-	-	-	-
G500/G550 (prev. GV/GVSP), G650	34	35	32	50	56	63	71	79	88	75	75	78	83	121	117
<b>Textron Aviation (Beechcraft)</b>	<b>118</b>	<b>98</b>	<b>94</b>	<b>100</b>	<b>115</b>	<b>141</b>	<b>140</b>	<b>162</b>	<b>160</b>	<b>98</b>	<b>73</b>	<b>52</b>	<b>32</b>	<b>6</b>	<b>0</b>
Premier I/A	-	18	29	29	37	30	23	54	31	16	11	11	3	-	-
Hawker 400XP	51	25	19	24	28	53	53	41	35	11	12	1	-	-	-
Hawker 750	-	-	-	-	-	-	-	-	23	13	5	7	-	-	-
Hawker 800XP	67	55	46	47	50	58	8	-	-	-	-	1	-	-	-
Hawker 850XP	-	-	-	-	-	-	56	35	15	3	1	0	-	-	-
Hawker 900XP	-	-	-	-	-	-	-	32	50	35	28	22	17	-	-
Hawker 4000	-	-	-	-	-	-	-	-	6	20	16	10	12	6	-
<b>Textron Aviation (Cessna Aircraft)</b>	<b>252</b>	<b>306</b>	<b>305</b>	<b>196</b>	<b>181</b>	<b>247</b>	<b>307</b>	<b>388</b>	<b>466</b>	<b>289</b>	<b>178</b>	<b>183</b>	<b>181</b>	<b>139</b>	<b>159</b>
CE-510 Citation Mustang	-	-	-	-	-	-	1	45	101	125	73	43	38	20	8
CE-525 Citation CJ1	56	61	30	22	20	14	-	-	-	-	-	-	-	-	-
CE-525 Citation CJ1+	-	-	-	-	-	4	25	34	20	14	3	2	-	-	-

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## 1.4a Worldwide Business Jet Shipments by Manufacturer (2000–2014) CONTINUED

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Textron Aviation (Cessna Aircraft)</b>															
CE-525 Citation M2	-	-	-	-	-	-	-	-	-	-	-	-	-	12	46
CE-525A Citation CJ2	8	41	86	56	27	23	1	-	-	-	-	-	-	-	-
CE-525A Citation CJ2+	-	-	-	-	-	-	36	44	56	21	17	15	19	15	2
CE-525B Citation CJ3	-	-	-	-	6	48	72	78	88	40	20	22	21	15	6
CE-525B Citation CJ3+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
CE-525C Citation CJ4	-	-	-	-	-	-	-	-	-	-	19	48	44	33	28
CE-550 Citation Bravo	54	48	41	31	25	21	18	-	-	-	-	-	-	-	-
CE-560 Citation Ultra	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CE-560 Citation Encore	6	37	36	21	24	13	12	-	-	-	-	-	-	-	-
CE-560 Citation Encore+	-	-	-	-	-	-	-	23	28	5	5	4	-	-	-
CE-560 Citation Excel	79	85	81	48	23	-	-	-	-	-	-	-	-	-	-
CE-560 Citation XLS	-	-	-	-	32	64	73	82	72	7	-	-	-	-	-
CE-560 Citation XLS+	-	-	-	-	-	-	-	-	8	37	22	27	31	31	22
CE-650 Citation VII	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CE-680 Citation Sovereign	-	-	-	-	9	46	57	65	77	33	16	19	22	5	-
CE-680 Citation Sovereign+	-	-	-	-	-	-	-	-	-	-	-	-	-	8	28
CE-750 Citation X	37	34	31	18	15	14	12	17	16	7	3	3	6	-	-
CE-750 Citation X+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
<b>Total Number of Airplanes</b>	<b>752</b>	<b>784</b>	<b>676</b>	<b>518</b>	<b>592</b>	<b>750</b>	<b>887</b>	<b>1,137</b>	<b>1,317</b>	<b>874</b>	<b>767</b>	<b>696</b>	<b>672</b>	<b>678</b>	<b>722</b>
% Change	12.7%	4.3%	-13.8%	-23.4%	14.3%	26.7%	18.3%	28.2%	15.8%	-33.6%	-12.2%	-9.3%	-3.4%	0.9%	6.5%
<b>Total Billings for Airplanes (\$M)</b>	<b>11,661</b>	<b>12,117</b>	<b>10,427</b>	<b>8,616</b>	<b>10,404</b>	<b>13,161</b>	<b>16,555</b>	<b>19,347</b>	<b>21,948</b>	<b>17,443</b>	<b>18,000</b>	<b>17,235</b>	<b>17,108</b>	<b>21,058</b>	<b>22,015</b>
% Change	14.4%	3.9%	-13.9%	-17.4%	20.7%	26.5%	25.8%	16.9%	13.4%	-20.5%	3.2%	-4.2%	-0.7%	23.1%	4.5%

Source: GAMA

## 1.4b Worldwide Turboprop Airplane Shipments by Manufacturer (2000–2014)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Air Tractor</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>130</b>	<b>168</b>	<b>174</b>	<b>145</b>
AT-402A	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	1	0	0
AT-402B	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9	21	33	20
AT-502A	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3	1	2	1
AT-502B	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	57	81	70	61
AT-504	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4	6	2	3
AT-602	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	10	10	18	14
AT-802	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	26	18	9	10
AT-802A	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	21	30	40	36
<b>Extra Aircraft</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>2</b>
EA500	-	-	-	-	-	-	-	-	-	-	-	-	2	1	2
<b>Maule Air Incorporated</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
M-7-420AC	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
MT-7-420	0	3	0	1	2	0	0	0	0	0	0	0	0	0	0
<b>Pacific Aerospace Corporation</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>8</b>	<b>10</b>	<b>5</b>	<b>10</b>	<b>15</b>	<b>12</b>	<b>11</b>	<b>10</b>	<b>10</b>	<b>6</b>	<b>4</b>
PAC 750XL	-	1	0	2	8	10	5	10	15	12	11	10	10	6	4
<b>Piaggio Aerospace</b>	<b>6</b>	<b>12</b>	<b>14</b>	<b>12</b>	<b>16</b>	<b>14</b>	<b>19</b>	<b>21</b>	<b>30</b>	<b>24</b>	<b>11</b>	<b>14</b>	<b>5</b>	<b>2</b>	<b>2</b>
P.180 Avanti	6	12	14	12	16	13	-	-	-	-	-	-	-	-	-
P.180 Avanti II	-	-	-	-	-	1	19	21	30	24	11	14	5	2	2
<b>Pilatus</b>	<b>69</b>	<b>70</b>	<b>45</b>	<b>61</b>	<b>70</b>	<b>80</b>	<b>90</b>	<b>98</b>	<b>100</b>	<b>105</b>	<b>84</b>	<b>69</b>	<b>67</b>	<b>69</b>	<b>76</b>
PC-6 Porter	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6	3	5	5	6	5	4	10
PC-12	69	70	45	61	70	80	90	92	97	100	79	63	62	65	66
<b>Piper Aircraft, Inc.</b>	<b>18</b>	<b>98</b>	<b>25</b>	<b>24</b>	<b>26</b>	<b>40</b>	<b>49</b>	<b>53</b>	<b>52</b>	<b>29</b>	<b>25</b>	<b>32</b>	<b>32</b>	<b>34</b>	<b>36</b>
PA-46-500 TP Meridian	18	98	25	24	26	40	49	53	52	29	25	32	32	34	36
<b>Quest Aircraft Company</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>7</b>	<b>24</b>	<b>14</b>	<b>13</b>	<b>15</b>	<b>28</b>	<b>30</b>
Kodiak 100	-	-	-	-	-	-	-	1	7	24	14	13	15	28	30
<b>SOCATA</b>	<b>25</b>	<b>33</b>	<b>34</b>	<b>34</b>	<b>31</b>	<b>31</b>	<b>42</b>	<b>46</b>	<b>60</b>	<b>36</b>	<b>38</b>	<b>38</b>	<b>38</b>	<b>40</b>	<b>51</b>
TBM 700	25	33	34	34	31	31	-	-	-	-	-	-	-	-	-
TBM 850	-	-	-	-	-	-	42	46	60	36	38	38	38	40	-
TBM 900	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51
<b>Textron Aviation (Beechcraft)</b>	<b>205</b>	<b>130</b>	<b>82</b>	<b>81</b>	<b>102</b>	<b>114</b>	<b>140</b>	<b>157</b>	<b>172</b>	<b>119</b>	<b>90</b>	<b>92</b>	<b>89</b>	<b>135</b>	<b>127</b>
King Air C90	46	41	21	18	27	35	52	46	66	44	28	29	27	27	21
King Air B200 / B250	59	46	26	38	39	37	42	58	54	37	24	25	22	36	35
King Air 350	46	32	24	24	36	42	46	53	52	38	38	38	40	72	71
1900D	54	11	11	1	-	-	-	-	-	-	-	-	-	-	-
<b>Textron Aviation (Cessna Aircraft)</b>	<b>92</b>	<b>75</b>	<b>80</b>	<b>57</b>	<b>64</b>	<b>86</b>	<b>67</b>	<b>79</b>	<b>101</b>	<b>97</b>	<b>95</b>	<b>93</b>	<b>107</b>	<b>105</b>	<b>94</b>
CE-208 Caravan 675	16	19	14	8	13	11	8	11	12	12	8	10	11	11	13
CE-208B Grand Caravan	76	56	66	49	51	75	59	68	89	85	87	83	96	94	81
<b>Thrush Aircraft, Inc.</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>35</b>	<b>51</b>	<b>51</b>	<b>36</b>
S2R-T34	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	30	39	20	10
S2RHG-T65	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1	0	1	0
S2R-T660	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1	0	1	1
S2R-G10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3	3	2	1
S2R-H80	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	9	27	24
<b>Total Number of Airplanes</b>	<b>415</b>	<b>422</b>	<b>280</b>	<b>272</b>	<b>319</b>	<b>375</b>	<b>412</b>	<b>465</b>	<b>538</b>	<b>446</b>	<b>368</b>	<b>526</b>	<b>584</b>	<b>645</b>	<b>603</b>
% Change	22.1%	1.7%	-33.6%	-2.9%	17.3%	17.6%	9.9%	12.9%	15.7%	-17.1%	-17.5%	n/a	11.0%	10.4%	-6.5%
<b>Total Billings for Airplanes (\$M)</b>	<b>1,323</b>	<b>1,210</b>	<b>868</b>	<b>837</b>	<b>997</b>	<b>1,189</b>	<b>1,389</b>	<b>1,593</b>	<b>1,953</b>	<b>1,589</b>	<b>1,300</b>	<b>1,365</b>	<b>1,359</b>	<b>1,821</b>	<b>1,849</b>
% Change	42.2%	-8.5%	-28.3%	-3.5%	19.1%	19.3%	16.9%	14.6%	22.7%	-18.7%	-18.2%	n/a	-0.4%	33.9%	1.5%

Source: GAMA

## 1.4c Worldwide Piston-Engine Airplane Shipments by Manufacturer (2000–2014)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Adam Aircraft</b>	0	0	0	0	0	2	4	3	0	0	0	0	0	0	0
A500	-	-	-	-	-	2	4	3	-	-	-	-	-	-	-
<b>Air Tractor</b>	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
AT-401B	-	-	-	-	-	-	-	-	-	-	-	-	1	0	1
<b>Alpha Aviation</b>	0	0	0	0	0	0	5	13	1	0	0	0	0	0	0
120T	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-
160A	-	-	-	-	-	-	5	9	1	-	-	-	-	-	-
160Ai	-	-	-	-	-	-	-	2	0	-	-	-	-	-	-
<b>American Champion</b>	96	56	53	63	94	89	60	70	54	26	37	29	18	26	30
7EC Champ	-	-	-	-	-	-	1	21	7	1	0	3	0	3	1
7ECA Aurora	3	2	3	2	2	3	2	4	3	2	2	1	0	0	2
7GCAA Adventurer	23	8	12	9	12	12	6	6	2	1	2	0	0	0	0
7GCBC Citabria Explorer	22	21	13	12	24	26	16	8	8	4	4	6	3	1	3
8GCBC Scout	23	6	11	8	18	9	14	8	10	8	15	13	7	6	7
8KCAB Super Decathlon	25	19	14	32	38	39	21	23	24	10	14	6	8	10	14
8KCAB Xtreme Decathlon	-	-	-	-	-	-	-	-	-	-	-	-	-	6	3
<b>Aviat Aircraft</b>	91	57	38	47	42	47	0	0	0	0	0	0	0	0	0
A-1A Husky	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A-1B Husky	76	50	34	37	30	41	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Husky Pup	-	-	-	3	3	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
S-2C Pitts	11	7	4	7	9	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<b>Bellanca</b>	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Super Viking 17-30A	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Britten-Norman</b>	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BN-2B Islander	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Columbia Aircraft (prev. Lancair)</b>	5	27	24	51	78	114	185	152	0	0	0	0	0	0	0
Columbia 300	5	27	24	19	-	-	-	-	-	-	-	-	-	-	-
Columbia 350	-	-	-	32	28	25	39	34	-	-	-	-	-	-	-
Columbia 400	-	-	-	-	50	89	146	118	-	-	-	-	-	-	-
<b>Cirrus Aircraft</b>	95	183	397	469	553	600	721	710	549	266	264	255	253	276	308
Cirrus SR20	95	59	105	112	91	116	150	112	115	28	42	48	84	32	31
Cirrus SR22	-	124	292	355	459	475	565	588	427	238	165	105	81	112	117
Cirrus SR22T	-	-	-	-	-	-	-	-	-	-	57	102	88	132	160
Cirrus SRV	-	-	-	2	3	9	6	10	7	-	-	-	-	-	-
<b>Commander Aircraft</b>	20	11	7	0	0	0	0	0	0	0	0	0	0	0	0
Commander 114B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Commander 114TC	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Commander 115	11	5	1	-	-	-	-	-	-	-	-	-	-	-	-
Commander 115TC	8	6	6	-	-	-	-	-	-	-	-	-	-	-	-
<b>CubCrafters</b>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	47	58	63	60
CC11-100 Sport Cub S2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	0	2	0
CC11-160 Carbon Cub SS	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	38	57	52	53
CC18-180 Top Cub	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7	1	9	7
<b>Diamond Aircraft</b>	0	0	155	228	261	329	438	471	308	163	130	185	156	139	202
HK-36	-	-	-	-	-	-	-	-	-	13	10	3	3	1	0
DA-20	n/a	n/a	70	75	58	54	55	58	69	14	31	40	32	14	16
DA-40	-	n/a	85	153	203	207	220	232	154	98	57	72	93	102	136
DA-42	-	-	-	-	-	68	163	181	85	38	32	70	28	22	50
<b>Discovery Aviation (prev. Liberty)</b>	0	0	0	0	0	2	29	38	33	13	14	3	0	0	0
XL2	-	-	-	-	-	2	29	38	33	13	14	3	0	0	0
<b>Embraer</b>	17	1	0	0	0	0	0	0	0	0	0	0	0	0	0
EMB-201A Ipanema	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EMB-202 Ipanema	15	1	-	-	-	-	-	-	-	-	-	-	-	-	-
EMB-720 Minuano	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EMB-810 Seneca II	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Extra Aircraft</b>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	27	29	31
EA300	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	27	29	31
<b>Flight Design GmbH</b>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	89	76	89	88
ASTM CT Series	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	89	76	89	88
<b>Mahindra Aerospace (prev. GippsAero)</b>	0	0	0	19	20	22	20	17	19	11	14	10	14	12	17
Airvan 8	-	-	-	19	20	22	20	17	19	11	14	10	14	12	17
<b>Maule Air Incorporated</b>	57	54	46	31	25	27	38	36	27	7	4	4	9	6	2
M-4-180A, V	-	-	-	-	-	1	7	5	-	-	-	-	-	-	1
M-6-235	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M-7-235, A, B, C	24	19	21	12	8	11	8	6	7	1	3	-	1	-	1
M-7-260, C	10	11	3	4	3	4	2	4	4	4	-	1	3	4	-
MT-7-235	5	16	12	7	1	2	9	2	6	2	-	-	1	-	-
MT-7-260	1	4	1	-	-	2	4	-	-	-	-	-	-	-	-
MX-7-160, C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MX-7-180, A, B, C, AC	3	1	4	6	5	3	4	6	4	-	1	1	1	1	-
MXT-7-160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MXT-7-180, A, AC	13	3	5	2	8	4	4	12	6	-	-	2	3	-	-

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## 1.4c Worldwide Piston-Engine Airplane Shipments by Manufacturer (2000–2014) CONTINUED

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Maule Air Incorporated (cont.)</b>															
M-8-235	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
M-9-235	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
<b>Micco</b>	<b>6</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
SP-20	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP-26	1	10	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Mooney International Corporation</b>	<b>100</b>	<b>29</b>	<b>10</b>	<b>36</b>	<b>37</b>	<b>85</b>	<b>75</b>	<b>79</b>	<b>65</b>	<b>19</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>
M20M Bravo	26	8	-	5	9	20	5	1	-	-	-	-	-	-	-
M20R Ovation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M20R Ovation 2	55	16	8	30	28	65	63	20	21	4	0	0	0	0	0
M20S Eagle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M20S Eagle 2	19	5	2	1	-	-	-	-	-	-	-	-	-	-	-
M20TN Acclaim	-	-	-	-	-	-	7	58	44	15	2	0	0	0	1
<b>Pacific Aerospace Corporation</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
CT/4E Airtrainer	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-
<b>Piper Aircraft, Inc.</b>	<b>377</b>	<b>343</b>	<b>265</b>	<b>205</b>	<b>163</b>	<b>193</b>	<b>189</b>	<b>168</b>	<b>216</b>	<b>61</b>	<b>135</b>	<b>104</b>	<b>126</b>	<b>154</b>	<b>136</b>
PA-28-161 Warrior III	43	32	29	31	18	37	19	27	23	8	23	15	20	2	3
PA-28-181 Archer III	102	88	38	49	19	16	29	16	7	1	21	2	4	48	45
PA-28R-201 Arrow IV	18	23	26	16	12	9	5	8	1	0	4	0	2	1	8
PA-32-301FT Piper 6X	-	-	-	10	24	18	10	12	0	-	-	-	-	-	-
PA-32-301XTC Piper 6XT	-	-	-	11	14	16	11	-	-	-	-	-	-	-	-
PA-32R-301 Saratoga II HP	28	22	5	9	9	8	10	-	-	-	-	-	-	-	-
PA-32-301T Saratoga II TC	70	68	45	28	31	37	37	39	12	-	-	-	-	-	-
PA-34-220T Seneca V	42	38	43	28	10	12	26	22	27	7	22	21	17	22	10
PA-44-180 Seminole	11	62	60	16	11	29	11	14	24	5	16	16	22	23	22
PA-46-350P Malibu Mirage	63	10	19	7	15	11	31	30	21	7	26	33	49	42	37
PA-46R-350T Matrix	-	-	-	-	-	-	-	-	101	33	23	17	12	16	11
<b>Quartz Mountain Aerospace</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
QMA 11E	-	-	-	-	-	-	-	-	11	-	-	-	-	-	-
<b>Symphony Aircraft (prev. OMF)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>1</b>	<b>10</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Symphony 160	-	-	-	19	1	10	5	-	-	-	-	-	-	-	-
<b>SOCATA</b>	<b>48</b>	<b>63</b>	<b>70</b>	<b>40</b>	<b>5</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
TB-9 Tampico	2	2	3	2	0	1	-	-	-	-	-	-	-	-	-
TB-10	5	8	7	7	3	4	-	-	-	-	-	-	-	-	-
TB-20	26	33	44	19	0	1	-	-	-	-	-	-	-	-	-
TB-21	8	12	14	9	2	3	-	-	-	-	-	-	-	-	-
TB-200	7	8	2	3	0	0	-	-	-	-	-	-	-	-	-
<b>TECNA Aircraft</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>197</b>	<b>190</b>
ASTM - LSA	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	108	108
P2002JF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	33	18
P92JS	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	15	7
P2002JR	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	0
P2008JC	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	19	36
P2006T	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	20	21
<b>Textron Aviation (Beechcraft)</b>	<b>153</b>	<b>136</b>	<b>83</b>	<b>82</b>	<b>93</b>	<b>99</b>	<b>118</b>	<b>111</b>	<b>103</b>	<b>56</b>	<b>51</b>	<b>54</b>	<b>36</b>	<b>70</b>	<b>72</b>
Beechcraft Bonanza A/G36	85	63	51	55	62	71	80	73	63	36	22	24	12	35	32
Beechcraft Bonanza B36TC	18	26	5	-	-	-	-	-	-	-	-	-	-	-	-
Beechcraft Baron B/G58	50	47	27	27	31	28	38	38	40	20	29	30	24	35	40
<b>Textron Aviation (Cessna Aircraft)</b>	<b>912</b>	<b>821</b>	<b>559</b>	<b>588</b>	<b>654</b>	<b>822</b>	<b>865</b>	<b>807</b>	<b>733</b>	<b>355</b>	<b>261</b>	<b>413</b>	<b>283</b>	<b>206</b>	<b>220</b>
CE-162 SkyCatcher	-	-	-	-	-	-	-	-	-	1	22	168	19	-	-
CE-172R Skyhawk	150	107	57	58	32	37	87	133	55	16	8	26	27	0	0
CE-172S Skyhawk	340	341	258	291	204	314	322	240	228	110	77	77	113	106	155
CE-182T Skylane	267	142	109	118	196	241	140	161	109	58	64	40	48	13	0
CE-T182T Turbo Skylane	-	96	79	47	133	118	187	140	105	75	36	37	19	26	0
CE-206H Stationair	53	41	18	16	22	29	25	20	17	3	4	11	16	3	0
CE-T206H Turbo Stationair	102	94	38	58	67	83	104	111	95	46	42	53	40	37	43
CE-350 Corvalis	-	-	-	-	-	-	-	1	14	5	1	0	1	0	0
CE-400 Corvalis TTx	-	-	-	-	-	-	-	1	110	41	7	1	0	21	22
<b>Tiger Aircraft</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>18</b>	<b>19</b>	<b>15</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
AG-5B Tiger	-	-	14	18	19	15	3	-	-	-	-	-	-	-	-
<b>WACO Classic Aircraft</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>11</b>
2T-1A-2	-	-	-	-	-	-	-	-	-	-	-	-	-	1	6
YMF-5D	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5	6	6	5
<b>XtremeAir GmbH</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>9</b>	<b>9</b>	<b>8</b>	<b>9</b>
XA41	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4	2	2	0
XA42	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5	7	6	9
<b>Total Number of Airplanes</b>	<b>1,980</b>	<b>1,792</b>	<b>1,721</b>	<b>1,896</b>	<b>2,051</b>	<b>2,465</b>	<b>2,755</b>	<b>2,675</b>	<b>2,119</b>	<b>977</b>	<b>912</b>	<b>1,207</b>	<b>1,072</b>	<b>1,282</b>	<b>1,378</b>
% Change	9.9%	-9.5%	-4.0%	10.2%	8.2%	20.2%	11.8%	-2.9%	-20.8%	-53.9%	-6.7%	n/a	-11.2%	n/a	7.5%
<b>Total Billings for Airplanes (\$M)</b>	<b>512</b>	<b>541</b>	<b>483</b>	<b>545</b>	<b>692</b>	<b>805</b>	<b>857</b>	<b>897</b>	<b>945</b>	<b>442</b>	<b>415</b>	<b>441</b>	<b>428</b>	<b>571</b>	<b>635</b>
% Change	16.5%	5.5%	-10.7%	12.9%	27.0%	16.3%	6.5%	4.7%	5.3%	-53.1%	-7.7%	n/a	-3.0%	n/a	11.1%

Table 1.4c includes all piston-engine airplanes delivered by the manufacturers listed, including type-certified piston-engine airplanes under airworthiness standards other than Part/CS-23, such as those type certified under EASA CS-Very Light Aircraft and CS-Light Sport Aircraft, as well as Special Light Sport Aircraft.

Source: GAMA

## 1.4d Worldwide Rotorcraft Shipments by Manufacturer (2000–2014), Select Data (Including Select Military Data)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>AgustaWestland</b>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	131	n/a
AW119Ke	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	16	n/a
AW109Power	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5	n/a
GRANDNEW	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	27	n/a
AW139	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	81	n/a
AW101	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	n/a
AW189	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SW4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a
W3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	n/a
Military (All Models)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	83	n/a
<b>Airbus Helicopters (prev. Eurocopter)</b>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	378	334	364	324
EC120	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9	11	11	7
AS350 B2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	57	36	32	23
AS350 B3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	142	124	174	122
EC130	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	42	43	35	58
AS355 NP	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5	7	5	3
EC135	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	53	56	48	34
EC145	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	35	28	24	28
AC365 N3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7	7	8	4
EC155	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12	7	10	10
EC175	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
AS332	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1	0	0	2
EC225	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	15	15	17	30
Military (All Models)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	141	87	94
<b>Bell Helicopters (Civil Total)</b>	143	122	92	105	111	123	159	181	n/a	n/a	132	125	188	213	178
206B	14	14	10	10	7	16	20	28	-	-	5	-	-	-	-
206L/LT	27	10	12	6	18	22	21	24	-	-	15	14	9	11	13
407	62	47	33	46	40	41	67	73	-	-	62	55	85	110	86
412	24	22	25	29	33	29	35	39	-	-	28	20	39	36	26
427	5	15	5	7	9	5	7	10	-	-	1	4	4	-	-
429	-	-	-	-	-	-	-	-	-	-	20	28	43	56	53
430	11	14	7	7	4	10	9	7	-	-	-	-	-	-	-
Huey II	-	-	-	-	-	-	-	-	-	-	1	4	8	-	-
H-1 (Military)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	28	21	25	24
V22 (Military)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	35	38	41	37
<b>Brantly</b>	6	2	1	1	0	2	0	0	0	0	0	0	0	0	0
B-2B	6	2	1	1	0	2	0	0	0	0	0	0	0	0	0
<b>Enstrom Helicopter Corp. (Civil Total)</b>	7	8	12	17	23	29	23	19	10	6	4	n/a	5	17	16
F-28/280	2	4	4	7	5	15	10	6	1	1	1	n/a	2	4	2
480	5	4	8	10	18	14	13	13	9	5	3	n/a	3	13	14
F-28/280 (Military)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	0	0
480 (Military)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11	10	10
<b>Hiller</b>	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0
UH-12E	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Kaman</b>	3	6	0	0	0	0	0	0	0	0	0	n/a	n/a	n/a	n/a
K-1200	3	6	0	0	0	0	0	0	0	0	0	n/a	n/a	n/a	n/a
<b>MD Helicopters</b>	41	28	12	16	10	3	13	18	52	40	12	n/a	n/a	n/a	n/a
500	11	4	5	3	1	0	n/a	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a
520N	4	2	3	1	0	2	n/a	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a
530	4	0	0	3	1	0	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a
600	8	2	0	1	4	1	n/a	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a
900	14	20	4	8	4	0	n/a	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<b>Robinson Helicopter Company</b>	390	328	255	422	690	806	749	823	893	433	162	356	517	523	329
R22	126	134	107	128	234	243	97	159	164	25	40	56	40	42	42
R44 Raven I / II	264	194	148	294	456	563	652	664	729	408	112	212	286	289	186
R66	-	-	-	-	-	-	-	-	-	-	10	88	191	192	101
<b>Schweitzer</b>	36	33	32	38	48	58	61	70	51	27	29	n/a	n/a	n/a	n/a
300C	13	17	13	20	13	12	12	11	16	10	14	n/a	n/a	n/a	n/a
300CB/300CBi	17	12	17	15	27	40	44	51	27	13	6	n/a	n/a	n/a	n/a
330/333	6	4	2	3	8	6	5	8	8	4	9	n/a	n/a	n/a	n/a
<b>Sikorsky</b>	9	8	6	23	34	49	52	79	78	58	42	n/a	n/a	63	59
S-70	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0
S-76	7	8	6	23	29	30	36	50	53	34	21	n/a	n/a	26	17
S-92	0	0	0	0	4	19	16	29	25	24	21	n/a	n/a	37	42
Military (All Models)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	168	172

AgustaWestland Q4 data was not available at time of publication. Q4 data will be published on March 18, 2015 by AgustaWestland. GAMA will update the online 2014 shipment report then at [www.GAMA.aero](http://www.GAMA.aero).

Source: GAMA, Aerospace Industries Association, and company reports.

## 1.5 U.S.-Manufactured General Aviation Airplane Shipments by Type (1946–2014)

Year	Grand Total	Single-Engine Piston	Multi-Engine Piston	Total Piston	Turboprop	Business Jet	Total Turbine	Companies Reporting	Factory Net Billings (\$ Millions)
1946	35,000	n/a	n/a	35,000	-	-	-	-	\$111
1947	15,594	n/a	n/a	15,594	-	-	-	15	\$58
1948	7,037	n/a	n/a	7,037	-	-	-	12	\$32
1949	3,405	n/a	n/a	3,405	-	-	-	11	\$18
1950	3,386	n/a	n/a	3,386	-	-	-	13	\$19
1951	2,302	n/a	n/a	2,302	-	-	-	12	\$17
1952	3,058	n/a	n/a	3,058	-	-	-	8	\$27
1953	3,788	n/a	n/a	3,788	-	-	-	7	\$34
1954	3,071	n/a	n/a	3,071	-	-	-	7	\$43
1955	4,434	n/a	n/a	4,434	-	-	-	7	\$68
1956	6,738	n/a	n/a	6,738	-	-	-	8	\$104
1957	6,118	n/a	n/a	6,118	-	-	-	9	\$100
1958	6,414	n/a	n/a	6,414	-	-	-	10	\$102
1959	7,689	6,849	840	7,689	-	-	-	9	\$130
1960	7,588	6,569	1,019	7,588	-	-	-	8	\$151
1961	6,756	5,995	761	6,756	-	-	-	8	\$124
1962	6,697	5,690	1,007	6,697	-	-	-	7	\$137
1963	7,569	6,248	1,321	7,569	-	-	-	7	\$153
1964	9,336	7,718	1,606	9,324	9	3	12	8	\$199
1965	11,852	9,873	1,780	11,653	87	112	199	8	\$318
1966	15,768	13,250	2,192	15,442	165	161	326	10	\$445
1967	13,577	11,557	1,773	13,330	149	98	247	14	\$360
1968	13,698	11,398	1,959	13,357	248	93	341	14	\$426
1969	12,457	10,054	2,078	12,132	214	111	325	14	\$585
1970	7,292	5,942	1,159	7,101	135	56	191	13	\$337
1971	7,466	6,287	1,043	7,330	89	47	136	11	\$322
1972	9,774	7,898	1,548	9,446	179	149	328	12	\$558
1973	13,646	10,780	2,413	13,193	247	206	453	12	\$828
1974	14,166	11,562	2,135	13,697	250	219	469	12	\$909
1975	14,056	11,439	2,116	13,555	305	196	501	12	\$1,033
1976	15,449	12,783	2,120	14,903	359	187	546	12	\$1,226
1977	16,907	14,057	2,195	16,252	428	227	655	12	\$1,488
1978	17,811	14,398	2,634	17,032	548	231	779	12	\$1,781
1979	17,050	13,286	2,843	16,129	639	282	921	12	\$2,165
1980	11,860	8,640	2,116	10,756	778	326	1,104	12	\$2,486
1981	9,457	6,608	1,542	8,150	918	389	1,307	12	\$2,920
1982	4,266	2,871	678	3,549	458	259	717	11	\$2,000
1983	2,691	1,811	417	2,228	321	142	463	10	\$1,470
1984	2,431	1,620	371	1,991	271	169	440	9	\$1,681
1985	2,029	1,370	193	1,563	321	145	466	9	\$1,431
1986	1,495	985	138	1,123	250	122	372	9	\$1,262
1987	1,085	613	87	700	263	122	385	9	\$1,364
1988	1,143	628	67	695	291	157	448	11	\$1,923
1989	1,535	1,023	87	1,110	268	157	425	11	\$1,804
1990	1,144	608	87	695	281	168	449	14	\$2,008
1991	1,021	564	49	613	222	186	408	14	\$1,968
1992	941	552	41	593	177	171	348	16	\$1,840
1993	964	516	39	555	211	198	409	16	\$2,144
1994	929	444	55	499	208	222	430	13	\$2,357
1995	1,077	515	61	576	255	246	501	13	\$2,842
1996	1,171	607	42	649	289	233	522	13	\$3,048
1997	1,562	898	86	984	236	342	578	12	\$4,593
1998	2,212	1,434	94	1,528	271	413	684	12	\$5,761
1999	2,530	1,634	114	1,748	265	517	782	13	\$7,843
2000	2,816	1,810	103	1,913	315	588	903	15	\$8,558
2001	2,631	1,581	147	1,728	303	600	903	14	\$8,641
2002	2,207	1,366	130	1,496	187	524	711	12	\$7,719
2003	2,137	1,519	71	1,590	163	384	547	13	\$6,434
2004	2,355	1,706	52	1,758	194	403	597	13	\$6,816
2005	2,857	2,024	71	2,095	240	522	762	13	\$8,667
2006	3,147	2,208	79	2,287	256	604	860	16	\$10,367
2007	3,279	2,097	77	2,174	290	815	1,105	16	\$11,941
2008	3,079	1,700	91	1,791	333	955	1,288	15	\$13,348
2009	1,585	770	32	802	269	514	783	13	\$9,082
2010	1,334	679	67	746	224	364	588	12	\$7,875
2011	1,465	639	67	706	395	364	759	16	\$8,266
2012	1,518	645	63	708	463	347	810	17	\$8,017
2013	1,615	674	80	754	527	334	861	17	\$11,069
2014	1,631	716	72	788	468	375	843	16	\$11,688

Source: GAMA



## 1.6 U.S.-Manufactured General Aviation Airplane Billings (in Millions of Dollars) by Type (1978–2014)

Year	Grand Total	Single-Engine Piston	Multi-Engine Piston	Total Piston	Turboprop	Business Jet	Total Turbine
1978	1,781	516	493	1,009	394	378	772
1979	2,165	523	555	1,078	548	540	1,088
1980	2,486	391	403	794	875	816	1,691
1981	2,920	327	348	675	1,120	1,125	2,245
1982	2,000	200	220	420	590	990	1,580
1983	1,470	145	115	260	460	750	1,210
1984	1,681	147	133	280	436	966	1,402
1985	1,431	126	68	194	524	713	1,237
1986	1,262	80	43	123	430	709	1,139
1987	1,364	80	18	98	477	789	1,266
1988	1,918	66	12	78	596	1,242	1,838
1989	1,804	104	24	128	524	1,149	1,673
1990	2,008	68	24	92	644	1,272	1,916
1991	1,968	n/a	n/a	93	527	1,348	1,875
1992	1,840	n/a	n/a	96	460	1,284	1,744
1993	2,144	n/a	n/a	76	595	1,473	2,068
1994	2,357	n/a	n/a	81	595	1,681	2,276
1995	2,842	n/a	n/a	123	653	2,066	2,719
1996	3,048	n/a	n/a	142	715	2,191	2,906
1997	4,580	n/a	n/a	200	727	3,653	4,380
1998	5,761	n/a	n/a	330	763	4,668	5,431
1999	7,843	n/a	n/a	385	658	6,800	7,458
2000	8,558	n/a	n/a	446	934	7,178	8,112
2001	8,641	n/a	n/a	471	742	7,428	8,170
2002	7,719	n/a	n/a	389	487	6,843	7,330
2003	6,434	n/a	n/a	440	411	5,583	5,994
2004	6,816	n/a	n/a	568	555	5,693	6,248
2005	8,667	n/a	n/a	712	749	7,205	7,954
2006	10,367	n/a	n/a	722	853	8,792	9,645
2007	11,941	n/a	n/a	712	1,001	10,227	11,228
2008	13,348	n/a	n/a	836	1,172	11,340	12,513
2009	9,082	n/a	n/a	389	872	7,821	8,693
2010	7,875	n/a	n/a	368	724	6,782	7,506
2011	8,266	n/a	n/a	368	831	7,068	7,898
2012	8,017	n/a	n/a	374	867	6,776	7,643
2013	11,069	n/a	n/a	456	1,358	9,255	10,613
2014	11,688	n/a	n/a	484	1,316	9,888	11,204

Source: GAMA



## 1.7 U.S.-Manufactured General Aviation Airplane Exports by Type and Billings (1978–2014)

Year	Single-Engine Piston	Multi-Engine Piston	Turboprop	Business Jet	Total Airplanes Exported		Billings Exported	
					Units	% of Shipments	(in \$ Millions)	% of Total Billings
1978	2,712	652	166	82	3,612	20.3%	\$486.7	27.3%
1979	2,942	774	181	98	3,995	23.4%	\$600.9	27.8%
1980	2,565	635	245	110	3,555	29.9%	\$756.4	30.4%
1981	1,546	363	259	102	2,270	24.0%	\$749.0	25.7%
1982	718	227	135	82	1,162	27.2%	\$650.2	32.5%
1983	298	119	66	30	513	19.1%	\$316.5	21.5%
1984	199	79	25	31	334	13.7%	\$260.7	15.5%
1985	208	69	49	28	354	17.4%	\$230.0	16.1%
1986	272	69	68	32	441	29.5%	\$343.6	27.2%
1987	252	60	78	49	439	40.5%	\$469.3	34.4%
1988	220	52	91	62	425	37.2%	\$626.8	32.7%
1989	385	46	78	57	566	36.9%	\$587.0	32.5%
1990	224	57	86	91	458	40.0%	\$872.2	43.4%
1991	204	25	74	79	382	37.4%	\$807.0	41.0%
1992	196	16	90	51	353	39.0%	\$608.7	33.0%
1993	149	23	109	68	349	36.2%	\$856.8	40.0%
1994	84	42	84	67	277	29.8%	\$684.2	29.0%
1995	130	30	85	70	315	29.3%	\$815.9	28.7%
1996	126	24	135	60	345	30.5%	\$903.0	28.9%
1997	199	25	126	99	449	28.6%	\$1,504.6	32.2%
1998	268	30	131	106	535	24.1%	\$1,640.1	27.9%
1999	237	23	42	158	562	22.3%	\$2,503.8	31.6%
2000	285	24	112	148	569	20.2%	\$1,957.5	22.9%
2001	175	42	118	170	505	19.2%	\$2,380.6	27.5%
2002	135	23	79	136	372	16.8%	\$1,980.9	25.4%
2003	168	22	52	94	336	15.7%	\$1,218.2	18.9%
2004	181	9	55	88	333	14.1%	\$1,419.6	20.8%
2005	301	18	66	172	557	19.5%	\$2,585.9	29.8%
2006	535	30	74	252	891	28.3%	\$4,395.5	42.4%
2007	665	33	131	313	1,142	34.8%	\$4,587.0	38.4%
2008	556	40	175	410	1,161	37.7%	\$5,863.8	43.9%
2009	341	15	121	255	732	46.2%	\$4,612.7	50.8%
2010	299	45	151	194	689	51.6%	\$4,867.8	61.8%
2011	249	50	121	112	486	36.3%	\$4,585.8	55.5%
2012	263	40	243	174	720	47.7%	\$4,791.1	59.8%
2013	255	49	245	142	691	42.8%	\$5,616.9	50.7%
2014	273	37	248	138	696	42.7%	\$5,419.2	46.4%

Source: GAMA

## 1.8 U.S. Civil Airplane Imports (2005–2011) Units and Dollar Value (in Millions)

	2005		2006		2007		2008		2009		2010		2011	
	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars	Units	Dollars
Single-Engine	313	\$255.5	394	\$334.4	388	\$304.7	376	\$456.0	200	\$310.6	212	\$272.6	171	\$273.0
Multi-Engine – Under 4,400 lbs	0	-	37	\$17.5	81	\$37.7	37	\$17.2	11	\$6.0	4	\$2.8	3	\$1.8
Multi-Engine – 4,400–10,000 lbs	13	\$57.2	19	\$87.8	20	\$105.4	20	\$104.1	71	\$263.7	50	\$160.7	32	\$138.6
Multi-Engine – Turbojet/ Turboprop 10,000–33,000 lbs	184	\$3,367.0	189	\$3,496.0	219	\$3,998.3	188	\$3,489.2	82	\$1,684.3	86	\$1,657.4	115	\$2,084.3
Multi-Engine (Other Including Turboshaft) 10,000–33,000 lbs.	2	\$6.2	6	\$50.7	4	\$69.5	-	-	3	\$72.8	5	\$97.1	7	\$169.4
<b>Total</b>	<b>512</b>	<b>\$3,679.8</b>	<b>645</b>	<b>\$3,986.3</b>	<b>712</b>	<b>\$4,515.7</b>	<b>621</b>	<b>\$4,066.4</b>	<b>367</b>	<b>\$2,337.4</b>	<b>357</b>	<b>\$2,190.8</b>	<b>328</b>	<b>\$2,667.0</b>

Note: U.S. Department of Commerce data includes regional jets and regional turboprop airplanes in the 10,000–33,000 lbs. categories.

Source: Aerospace Industries Association from U.S. Department of Commerce Data

## 1.9 European-Manufactured General Aviation Airplane Shipments by Type (2008–2014)

Year	Grand Total	Single-Engine Piston	Multi-Engine Piston	Total Piston	Turboprop	Business Jet	Total Turbine	Companies Reporting	Factory Net Billings (\$ Millions)
2008	579	223	85	308	190	81	271	6	\$3,966.6
2009	416	125	38	163	165	88	253	6	\$4,552.5
2010	380	98	41	139	133	108	241	6	\$5,556.0
2011	468	204	70	274	121	73	194	7	\$3,987.9
2012	446	231	28	259	112	75	187	8	\$4,063.3
2013	657	420	42	462	112	83	195	10	\$4,533.9
2014	722	449	71	520	131	71	202	10	\$3,825.3

An aircraft is considered manufactured in Europe when produced under an EASA production approval. EASA rules require production approvals for all aircraft including CS-VLA and CS-SLSA models.

Source: GAMA

# U.S. and Canada General Aviation Fleet and Flight Activity and Forecast



## 2.1 Active U.S. General Aviation and On-Demand Part 135 Aircraft by Primary Use and Aircraft Type (2013)

Aircraft Type	Total Active (75.2% of 265,989)	General Aviation FAR Part 91 Use												On-Demand FAR Part 135 Use		
		Personal	Business (w/o crew)	Business (with crew)	Instruc- tional	Aerial Apps.	Aerial Obs.	Aerial Other	External Load	Other Work	Sight- seeing	Air Medical	Other	Air Taxi	Air Tours	Air Medical
<b>Total All Aircraft</b>	<b>199,927</b>	<b>133,875</b>	<b>15,915</b>	<b>10,656</b>	<b>13,401</b>	<b>3,634</b>	<b>4,806</b>	<b>977</b>	<b>304</b>	<b>973</b>	<b>1,083</b>	<b>375</b>	<b>4,519</b>	<b>7,311</b>	<b>529</b>	<b>1,570</b>
% Std. Error	1.4%	2.0%	1.7%	1.0%	1.7%	1.1%	1.2%	1.0%	0.8%	1.4%	1.5%	0.9%	1.3%	0.8%	0.6%	0.7%
<b>Piston Total</b>	<b>137,655</b>	<b>102,379</b>	<b>13,181</b>	<b>1,678</b>	<b>10,776</b>	<b>1,178</b>	<b>2,076</b>	<b>245</b>	<b>0</b>	<b>610</b>	<b>375</b>	<b>128</b>	<b>2,697</b>	<b>2,177</b>	<b>85</b>	<b>67</b>
One-Engine Piston	124,398	95,764	10,512	823	9,759	1,129	1,701	165	0	589	340	105	2,058	1,361	80	13
Two-Engine Piston	13,257	6,615	2,669	855	1,018	49	375	80	0	21	35	23	639	816	6	54
<b>Turboprop Total</b>	<b>9,619</b>	<b>1,309</b>	<b>1,251</b>	<b>1,976</b>	<b>84</b>	<b>1,793</b>	<b>643</b>	<b>223</b>	<b>0</b>	<b>147</b>	<b>0</b>	<b>19</b>	<b>366</b>	<b>1,452</b>	<b>99</b>	<b>257</b>
One-Engine Turboprop	4,478	709	649	367	29	1,787	37	91	0	73	0	13	100	487	76	61
Two-Engine Turboprop	5,140	600	602	1,609	55	6	606	132	0	73	0	6	266	965	24	196
<b>Business Jet</b>	<b>11,637</b>	<b>1,365</b>	<b>719</b>	<b>6,460</b>	<b>73</b>	<b>0</b>	<b>18</b>	<b>14</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>9</b>	<b>195</b>	<b>2,607</b>	<b>0</b>	<b>168</b>
<b>Rotorcraft Total</b>	<b>9,765</b>	<b>1,205</b>	<b>311</b>	<b>358</b>	<b>1,373</b>	<b>620</b>	<b>1,876</b>	<b>478</b>	<b>300</b>	<b>76</b>	<b>131</b>	<b>208</b>	<b>466</b>	<b>992</b>	<b>316</b>	<b>1,054</b>
Piston Total	3,137	865	175	15	1,251	279	267	48	0	20	95	0	44	62	17	0
Turbine Total	6,628	340	136	343	122	342	1,610	430	300	56	36	208	422	930	300	1,054
- One-Engine Turbine	5,032	288	124	168	118	335	1,558	389	275	44	36	63	144	596	296	598
- Two-Engine Turbine	1,596	52	12	175	5	6	51	42	24	12	0	145	278	334	4	456
<b>Gliders</b>	<b>1,594</b>	<b>1,414</b>	<b>3</b>	<b>0</b>	<b>139</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Lighter-Than-Air</b>	<b>2,684</b>	<b>1,974</b>	<b>6</b>	<b>0</b>	<b>118</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>542</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>23</b>	<b>0</b>
<b>Experimental Total</b>	<b>24,918</b>	<b>22,581</b>	<b>386</b>	<b>184</b>	<b>563</b>	<b>40</b>	<b>174</b>	<b>16</b>	<b>5</b>	<b>130</b>	<b>13</b>	<b>10</b>	<b>716</b>	<b>71</b>	<b>5</b>	<b>24</b>
Amateur-Built	17,503	16,577	258	81	242	0	76	0	0	57	5	0	202	5	0	0
Exhibition	1,908	1,632	20	0	42	0	5	0	0	25	2	0	182	0	0	0
Exp. Light-Sport	4,157	3,874	16	0	150	0	31	0	0	30	0	0	56	0	0	0
Other Experimental	1,350	499	93	103	129	40	62	16	5	18	6	10	277	66	5	24
<b>Special Light-Sport</b>	<b>2,056</b>	<b>1,647</b>	<b>56</b>	<b>0</b>	<b>274</b>	<b>3</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>45</b>	<b>12</b>	<b>0</b>	<b>0</b>

Source: FAA Survey



## 2.2 U.S. General Aviation and On-Demand Part 135 Total Hours Flown (in Thousands) by Use and Aircraft Type (2013)

Aircraft Type	Total Hours	General Aviation FAR Part 91 Use												On-Demand FAR Part 135 Use		
		Personal	Business (w/o crew)	Business (with crew)	Instructional	Aerial Apps.	Aerial Obs.	Aerial Other	External Load	Other Work	Sight-seeing	Air Medical	Other	Air Taxi	Air Tours	Air Medical
<b>Total All Aircraft</b>	<b>22,876</b>	<b>7,189</b>	<b>1,717</b>	<b>2,568</b>	<b>3,978</b>	<b>1,014</b>	<b>1,141</b>	<b>213</b>	<b>167</b>	<b>264</b>	<b>157</b>	<b>111</b>	<b>974</b>	<b>2,395</b>	<b>343</b>	<b>645</b>
% Std. Error	1.0%	1.3%	2.4%	3.2%	3.3%	5.8%	5.5%	8.3%	14.3%	10.8%	9.0%	12.3%	3.7%	3.7%	13.0%	6.9%
<b>Piston Total</b>	<b>12,352</b>	<b>5,552</b>	<b>1,303</b>	<b>281</b>	<b>3,351</b>	<b>202</b>	<b>466</b>	<b>25</b>	<b>-</b>	<b>145</b>	<b>67</b>	<b>20</b>	<b>328</b>	<b>543</b>	<b>40</b>	<b>27</b>
One-Engine Piston	10,706	5,156	1,062	142	2,905	198	388	12	-	143	61	14	265	309	37	14
Two-Engine Piston	1,646	396	241	140	446	4	79	13	-	2	7	6	63	234	3	13
<b>Turboprop Total</b>	<b>2,587</b>	<b>200</b>	<b>175</b>	<b>432</b>	<b>66</b>	<b>650</b>	<b>134</b>	<b>64</b>	<b>-</b>	<b>43</b>	<b>2</b>	<b>10</b>	<b>106</b>	<b>517</b>	<b>61</b>	<b>128</b>
One-Engine Turboprop	1,310	94	91	103	17	646	9	18	-	20	2	7	35	181	49	40
Two-Engine Turboprop	1,277	106	85	329	49	3	125	46	-	23	0	3	70	336	12	89
<b>Business Jet</b>	<b>3,488</b>	<b>264</b>	<b>157</b>	<b>1,714</b>	<b>12</b>	<b>-</b>	<b>6</b>	<b>2</b>	<b>-</b>	<b>6</b>	<b>0</b>	<b>5</b>	<b>379</b>	<b>871</b>	<b>-</b>	<b>72</b>
<b>Rotorcraft Total</b>	<b>2,949</b>	<b>89</b>	<b>44</b>	<b>103</b>	<b>399</b>	<b>153</b>	<b>510</b>	<b>117</b>	<b>164</b>	<b>47</b>	<b>53</b>	<b>69</b>	<b>108</b>	<b>443</b>	<b>239</b>	<b>409</b>
Piston Total	636	54	17	3	333	54	75	11	3	7	38	-	15	20	7	-
Turbine Total	2,312	35	27	101	66	99	436	106	161	41	15	69	93	423	232	409
- One-Engine Turbine	1,797	29	25	52	57	97	415	91	144	37	15	31	54	294	231	225
- Two-Engine Turbine	515	6	2	49	9	2	20	15	17	4	0	38	39	129	2	184
<b>Gliders</b>	<b>68</b>	<b>51</b>	<b>-</b>	<b>-</b>	<b>11</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3</b>	<b>-</b>	<b>2</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Lighter-Than-Air</b>	<b>67</b>	<b>35</b>	<b>1</b>	<b>-</b>	<b>3</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0</b>	<b>27</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Experimental Total</b>	<b>1,191</b>	<b>901</b>	<b>30</b>	<b>37</b>	<b>73</b>	<b>-</b>	<b>22</b>	<b>5</b>	<b>-</b>	<b>23</b>	<b>-</b>	<b>7</b>	<b>45</b>	<b>20</b>	<b>-</b>	<b>9</b>
Amateur-Built	785	692	17	5	44	-	2	-	-	12	-	-	11	-	-	-
Exhibition	78	63	1	-	2	-	-	-	-	5	1	-	7	-	-	-
Exp. Light-Sport	135	119	1	-	7	-	1	0	-	4	-	-	2	-	-	-
Other Experimental	193	27	11	32	20	9	19	5	-	3	3	7	25	19	2	9
<b>Special Light-Sport</b>	<b>173</b>	<b>97</b>	<b>5</b>	<b>-</b>	<b>63</b>	<b>0</b>	<b>2</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>-</b>	<b>5</b>	<b>-</b>	<b>-</b>	<b>-</b>

Source: FAA Survey

The Federal Aviation Administration's (FAA) annual general aviation survey categorizes the **uses of general aviation aircraft** as follows:

- personal (and recreational) flying;
- business transportation without a paid crew (that is, an individual using an aircraft for business without a paid, professional crew); and
- business transportation with a paid, professional crew (previously called "corporate").

In addition, the following **forms of business operations** are included in general aviation operations:

- instructional flying (operations under the supervision of a flight instructor, including solo flight);
- sightseeing (commercial sightseeing operations under FAR Part 91); and
- on-demand FAR Part 135 operations including air taxi (that is, charter), air tours, and air medical operations.

## 2.3 Active U.S. General Aviation and On-Demand Part 135 Aircraft by Type (1980–2013) and Forecast (2014–2034)

Calendar Year	Total Aircraft	Airplane			Rotorcraft		Balloons, Dirigibles, Glider	Experimental	Light-Sport Aircraft		
		Piston	Turboprop	Business Jet	Piston	Turbine			Total	Experimental	Special
1980	211,039	193,012	4,089	2,992	2,794	3,207	4,945	-	-	-	-
1981	213,219	193,367	4,659	3,170	3,250	3,724	5,049	-	-	-	-
1982	209,778	189,195	5,186	3,996	2,419	3,749	5,233	-	-	-	-
1983	213,292	191,479	5,453	3,898	2,541	3,998	5,923	-	-	-	-
1984	220,941	197,442	5,808	4,320	2,936	4,160	6,275	-	-	-	-
1985	210,853	188,191	5,607	4,374	2,877	3,541	6,263	-	-	-	-
1986	219,325	195,647	5,244	4,481	2,921	4,022	7,010	-	-	-	-
1987	217,202	194,454	5,274	4,358	2,813	3,520	6,783	-	-	-	-
1988	210,246	187,536	5,259	4,188	2,584	3,822	6,857	-	-	-	-
1989	219,738	193,815	6,324	4,402	3,244	4,232	7,721	-	-	-	-
1990	212,230	187,774	5,652	4,375	3,459	3,938	7,032	-	-	-	-
1991	196,874	173,518	4,941	4,126	2,390	3,848	8,051	-	-	-	-
1992	185,650	162,881	4,786	4,004	2,348	3,631	8,000	-	-	-	-
1993	177,120	149,156	4,116	3,663	1,846	2,875	5,037	10,426	-	-	-
1994	172,935	142,152	4,092	3,914	1,627	3,101	5,906	12,144	-	-	-
1995	188,089	152,788	4,995	4,559	1,863	3,967	4,741	15,176	-	-	-
1996	191,129	153,551	5,716	4,424	2,507	4,063	4,244	16,625	-	-	-
1997	192,414	156,056	5,619	5,178	2,259	4,527	4,092	14,680	-	-	-
1998	204,710	162,963	6,174	6,066	2,545	4,881	5,580	16,502	-	-	-
1999	219,464	171,923	5,679	7,120	2,564	4,884	6,765	20,528	-	-	-
2000	217,534	170,513	5,762	7,001	2,680	4,470	6,701	20,407	-	-	-
2001	211,446	163,314	6,596	7,787	2,292	4,491	6,545	20,421	-	-	-
2002	211,244	161,087	6,841	8,355	2,351	4,297	6,377	21,936	-	-	-
2003	209,708	160,938	7,689	7,997	2,123	4,403	6,008	20,550	-	-	-
2004	219,426	165,189	8,379	9,298	2,315	5,506	5,939	22,800	-	-	-
2005	224,352	167,608	7,942	9,823	3,039	5,689	6,454	23,627	170	-	-
2006	221,942	163,743	8,063	10,379	3,264	5,895	6,278	23,047	1,273	-	-
2007	231,607	166,907	9,514	10,385	2,769	6,798	5,940	23,228	6,066	-	-
2008	228,663	163,013	8,906	11,042	3,498	6,378	5,652	23,364	6,811	-	-
2009	223,877	157,123	9,055	11,268	3,499	6,485	5,480	24,419	6,547	5,077	1,470
2010	223,370	155,419	9,369	11,484	3,588	6,514	5,684	24,784	6,528	4,878	1,650
2011	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2012	209,034	143,160	10,304	11,793	3,292	6,763	5,006	26,715	-	4,631	2,001
2013	199,927	137,655	9,619	11,637	3,137	6,628	4,278	24,918	-	4,157	2,056
Forecast											
2014	203,020	136,935	10,160	12,055	3,430	7,280	5,025	25,895	-	-	2,240
2015	203,270	135,980	10,175	12,250	3,500	7,545	5,035	26,415	-	-	2,370
2016	203,630	135,075	10,190	12,540	3,570	7,820	5,040	26,880	-	-	2,515
2017	204,120	134,220	10,230	12,875	3,640	8,110	5,050	27,305	-	-	2,690
2018	204,615	133,390	10,285	13,225	3,710	8,405	5,065	27,705	-	-	2,830
2019	205,140	132,590	10,355	13,600	3,775	8,690	5,075	28,100	-	-	2,955
2020	205,780	131,835	10,445	14,010	3,840	8,990	5,080	28,500	-	-	3,080
2021	206,450	131,100	10,550	14,425	3,905	9,290	5,085	28,900	-	-	3,195
2022	207,235	130,415	10,685	14,855	3,970	9,585	5,100	29,310	-	-	3,315
2023	208,075	129,765	10,820	15,315	4,030	9,870	5,110	29,715	-	-	3,450
2024	209,040	129,160	11,000	15,800	4,090	10,150	5,115	30,130	-	-	3,595
2025	210,170	128,635	11,205	16,325	4,150	10,435	5,120	30,555	-	-	3,745
2026	211,405	128,150	11,455	16,870	4,210	10,720	5,135	30,980	-	-	3,885
2027	212,780	127,725	11,735	17,445	4,275	11,010	5,145	31,415	-	-	4,030
2028	214,250	127,345	12,045	18,045	4,340	11,305	5,150	31,850	-	-	4,170
2029	215,840	127,050	12,375	18,665	4,405	11,600	5,155	32,275	-	-	4,315
2030	217,560	126,830	12,725	19,310	4,470	11,900	5,165	32,715	-	-	4,445
2031	219,400	126,690	13,110	19,970	4,540	12,205	5,175	33,145	-	-	4,565
2032	221,380	126,660	13,515	20,645	4,610	12,510	5,185	33,575	-	-	4,680
2033	223,470	126,715	13,930	21,340	4,680	12,825	5,190	34,010	-	-	4,780
2034	225,700	126,865	14,370	22,050	4,750	13,145	5,200	34,440	-	-	4,880
Average Annual Growth											
2013–34	0.5%	-0.4%	1.6%	3.0%	1.7%	3.0%	0.2%	1.5%	-	-	4.1%

Source: FAA Survey and Forecast

## 2.4 U.S. General Aviation and On-Demand Part 135 Estimated Hours Flown (in Thousands) by Type (1980–2013) and Forecast (2014–2034)

Calendar Year	Total Hours	Airplane			Rotorcraft		Balloons, Dirigibles, Gliders	Experimental	Light-Sport Aircraft		
		Piston	Turboprop	Business Jet	Piston	Turbine			Total	Experimental	Special
1980	41,016	34,747	2,240	1,332	736	1,603	359	-	-	-	-
1981	40,704	34,086	2,155	1,387	930	1,754	391	-	-	-	-
1982	36,457	29,950	2,168	1,611	579	1,771	379	-	-	-	-
1983	35,249	28,911	2,173	1,473	572	1,700	420	-	-	-	-
1984	36,119	29,194	2,506	1,566	592	1,903	358	-	-	-	-
1985	31,456	25,666	1,921	1,498	521	1,468	382	-	-	-	-
1986	31,782	24,805	2,661	1,527	742	1,682	364	-	-	-	-
1987	30,883	24,969	2,010	1,411	602	1,506	384	-	-	-	-
1988	31,114	24,291	2,195	1,554	533	1,974	568	-	-	-	-
1989	32,332	24,907	2,892	1,527	692	1,918	396	-	-	-	-
1990	32,096	25,832	2,319	1,396	716	1,493	341	-	-	-	-
1991	29,862	23,919	1,628	1,071	549	2,214	483	-	-	-	-
1992	26,747	21,417	1,582	1,076	423	1,842	407	-	-	-	-
1993	24,455	19,321	1,192	1,212	391	1,308	338	785	-	-	-
1994	24,092	18,823	1,142	1,238	369	1,408	388	724	-	-	-
1995	26,612	20,251	1,490	1,455	337	1,624	261	1,194	-	-	-
1996	26,909	20,091	1,768	1,543	591	1,531	227	1,158	-	-	-
1997	27,713	20,744	1,655	1,713	344	1,740	192	1,327	-	-	-
1998	28,100	20,402	1,765	2,226	430	1,912	295	1,071	-	-	-
1999	31,231	22,529	1,797	2,721	552	2,077	309	1,246	-	-	-
2000	29,960	21,493	1,986	2,648	530	1,661	362	1,280	-	-	-
2001	27,017	19,194	1,773	2,654	474	1,479	287	1,157	-	-	-
2002	27,040	18,891	1,850	2,745	454	1,422	333	1,345	-	-	-
2003	27,329	19,013	1,922	2,704	448	1,687	263	1,292	-	-	-
2004	28,126	18,142	2,161	3,718	514	2,020	249	1,322	-	-	-
2005	26,982	16,434	2,106	3,771	617	2,439	267	1,339	9	-	-
2006	27,705	16,525	2,162	4,077	918	2,528	211	1,218	66	-	-
2007	27,852	16,257	2,661	3,938	704	2,541	215	1,275	260	-	-
2008	26,009	15,074	2,457	3,600	751	2,470	209	1,155	293	-	-
2009	23,763	13,634	2,215	3,161	755	2,248	178	1,286	286	171	115
2010	24,802	13,979	2,325	3,375	794	2,611	181	1,226	311	173	138
2011	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2012	24,403	13,206	2,733	3,418	731	2,723	180	1,243	-	151	169
2013	22,876	12,352	2,587	3,488	636	2,312	135	1,191	-	135	173
Forecast											
2014		12,521	2,784	3,571	765	2,804	182	1,237	-	-	193
2015		12,233	2,809	3,744	782	2,884	183	1,287	-	-	206
2016		11,992	2,828	3,927	799	2,987	185	1,343	-	-	221
2017		11,785	2,852	4,123	816	3,103	186	1,405	-	-	239
2018		11,618	2,872	4,317	834	3,220	187	1,454	-	-	254
2019		11,476	2,897	4,521	850	3,335	189	1,489	-	-	268
2020		11,360	2,924	4,738	866	3,455	190	1,526	-	-	282
2021		11,255	2,953	4,952	882	3,575	191	1,563	-	-	295
2022		11,183	2,992	5,172	898	3,695	192	1,600	-	-	309
2023		11,141	3,032	5,391	913	3,801	194	1,636	-	-	325
2024		11,099	3,080	5,609	927	3,906	195	1,672	-	-	343
2025		11,072	3,141	5,838	943	4,012	196	1,709	-	-	360
2026		11,057	3,211	6,069	957	4,120	198	1,743	-	-	377
2027		11,052	3,290	6,303	974	4,229	199	1,778	-	-	395
2028		11,049	3,381	6,542	990	4,343	200	1,812	-	-	413
2029		11,063	3,479	6,785	1,005	4,458	202	1,847	-	-	432
2030		11,076	3,582	7,029	1,021	4,577	203	1,882	-	-	449
2031		11,116	3,688	7,275	1,038	4,703	204	1,917	-	-	466
2032		11,174	3,800	7,512	1,055	4,831	206	1,952	-	-	482
2033		11,250	3,920	7,751	1,072	4,976	207	1,987	-	-	498
2034		11,361	4,041	8,005	1,090	5,123	208	2,023	-	-	513
Average Annual Growth											
2013–34		-0.6%	1.8%	4.2%	1.8%	3.1%	0.7%	2.6%	-	-	5.1%

Key changes to survey methodology by year:

- 2003: Aircraft operating in commuter operations were excluded.
- 2004: The survey coverage was expanded for turbine airplanes and rotorcraft, accounting for part of the increase in hours.
- 2007: The estimate of Light-Sport Aircraft increased significantly due to mandatory registration.

- 2009: The FAA began publishing data for Special Light-Sport Aircraft separately.
- 2011: Data is unavailable at the time of publication.
- 2012: The general aviation survey results includes "Experimental Light-Sport" data in the "Experimental" category.

Source: FAA Survey and Forecast



## 2.5 Active U.S. General Aviation and On-Demand FAR Part 135 Average Hours Flown Per Aircraft by Year (1998–2013)

Calendar Year	All Aircraft	Airplane			Rotorcraft		Balloons, Dirigibles, Giders	Experimental	Light-Sport Aircraft	
		Piston	Turboprop	Business Jet	Piston	Turbine			Total	Special
1998	137	125	286	367	169	392	53	65	-	-
1999	145	133	319	385	217	448	47	61	-	-
2000	142	130	353	393	198	398	56	64	-	-
2001	138	128	290	341	254	347	50	59	-	-
2002	128	117	270	329	193	331	53	61	-	-
2003	130	118	250	338	211	383	44	63	-	-
2004	128	110	258	400	222	367	42	58	-	-
2005	120	98	265	384	203	429	41	57	55	-
2006	125	101	268	393	281	429	34	53	52	-
2007	120	97	280	379	254	374	36	55	43	-
2008	114	93	276	326	215	387	37	50	43	-
2009	106	87	245	281	216	347	32	53	44	78
2010	111	90	248	294	221	401	32	50	48	84
2011	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-	n/a
2012	117	92	265	290	222	403	36	47	-	85
2013	114	90	269	300	203	349	32	48	-	84

Source: FAA Survey



## 2.6 Active General Aviation and On-Demand FAR Part 135 Aircraft and Hours Flown (in Thousands) by U.S. State or Territory (2007–2013)

State or Territory	2007		2008		2009		2010		2012		2013		
	Active Aircraft	Hours Flown	Active Aircraft	Hours Flown	Active Aircraft	Hours Flown	Active Aircraft	Hours Flown	Active Aircraft	Hours Flown	Aircraft Population	Active Aircraft	Hours Flown
Alabama	3,719	372	3,549	546	3,145	299	5,095	643	4,763	527	3,635	2,825	244
Alaska	6,111	783	6,076	701	6,017	688	6,113	681	5,703	696	8,161	5,526	675
Arizona	7,636	807	5,767	579	6,896	809	7,531	1,135	6,070	666	7,470	5,658	718
Arkansas	2,575	338	2,291	354	2,661	346	3,028	354	3,053	366	3,750	3,065	328
California	23,813	2,540	25,292	2,651	24,811	2,555	22,830	2,350	21,316	2,309	26,141	20,560	2,331
Colorado	5,441	663	6,268	626	4,973	525	5,483	716	5,412	772	6,819	5,338	611
Connecticut	2,296	380	2,228	445	1,868	355	1,566	201	1,657	281	1,681	1,342	175
Delaware	2,494	410	1,830	313	2,261	221	1,934	220	1,885	212	2,081	1,350	349
District of Columbia	41	15	29	88	80	4	17	4	415	107	52	52	13
Florida	16,341	2,198	16,143	2,382	16,804	2,047	16,126	1,839	14,754	1,958	18,162	14,450	1,868
Georgia	4,758	568	6,674	709	5,970	805	5,843	618	5,228	566	7,198	5,932	571
Hawaii	531	106	530	93	499	148	741	179	486	203	700	448	141
Idaho	2,747	319	2,816	234	3,282	300	2,860	204	2,966	301	3,731	2,666	322
Illinois	6,872	723	5,480	423	6,786	655	6,112	574	5,202	444	7,021	5,169	530
Indiana	4,862	358	3,764	294	4,008	412	3,151	255	3,675	266	4,489	3,280	359
Iowa	2,982	298	3,361	294	2,935	281	2,629	232	3,064	371	4,056	3,024	236
Kansas	3,044	442	3,814	397	3,805	366	3,547	344	3,138	543	4,806	3,704	378
Kentucky	2,073	186	1,726	131	1,780	137	2,082	157	1,934	159	2,197	1,797	142
Louisiana	2,857	756	3,136	777	2,970	913	3,512	862	3,264	1,017	4,177	3,156	757
Maine	1,463	128	1,284	112	1,230	81	1,347	86	1,188	107	1,606	1,203	80
Maryland	2,699	309	2,671	248	2,971	176	2,774	235	2,505	274	2,983	2,184	245
Massachusetts	2,738	317	2,417	310	2,539	224	2,426	244	2,663	477	2,944	2,279	218
Michigan	6,443	512	8,668	572	6,068	477	6,112	471	5,663	468	6,965	4,999	410
Minnesota	5,086	552	4,840	453	5,187	413	4,690	415	4,365	383	6,308	4,720	437
Mississippi	1,939	381	1,298	233	2,237	296	2,543	354	2,037	300	2,672	2,033	243
Missouri	4,616	376	3,596	272	4,119	412	3,847	303	3,953	399	4,855	3,479	328
Montana	3,110	349	2,152	239	2,576	188	2,536	164	1,755	158	2,968	2,065	211
Nebraska	2,127	255	2,074	201	2,314	197	2,076	183	2,013	191	2,750	2,159	194
Nevada	3,512	573	3,093	377	2,022	276	2,030	343	2,246	319	3,153	2,322	323
New Hampshire	1,425	107	1,624	150	1,361	123	1,316	148	1,187	103	1,645	1,170	103
New Jersey	3,369	315	4,076	742	3,232	331	2,954	315	2,379	294	3,508	2,593	434
New Mexico	4,221	461	3,519	276	2,663	190	3,411	246	2,562	201	3,629	2,493	137
New York	5,661	600	6,074	549	5,577	463	6,457	787	5,116	478	6,989	5,131	477
North Carolina	5,917	928	5,376	644	6,004	637	5,883	723	5,451	463	7,175	5,627	559
North Dakota	1,236	171	1,276	348	1,101	106	1,366	217	1,376	341	2,053	1,412	275
Ohio	6,189	741	6,200	700	6,329	608	5,823	631	6,319	578	6,830	5,117	537
Oklahoma	4,021	841	4,911	794	4,229	809	4,794	910	3,915	566	5,476	4,001	862
Oregon	6,029	725	4,614	431	5,234	559	5,200	784	4,692	653	6,535	4,626	569
Pennsylvania	5,881	624	7,410	851	6,539	652	6,012	662	5,386	562	7,144	5,091	510
Puerto Rico	348	54	620	78	319	50	397	154	345	36	278	235	54
Rhode Island	243	43	299	20	234	19	352	36	2,538	193	415	319	43
South Carolina	3,214	260	2,845	300	2,425	189	2,634	205	1,478	153	2,855	2,414	186
South Dakota	1,143	151	1,554	112	1,843	176	1,024	96	3,557	429	1,834	1,080	167
Tennessee	4,286	524	4,438	559	3,820	315	3,993	362	18,500	2,140	4,478	3,718	411
Texas	20,235	2,450	18,117	2,071	19,416	2,042	17,595	2,039	2,601	433	22,851	16,811	2,243
Utah	2,057	386	2,583	443	1,859	262	2,298	325	545	30	2,511	1,906	284
Vermont	431	39	628	35	553	35	603	49	4,451	549	666	495	22
Virginia	4,642	703	5,605	691	3,961	376	5,178	645	7,249	679	6,446	5,184	499
Washington	7,722	949	7,198	691	6,604	614	7,585	602	855	47	9,507	6,612	513
West Virginia	1,101	82	1,247	95	1,160	97	1,292	80	4,485	352	1,031	886	66
Wisconsin	5,872	487	3,911	297	5,134	376	5,694	318	1,010	120	7,046	5,002	318
Wyoming	1,287	167	1,493	144	1,299	118	836	88	492	124	1,466	1,149	156
Other US Territories	154	32	182	15	166	10	-	-	174	44	93	70	15
<b>Grand Total</b>	<b>231,607</b>	<b>27,854</b>	<b>228,663</b>	<b>26,009</b>	<b>223,877</b>	<b>23,763</b>	<b>223,370</b>	<b>24,802</b>	<b>209,034</b>	<b>24,403</b>	<b>265,989</b>	<b>199,927</b>	<b>22,876</b>

Columns may not add up due to rounding procedures.  
Beginning in 2007, the survey asked the state in which the aircraft was "primarily flown" rather than where the aircraft was "based."

Estimates by state and region may vary from previous years. State of registration is assigned if state primarily flown was not answered or cannot be coded.  
Data for 2011 is unavailable at the time of publication.

Source: FAA Survey

## 2.7 U.S. Experimental Aircraft Fleet and Flight Hours (in Thousands) (1994–2013)

Year	Aircraft Fleet						Hours Flown					
	Amateur-Built	Exhibition	Experimental Light-Sport	Other	Total Experimental	% of GA Fleet	Amateur-Built	Exhibition	Experimental Light-Sport	Other	Total Experimental	% of GA Hours
1994	8,833	637	-	2,674	12,144	7.0%	391	44	-	289	724	3.0%
1995	9,328	2,245	-	3,603	15,176	8.1%	482	260	-	452	1,194	4.5%
1996	11,566	2,094	-	2,965	16,625	8.7%	524	192	-	442	1,158	4.3%
1997	10,261	1,798	-	2,620	14,679	7.6%	698	246	-	382	1,326	4.8%
1998	13,189	1,630	-	1,684	16,503	8.1%	729	73	-	269	1,071	3.8%
1999	16,858	1,999	-	1,671	20,528	9.4%	883	122	-	242	1,247	4.0%
2000	16,739	1,973	-	1,694	20,406	9.4%	887	113	-	279	1,279	4.3%
2001	16,736	2,052	-	1,633	20,421	9.7%	794	102	-	261	1,157	4.3%
2002	18,168	2,190	-	1,578	21,936	10.4%	976	127	-	242	1,345	5.0%
2003	17,028	2,031	-	1,491	20,550	9.8%	963	103	-	226	1,292	4.7%
2004	19,165	2,070	-	1,565	22,800	10.4%	990	116	-	216	1,322	4.7%
2005	19,817	2,120	-	1,691	23,628	10.5%	987	113	-	239	1,339	5.0%
2006	19,316	2,103	-	1,629	23,048	10.4%	899	103	-	216	1,218	4.4%
2007	19,538	2,101	-	1,589	23,228	10.0%	896	102	-	277	1,274	4.6%
2008	19,767	2,096	-	1,501	23,364	10.2%	872	92	-	192	1,155	4.4%
2009	20,794	2,063	5,077	1,562	29,496	13.2%	983	88	171	215	1,457	6.1%
2010	21,270	2,029	4,878	1,485	29,662	13.3%	911	98	173	217	1,399	5.6%
2011	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2012	18,843	1,923	4,631	1,317	26,715	12.8%	847	88	151	157	1,243	5.1%
2013	17,503	1,908	4,157	1,350	24,918	12.5%	785	78	135	193	1,191	5.2%

Beginning in 1994, experimental includes aircraft with an experimental airworthiness certificate. These include research and development, amateur-built, exhibition, racing, crew training, and market survey aircraft and aircraft used to show compliance with the Federal Aviation Regulations.

Source: FAA Survey





2.8 Total Fuel Consumed and Average Fuel Consumption Rate by Aircraft Type Based on U.S. FAA's Survey (2013)

Fuel Type	Fixed-Wing			Rotorcraft		Other Aircraft	Experimental	Special Light-Sport	Total All Aircraft
	Piston	Turboprop	Turbojet	Piston	Turbine				
Jet Fuel									
Avg. Rate (GPH)	31.8	75.3	271.4	28.0	54.6	-	70.3	-	149.9
Estimated Fuel Use (Thousand Gal.)	2,805.4	194,628.4	1,022,988.6	163.4	126,134.7	-	6,869.4	-	1,353,590.0
% Standard Error	18.2%	1.2%	1.1%	19.2%	1.2%	-	11.7%	-	1.0%
100 Low-Lead									
Avg. Rate (GPH)	12.9	26.5	45.5	13.7	16.6	3.4	10.2	5.5	12.6
Estimated Fuel Use (Thousand Gal.)	136,013.2	1,238.0	162.6	8,211.3	39.5	21.7	7,536.6	550.1	153,773.0
% Standard Error	1.9%	9.7%	52.4%	2.6%	44.2%	9.6%	4.3%	6.3%	1.6%
100 Octane									
Avg. Rate (GPH)	13.8	33.7	-	14.6	-	5.0	40.7	5.6	18.2
Estimated Fuel Use (Thousand Gal.)	9,049.9	141.6	-	114.6	-	2.1	10,195.8	18.0	19,522.0
% Standard Error	7.6%	19.2%	-	12.4%	-	16.8%	14.9%	13.6%	11.4%
Automotive Gasoline									
Avg. Rate (GPH)	10.1	-	-	6.4	-	3.8	4.8	4.7	7.9
Estimated Fuel Use (Thousand Gal.)	18,230.3	-	-	2.8	-	5.0	1,331.8	369.8	19,937.7
% Standard Error	5.4%	-	-	14.9%	-	18.7%	3.9%	4.6%	3.9%
Other Fuel									
Avg. Rate (GPH)	7.4	-	-	-	-	18.6	13.0	4.0	17.7
Estimated Fuel Use (Thousand Gal.)	40.0	-	-	-	-	1,530.0	23.3	0.9	1,594.3
% Standard Error	11.8%	-	-	-	-	9.1%	13.1%	41.1%	8.7%
Total Fuel Use									
Avg. Rate (GPH)	12.7	72.9	270.9	13.9	54.5	17.5	12.1	5.1	32.1
Estimated Fuel Use (Thousand Gal.)	166,329.9	196,196.0	1,023,375.4	8,497.5	126,174.2	1,558.7	25,966.1	936.8	1,549,034.7
% Standard Error	1.8%	1.3%	1.1%	2.5%	1.2%	8.6%	8.4%	4.1%	2.0%

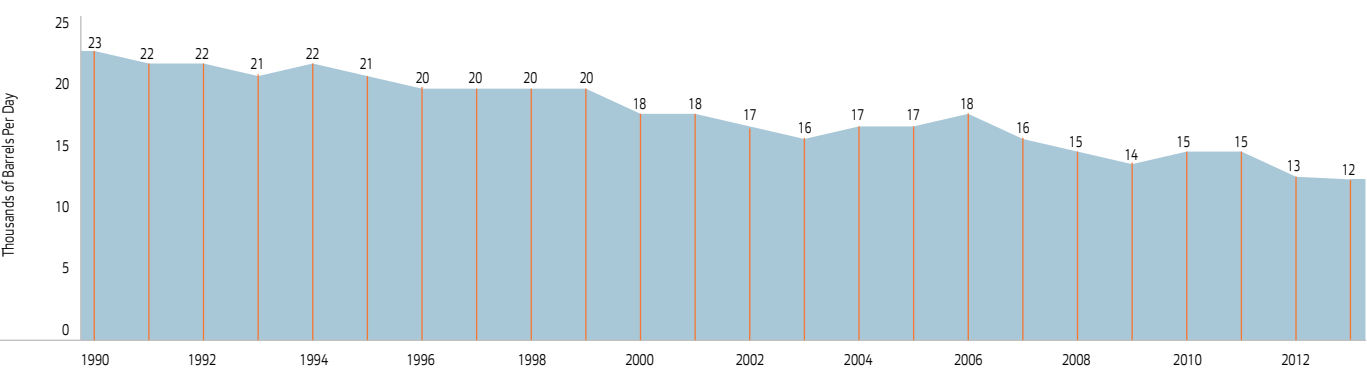
Some data points are suppressed or contain no reports of a type of aircraft using that fuel. Source: FAA Survey

2.9 U.S. Refinery and Blender Net Production of Aviation Gasoline (1990–2013) (In Thousand Barrels Per Day)

Year	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9
1990	23	22	22	21	22	21	20	20	20	20
2000	18	18	17	16	17	17	18	16	15	14
2010	15	15	13	12	-	-	-	-	-	-

Source: U.S. Energy Information Administration

FIGURE 2.1 Refinery and Blender Net Production of Aviation Gasoline (1990–2013)



Source: U.S. Energy Information Administration

## 2.10 U.S. General Aviation Fuel Consumption (2000–2013) and Forecast (2014–2034) in Millions of Gallons

Year	Airplane				Rotorcraft		Experimental and Other Aircraft	Light-Sport	Total Fuel Consumed		
	Piston		Turbine		Piston	Turbine			Avgas	Jet Fuel	Total
	Single-Engine	Multi-Engine	Turboprop	Business Jet							
2000	200.8	108.4	176.3	736.7	8.4	59.0	15.2	-	332.8	972.0	1,304.8
2001	180.4	76.4	149.1	726.7	7.2	42.6	15.3	-	279.2	918.3	1,197.6
2002	177.9	74.2	152.3	745.5	6.8	40.5	17.8	-	276.7	938.3	1,215.0
2003	181.8	66.7	154.5	729.0	6.8	48.8	17.1	-	272.4	932.3	1,204.7
2004	167.5	80.1	167.0	1,004.9	7.9	59.0	17.5	-	272.9	1,230.9	1,503.8
2005	173.1	89.7	196.1	1,181.3	14.6	149.2	17.7	-	295.0	1,526.7	1,821.7
2006	164.9	79.9	190.1	1,303.9	16.7	148.6	21.6	0.3	283.4	1,642.6	1,926.0
2007	157.6	83.0	205.2	1,148.0	9.3	132.4	22.6	1.2	273.6	1,485.6	1,759.2
2008	143.0	69.5	230.4	1,313.2	10.7	162.1	23.3	1.5	248.1	1,705.7	1,953.8
2009	132.3	57.1	208.7	1,104.6	10.7	133.6	25.8	1.4	227.4	1,447.0	1,674.4
2010	133.1	53.9	187.1	1,122.9	10.7	124.8	21.6	1.5	220.7	1,434.8	1,655.6
2011E	129.3	52.9	188.0	1,181.8	10.5	120.8	21.3	1.5	215.5	1,490.7	1,706.2
2012	126.6	51.8	190.7	1,232.2	10.7	119.5	21.7	1.5	212.3	1,542.4	1,754.7
2013E	121.5	53.6	208.2	1,056.6	10.5	148.6	15.9	0.9	202.4	1,413.4	1,615.8
Forecast											
2014	118.8	52.6	209.0	1,108.4	10.7	152.2	16.9	1.0	200.0	1,469.5	1,669.5
2015	115.8	51.4	208.7	1,156.4	10.9	155.7	17.6	1.0	196.8	1,520.8	1,717.6
2016	113.5	50.6	209.1	1,206.7	11.2	159.7	18.2	1.1	194.5	1,575.5	1,770.1
2017	111.3	49.9	209.8	1,260.7	11.4	165.0	19.0	1.2	192.8	1,635.6	1,828.3
2018	109.7	49.2	210.2	1,313.4	11.6	170.4	19.6	1.3	191.4	1,694.0	1,885.5
2019	108.4	48.6	212.1	1,368.5	11.8	176.5	20.0	1.3	190.2	1,757.0	1,947.3
2020	107.0	48.2	213.0	1,427.0	12.1	182.8	20.5	1.4	189.2	1,822.7	2,012.0
2021	106.0	47.7	214.1	1,476.5	12.2	187.3	20.7	1.4	188.1	1,877.9	2,066.0
2022	105.1	47.4	215.8	1,526.7	12.5	192.6	21.2	1.5	187.6	1,935.0	2,122.6
2023	104.7	47.2	217.6	1,575.4	12.7	197.2	21.6	1.6	187.8	1,990.1	2,177.9
2024	104.3	47.0	221.0	1,622.8	12.9	201.6	22.1	1.7	188.0	2,045.4	2,233.4
2025	103.9	46.7	224.2	1,672.3	13.1	207.1	22.5	1.8	188.0	2,103.6	2,291.6
2026	103.4	46.7	226.9	1,721.0	13.2	210.5	22.7	1.8	187.9	2,158.4	2,346.3
2027	103.1	46.6	231.9	1,769.5	13.4	215.0	23.1	1.9	188.2	2,216.4	2,404.6
2028	102.8	46.2	238.0	1,818.3	13.7	219.7	23.5	2.0	188.2	2,276.0	2,464.2
2029	102.6	46.2	243.7	1,866.9	13.9	225.5	24.0	2.1	188.8	2,336.0	2,524.8
2030	102.5	46.2	250.2	1,914.6	14.1	229.2	24.4	2.2	189.3	2,393.9	2,583.3
2031	102.4	46.4	256.8	1,961.9	14.3	235.5	24.8	2.3	190.3	2,454.2	2,644.5
2032	102.4	46.9	263.8	2,005.6	14.6	241.9	25.2	2.3	191.5	2,511.4	2,702.9
2033	102.5	47.5	270.7	2,048.6	14.8	249.2	25.7	2.4	192.9	2,568.5	2,761.4
2034	103.0	48.1	277.7	2,094.6	15.0	256.6	26.1	2.5	194.7	2,628.9	2,823.6
Average Annual Growth											
2013-34	-0.8%	-0.5%	1.4%	3.3%	1.7%	2.6%	2.4%	5.0%	-0.2%	3.0%	2.7%

E = Estimated

Source: FAA Survey and Forecast

## 2.11 Average Age of Registered U.S. General Aviation Fleet (2005–2013)

Aircraft Type	Engine Type	Seats	Average Age in 2005 in Years	Average Age in 2006 in Years	Average Age in 2007 in Years	Average Age in 2008 in Years	Average Age in 2009 in Years	Average Age in 2010 in Years	Average Age in 2011 in Years	Average Age in 2012 in Years	Average Age in 2013 in Years
Single-Engine	Piston	1–3	37	38	38	48.1	-	-	-	-	-
		4	35	36	36	38.2	-	-	-	-	-
		5–7	30	31	32	33.5	-	-	-	-	-
		8+	44	44	43	49.3	-	-	-	-	-
		All	-	-	-	-	42.2	46.3	n/a	43.4	40.7
	Turboprop	All	13	10	14	13.6	16.1	15.2	n/a	14.9	12.5
	Jet	All	34	34	35	44.4	44.0	44.1	n/a	n/a	n/a
	Helicopter – Piston	All	n/a	n/a	n/a	n/a	n/a	n/a	n/a	20.8	17.1
	Helicopter – Turbine	All	n/a	n/a	n/a	n/a	n/a	n/a	n/a	22.9	22.3
Multi-Engine	Piston	1–3	32	32	33	48.9	-	-	-	-	-
		4	35	35	35	36.0	-	-	-	-	-
		5–7	36	36	39	39.3	-	-	-	-	-
		8+	38	39	40	41.6	-	-	-	-	-
		All	-	-	-	-	41.2	39.0	n/a	40.2	38.5
	Turboprop	All	25	26	27	28.8	28.0	27.0	n/a	26.1	25.2
	Jet	All	16	16	16	16.2	17.0	16.2	n/a	15.3	14.7
	Helicopter – Turbine	All	n/a	n/a	n/a	n/a	n/a	n/a	n/a	17.5	14.7
All Aircraft			34	35	35	39.3	39.5	37.3	n/a	35.1	33.2

Source: GAMA



## 2.12 U.S. General Aviation Operations (in Thousands) at FAA and Contract Towers (1992–2014)

Year	General Aviation Operations at Towers						Grand Total
	FAA Control Towers			Contract Towers			
	Total	Itinerant & Overflight	Local	Total	Itinerant & Overflight	Local	
1992	36,945	21,281	15,664	1,409	767	642	38,355
1993	35,228	20,377	14,851	1,373	760	613	36,601
1994	34,092	20,208	14,484	1,561	855	706	36,254
1995	32,265	18,886	13,379	3,661	1,974	1,687	35,927
1996	29,250	17,575	11,675	6,049	3,249	2,801	35,298
1997	28,232	17,097	11,135	8,601	4,572	4,029	36,833
1998	28,522	17,157	11,365	10,118	5,240	4,877	38,046
1999	29,110	17,422	11,688	10,890	5,597	5,292	40,000
2000	27,002	16,286	10,717	12,876	6,558	6,318	39,879
2001	24,784	14,949	9,835	12,843	6,484	6,359	37,627
2002	24,092	14,553	9,539	13,562	6,898	6,634	37,653
2003	22,598	13,577	9,021	12,926	6,654	6,272	35,524
2004	21,762	13,190	8,572	13,205	6,817	6,388	34,968
2005	20,705	12,430	8,275	13,456	6,885	6,571	34,161
2006	19,728	11,897	7,830	13,392	6,844	6,549	33,120
2007	19,367	11,616	7,751	13,768	6,961	6,807	33,135
2008	18,336	10,828	7,509	12,953	6,540	6,413	31,289
2009	17,429	10,770	6,659	12,156	6,585	5,571	29,585
2010	16,741	10,430	6,310	11,837	6,517	5,319	28,577
2011	16,324	10,206	6,118	11,737	6,374	5,363	28,061
2012	16,265	10,111	6,154	11,878	6,479	5,399	28,143
2013	16,027	9,857	6,170	11,998	6,438	5,560	28,025
2014E	15,791	9,707	6,084	11,950	6,355	5,594	27,741

E = Estimated  
Location operations at FAA Control Towers captures all civil local operations.

Facilities includes Control Towers, TRACONs, CERAPs and RAPCONs.  
Traffic Count for GA Operation Data are provided by OPSNET.

Source: FAA Air Traffic Activity

## 2.13 Summary of U.S. General Aviation Operations and Contacts (in Thousands) at FAA Facilities (1998–2014)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013E	2014F
GA IFR Aircraft Handled at FAA Air Route Traffic Control Centers	8,745.0	8,807.7	8,744.4	8,024.0	8,180.7	7,999.8	8,350.4	8,367.7	8,197.0	8,294.3	7,670.7	6,331.6	6,550.3	6,557.3	6,472.1	6,439.1	6,397.3
GA Instrument Operations at FAA & Contract Facilities	20,087.0	20,897.8	21,221.7	19,705.5	19,655.8	18,629.8	18,619.5	17,985.9	-	-	-	-	-	-	-	-	-
GA Total TRACON Operations	-	-	20,799.2	19,274.9	19,212.5	18,094.2	18,006.8	17,388.9	17,005.3	16,747.4	15,763.0	14,151.1	13,863.6	13,503.1	13,423.6	13,047.7	13,026.9
Total Aircraft Contacts at FSS	2,600.0	2,524.0	2,438.0	2,196.0	2,170.0	2,050.0	1,976.0	-	-	-	-	-	-	-	-	-	-

E = Estimated, F = Forecast.  
Facilities include Control Towers, TRACONs, CERAPs, and RAPCONs.  
Traffic Count for GA Operation Data provided by ATADS.  
FAA suspended tracking of IFR operations at Contract Facilities in 2005.

GA Total TRACON Operations were titled "GA Instrument Operations at Airports with FAA Traffic Control Facilities" in previous publications.  
FAA suspended tracking of Flight Service Station (FSS) contacts in 2005.

Source: FAA Air Traffic Activity



## 2.14 Canada—Registered Aircraft by Type and Weight Group (1983–2014)

Year	Number of Registered Aircraft by Type								By Weight Group		Total Aircraft
	Aeroplanes	Ultralights	Helicopters	Gliders	Balloons	Gyroplanes	Airships	Ornithopters	≤ 12,500 lbs	12,500 > lbs	
1983	22,354	1,282	1,410	560	177	116	n/a	n/a	n/a	n/a	25,899
1984	22,330	1,971	1,326	572	197	118	n/a	n/a	n/a	n/a	26,514
1985	22,231	2,376	1,276	582	219	117	n/a	n/a	n/a	n/a	26,801
1986	22,105	2,706	1,264	589	247	116	n/a	n/a	n/a	n/a	27,027
1987	22,270	2,946	1,299	602	279	121	n/a	n/a	n/a	n/a	27,517
1988	22,469	3,105	1,338	613	308	122	n/a	n/a	n/a	n/a	27,955
1989	22,463	3,212	1,366	614	339	127	n/a	n/a	n/a	n/a	28,121
1990	22,278	3,363	1,416	609	361	128	n/a	n/a	27,173	982	28,155
1991	21,973	3,477	1,433	601	384	135	n/a	n/a	23,553	981	28,003
1992	21,795	3,607	1,502	602	405	155	n/a	n/a	27,070	996	28,066
1993	21,452	3,744	1,533	597	424	162	n/a	n/a	26,977	935	27,912
1994	21,212	3,840	1,582	601	444	169	n/a	n/a	26,885	963	27,848
1995	21,169	3,956	1,605	601	440	166	n/a	n/a	26,914	1,023	27,937
1996	21,089	4,070	1,643	592	440	168	n/a	n/a	26,919	1,084	28,002
1997	20,985	4,208	1,655	587	450	169	n/a	n/a	26,862	1,192	28,054
1998	20,830	4,305	1,676	592	440	174	n/a	n/a	26,809	1,208	28,017
1999	20,768	4,346	1,711	596	442	181	2	1	26,783	1,264	28,047
2000	25,256	4,467	1,753	600	444	186	2	1	26,922	1,320	28,242
2001	25,435	4,584	1,798	613	453	190	3	1	27,171	1,322	28,493
2002	25,650	4,746	1,831	617	453	189	3	1	27,374	1,370	28,744
2003	25,902	4,922	1,894	674	450	188	3	1	27,752	1,360	29,112
2004	26,335	5,123	1,940	686	459	189	4	1	28,166	1,448	29,614
2005	26,870	5,339	2,019	683	475	192	4	1	28,745	1,499	30,244
2006	27,512	5,568	2,145	687	478	191	4	1	29,422	1,596	31,018
2007	28,195	5,745	2,317	695	481	192	5	1	30,223	1,663	31,886
2008	29,043	5,985	2,504	703	486	191	5	1	31,154	1,779	32,933
2009	29,567	6,184	2,576	715	479	190	5	1	31,709	1,824	33,533
2010	30,118	6,396	2,658	713	486	194	5	1	32,330	1,845	34,175
2011	30,805	6,585	2,728	720	490	198	5	1	32,986	1,961	34,947
2012	31,341	6,803	2,776	722	500	195	5	1	33,563	1,977	35,540
2013	31,780	6,973	2,849	726	511	206	5	1	34,050	2,028	36,078
2014	32,045	7,125	2,871	726	517	214	1	1	34,311	2,064	36,375

Source: Transport Canada and Canadian Civil Aircraft Registry, www.tc.gc.ca



FIGURE 2.2 Worldwide Turbine Business Airplane Fleet (2000–2014)

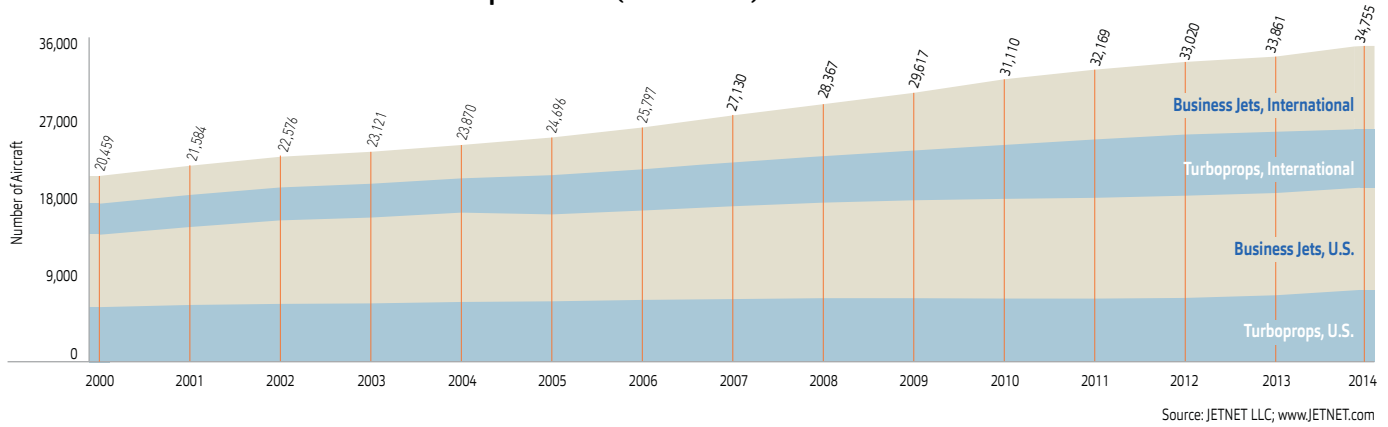


FIGURE 2.3 Worldwide Turbine and Piston Helicopter Fleet (2007–2014)

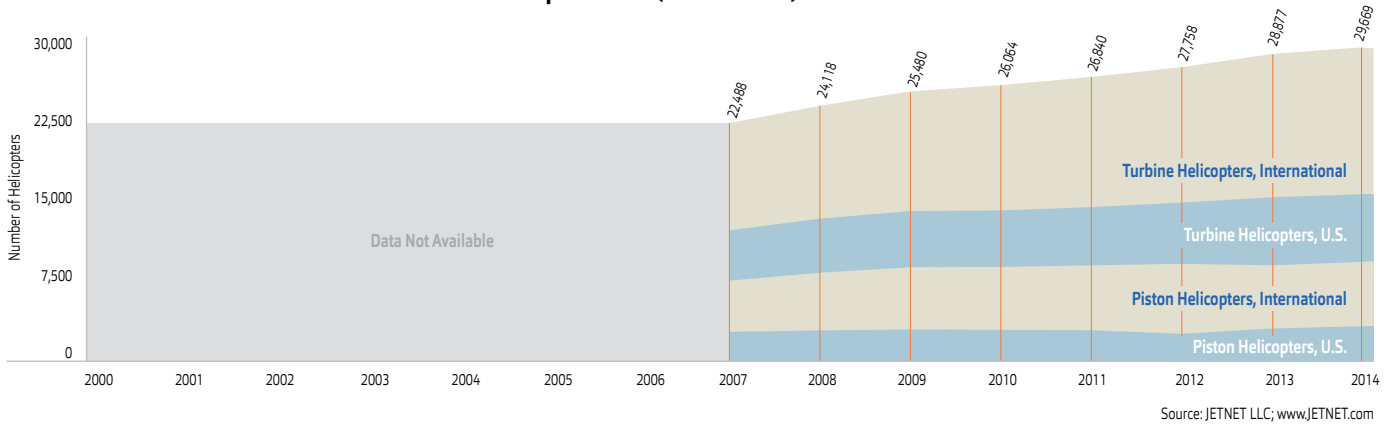


FIGURE 2.4 Worldwide Business Aircraft Operators (2000–2014)

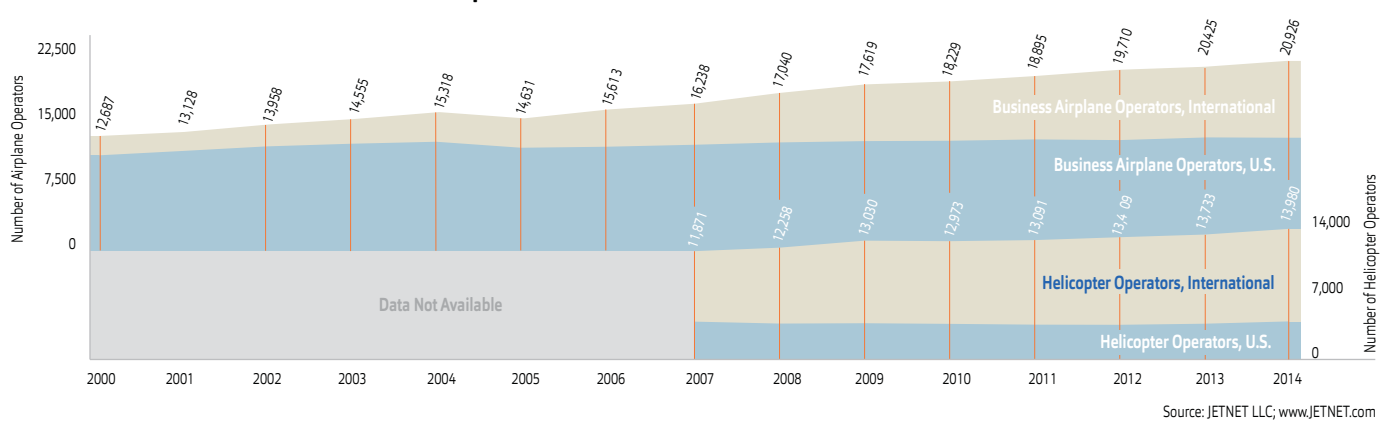
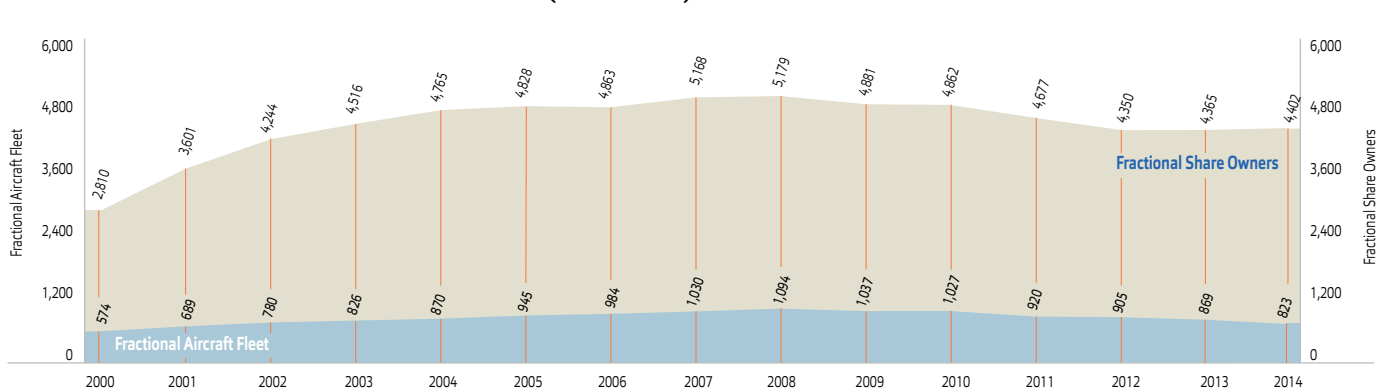


FIGURE 2.5 Fractional Aircraft and Share Owners (2000–2014)



## European Fleet Data



### 3.1 Austria—Number of General Aviation Aircraft by Type (2011–2014)

Year	Aircraft Type								Total Aircraft
	Fixed-wing Aeroplanes				Rotorcraft				
	1,999 kg and Below	2,000 kg–5,700 kg	Above 5,700 kg	Motor Gliders	Single-Engine	Multi-Engine	Gyroplanes	Federal Aircraft	
2011	723	110	323	186	99	57	5	17	1,520
2012	706	102	331	184	95	51	5	17	1,491
2013	712	97	326	181	96	52	8	17	1,489
2014	710	90	308	179	97	53	8	17	1,462

Source: Austrocontrol (österreichisches Luftfahrzeugregister), [www.austrocontrol.at](http://www.austrocontrol.at)

### 3.2 Belgium—Number of General Aviation Aircraft by Type (2014)

Year	Aircraft Type						Total Aircraft
	Fixed-wing Aeroplanes	Rotorcraft	Balloons and Airships	Homebuilt	Microlights	Gliders and Sailplanes	
2014	999	203	510	56	265	408	2,441

Source: Belgian Civil Aviation Authority (SPF Mobilité et Transport), [www.mobilite.belgium.be](http://www.mobilite.belgium.be)

### 3.3 Cyprus—Number of General Aviation Aircraft by Type (2014)

Year	Aircraft Type									Total Aircraft
	Fixed-wing Aeroplanes			Rotorcraft	Microlights	Gliders	Amphibian	Seaplanes	Powered Parachute	
	5,700 kg and Below		Above 5,700 kg							
	Single-Engine	Multi-Engine								
2014	47	9	1	2	18	1	1	1	1	81

Source: Department of Civil Aviation Cyprus (Κυπριακή Δημοκρατία, Υπουργείο Συγκοινωνιών και Εργών), [www.mcw.gov.cy](http://www.mcw.gov.cy)

### 3.4 Denmark—Number of General Aviation Aircraft by Type (2014)

Year	Aircraft Type								Total Aircraft
	Fixed-wing Aeroplanes			Rotorcraft		Balloons	Motor Gliders	Gliders	
	5,700 kg and Below	5,700 kg–15,000 kg	Above 15,000 kg	3,175 kg and Below	Above 3,175 kg				
2014	715	34	49	100	28	70	137	313	1,446

Source: Danish Transport Authority (Trafikstyrelsen), [www.trafikstyrelsen.dk](http://www.trafikstyrelsen.dk)

### 3.5 Estonia—Number of General Aviation Aircraft by Type (2014)

Year	Aircraft Type							Total Aircraft
	Fixed-wing Aeroplanes		Rotorcraft		Gyroplanes	Balloons	Gliders and Powered Sailplanes	
	5,700 kg and Below	Above 5,700 kg	Single-Engine	Multi-Engine				
2014	71	26	8	3	2	8	39	157

Source: Republic of Estonia Civil Aviation Administration (Lennuamet), [www.ecaa.ee](http://www.ecaa.ee)

## 3.6 Finland—Number of General Aviation Aircraft by Type (2014)

Year	Aircraft Type										Total Aircraft
	Fixed-wing Aeroplanes				Rotorcraft		Gliders and Powered Gliders	Balloons	Ultralights	Autogyros	
	Annex II	Below 5,700 kg		Above 5,700 kg	Single-Engine	Multi-Engine					
		Single-Engine	Multi-Engine								
2014	163	373	30	24	67	19	366	52	318	19	1,431

Source: Finnish Transport Safety Agency (Liikenteen turvallisuusvirasto), www.trafi.fi

## 3.7 France—Number of General Aviation Aircraft by Type (1990–2011)

Year	Activity at Aeroclubs														Total Aircraft
	Fixed-wing Aeroplanes			Gliders			Helicopters			Hand Gliders		Ultralights			
	Number of Aircraft	Hours Flown	Active Pilots	Number of Aircraft	Hours Flown	Active Pilots	Number of Aircraft	Hours Flown	Active Pilots	Number of Vehicles	Number of Pilots	Number of Aircraft	Hours Flown	Active Pilots	
1990	n/a	836,248	50,665	n/a	332,217	12,415	n/a	n/a	296	n/a	23,405	n/a	n/a	5,238	n/a
1995	n/a	699,892	47,397	n/a	322,874	11,389	47	6,015	324	n/a	26,162	n/a	n/a	5,360	n/a
2000	n/a	693,681	46,501	n/a	270,834	10,430	31	3,501	302	n/a	23,009	n/a	n/a	7,501	n/a
2004	2,096	643,845	44,937	1,808	267,902	10,837	24	5,672	432	n/a	18,553	n/a	191,061	9,842	n/a
2005	2,109	645,138	44,045	1,989	260,578	10,374	30	n/a	403	18,200	17,985	6,866	304,374	10,532	29,164
2006	2,103	619,323	43,266	1,956	240,739	10,311	30	3,119	403	18,500	18,296	6,993	371,838	11,262	29,552
2007	2,054	597,238	42,730	2,050	226,995	10,219	28	2,640	316	18,700	18,147	8,049	376,710	12,496	30,853
2008	2,057	568,704	41,266	1,853	228,000	9,951	34	4,120	249	18,900	18,354	8,214	378,032	13,108	31,024
2009	2,029	582,054	40,187	1,958	255,576	9,633	n/a	n/a	223	19,200	19,371	8,534	386,084	13,398	31,721
2010	1,980	558,730	40,113	2,353	247,381	9,668	17	3,320	193	19,700	19,949	8,713	376,477	13,534	32,746
2011	1,862	583,074	40,898	1,972	231,628	9,638	18	4,915	198	20,100	20,674	8,476	402,712	14,194	32,410

Active pilots includes student pilots.

Gliders include motor gliders, towed gliders, and gliders launched by winch.

Source: French DGAC (Observatoire de l'Aviation civile), www.developpement-durable.gouv.fr

## 3.8 Germany—Number of General Aviation Aircraft by Type (2001–2014)

Year	Aircraft Type												Total Aircraft
	Fixed-wing Aeroplanes							Rotorcraft	Motor Gliders	Airships	Balloons	Gliders	
	Single-Engine		Multi-Engine		5,701 kg–14,000 kg	14,001 kg–20,000 kg	Above 20,000 kg						
	Below 2,000 kg	2,000 kg–5,700 kg	Below 2,000 kg	2,000 kg–5,700 kg									
2001	6,813	95	207	476	191	60	612	721	2,434	5	1,474	7,771	20,859
2002	6,731	92	208	467	184	55	619	731	2,494	5	1,400	7,728	20,714
2003	6,658	97	205	452	179	54	653	725	2,533	6	1,362	7,686	20,610
2004	6,670	94	199	440	172	55	619	720	2,584	4	1,351	7,703	20,611
2005	6,682	93	212	417	176	54	651	721	2,664	4	1,305	7,728	20,707
2006	6,704	102	224	417	181	56	663	729	2,766	4	1,278	7,741	20,865
2007	6,705	120	230	417	200	51	702	731	2,824	4	1,264	7,769	21,017
2008	6,738	126	232	436	224	45	734	739	2,948	4	1,286	7,815	21,327
2009	6,752	144	241	445	231	43	757	780	3,022	3	1,261	7,891	21,570
2010	6,801	153	242	444	228	40	772	811	3,081	4	1,260	7,867	21,703
2011	6,744	155	243	428	236	38	770	773	3,122	3	1,257	7,834	21,603
2012	6,757	150	239	414	217	30	767	774	3,185	5	1,215	7,793	21,546
2013	6,733	155	240	403	199	34	758	769	3,263	3	1,201	7,704	21,462
2014	6,689	149	228	393	207	33	751	745	3,357	3	1,183	7,657	21,395

Source: German Civil Aviation Authority (Luftfahrt-Bundesamtes / Statistiken), www.lba.de



## 3.9 Ireland—Number of General Aviation Aircraft by Type (2011–2014)

Year	Aircraft Type																Total Aircraft
	Fixed-wing Aeroplanes						Rotorcraft		Micro-lights	Gliders	Balloons	Home-built	Gyro-copters	Powered Sail-planes	Am-phibian	Sail-planes	
	Single-Engine		Multi-Engine		5,701 kg–15,000 kg	Above 15,000 kg	Single-Engine	Multi-Engine									
	Below 2,000 kg	2,000 kg–5,700 kg	Below 2,000 kg	2,000 kg–5,700 kg													
2011	228	2	11	12	7	14	45	20	150	22	12	36	18	n/a	1	n/a	578
2012	181	5	7	6	5	14	31	16	128	n/a	10	39	11	3	1	n/a	457
2013	180	5	8	6	3	17	30	19	133	n/a	10	45	13	4	1	21	495
2014	179	3	6	8	1	8	25	14	132	n/a	10	56	14	5	1	20	482

Source: Irish Aviation Authority, www.iaa.ie

## 3.10 Isle of Man—Number of General Aviation Aircraft by Type (2014)

Year	Aircraft Type					Total Aircraft
	Fixed-wing Aeroplanes			Rotorcraft		
	5,700 kg and Below	5,700 kg–15,000 kg	Above 15,000 kg	Single-Engine	Multi-Engine	
2014	76	65	230	2	28	401

Source: Isle of Man Aircraft Registry, www.gov.im

## 3.11 Latvia—Number of General Aviation Aircraft by Type (2014)

Year	Aircraft Type														Total Aircraft	
	Fixed-wing Aeroplanes								Rotorcraft				Powered Sailplanes	Sailplanes		Gyroplanes
	Below 5,700 kg						Above 5,700 kg		Piston	Turbine						
	Piston		Turboprop		Turbojet		Turboprop	Turbojet		Single-Engine	Multi-Engine					
	Single-Engine	Multi-Engine	Single-Engine	Multi-Engine	Single-Engine	Multi-Engine										
2014	122	6	2	2	8	2	1	3	10	5	12	25	21	2	221	

Source: Latvian CAA (Civīlās Aviācijas Aģentūra), www.caa.lv

## 3.12 Lithuania—Number of General Aviation Aircraft by Type (2014)

Year	Aircraft Type								Total Aircraft
	Fixed-wing Aeroplanes	Rotorcraft	Ultralights	Micro-lights	Balloons and Airships	Sailplanes	Powered Sailplanes	Amphibian	
2014	266	29	122	54	110	194	12	1	788

Source: Lithuanian CAA (Civilišės Aviacijos Administracija), www.caa.lt

## 3.13 Luxembourg—Number of General Aviation Aircraft by Type (2014)

Year	Aircraft Type						Total Aircraft
	Fixed-wing Aeroplanes	Rotorcraft	Experimental	Balloons	Ultralights	Gliders	
2014	183	11	12	54	21	11	292

Source: Luxembourg CAA (Direction De L'Aviation Civile), www.dac.public.lu

## 3.14 Malta—Number of General Aviation Aircraft by Type (2014)

Year	Aircraft Type					Total Aircraft
	Fixed-wing Aeroplanes			Rotorcraft	Microlights	
	5,700 kg and Below	5,701 kg–12,000 kg	Above 12,000 kg			
2014	38	11	60	4	33	146

Source: Transport Malta, www.transport.gov.mt

## 3.15 Montenegro—Number of General Aviation Aircraft by Type (2014)

Year	Aircraft Type					Total Aircraft
	Fixed-wing Aeroplanes		Rotorcraft	Balloons	Gliders	
	5,700 kg and Below	Above 5,700 kg				
2014	19	2	7	1	2	31

Source: Civil Aviation Agency of Montenegro (Agencija za civilno vazduhoplovstvo), www.caa.me

## 3.16 Netherlands—Number of General Aviation Aircraft by Type (1998–2014)

Year	Aircraft Type															Total Aircraft
	Fixed-wing Aeroplanes						Rotorcraft			Gliders	Powered Sail-planes	Home-built	Balloons	Am-phibian	Micro-lights	
	2,000 kg and Below		2,000 kg–5,700 kg		Large Aeroplanes		Single-Engine	Multi-Engine	Gyro-copters							
	Single-Engine	Multi-Engine	Single-Engine	Multi-Engine	Piston and Turboprop	Turbofan										
1998	561	22	13	48	77	132	28	22	4	611	91	42	340	1	273	2,265
1999	567	20	15	50	76	136	34	20	4	616	96	54	359	1	300	2,348
2000	557	20	18	48	77	157	38	19	4	609	106	59	385	1	312	2,410
2001	557	21	19	48	92	152	40	23	3	611	118	67	414	2	337	2,504
2002	554	20	17	48	83	159	41	22	3	613	127	79	416	2	350	2,534
2003	546	21	17	44	81	198	43	22	5	607	125	84	435	2	354	2,584
2004	534	21	21	40	78	194	45	25	6	599	129	92	438	2	381	2,605
2005	531	24	24	32	59	193	49	25	7	600	139	103	430	2	374	2,592
2006	538	23	24	31	55	196	51	27	7	592	146	110	438	2	365	2,605
2007	542	22	27	35	50	206	54	30	7	575	143	116	458	2	381	2,648
2008	567	27	25	35	44	210	56	30	7	554	151	132	461	2	403	2,704
2009	571	30	29	35	42	235	51	38	5	550	153	143	469	2	413	2,766
2010	550	31	29	35	33	233	50	41	5	547	151	149	463	2	438	2,757
2011	545	32	28	30	20	239	49	37	5	533	145	153	462	1	469	2,748
2012	523	30	26	29	22	237	48	37	6	519	151	163	466	1	494	2,752
2013	508	19	23	26	20	236	45	39	6	507	145	175	447	1	507	2,704
2014	482	16	24	25	18	237	38	35	5	493	151	177	432	1	515	2,649

Turbopfan data includes both business jets and aeroplanes used in airline operations.

Source: Dutch Environment and Transport Inspectorate (Inspectie Leefomgeving en Transport), www.ilent.nl

## 3.17 Poland—Number of General Aviation Aircraft by Type (2014)

Year	Aircraft Type										Total Aircraft
	Fixed-wing Aeroplanes				Rotorcraft		Gliders and Powered Gliders	Balloons	Ultralights	Autogiros	
	Annex II	5,700 kg and Below		Above 5,700 kg	Single-Engine	Multi-Engine					
		Single-Engine	Multi-Engine								
2014	265	1,019	84	116	110	71	837	144	204	21	2,871

Source: Polish Civil Aviation Authority (Urząd Lotnictwa Cywilnego), www.ulc.gov.pl

## 3.18 Portugal—Number of General Aviation Aircraft by Type (2014)

Year	Aircraft Type										Total Aircraft
	Fixed-wing Aeroplanes				Rotorcraft		Ultralights and Powered Gliders	Gliders	Balloons	Amphibian	
	5,700 kg and Below		5,700 kg–15,000 kg	Above 15,000 kg	Single-Engine	Multi-Engine					
	Single-Engine	Multi-Engine									
2014	317	35	80	50	73	28	430	21	47	1	1,082

Source: Portuguese Civil Aviation Authority (Instituto Nacional de Aviação Civil) www.inac.pt

## 3.19 Serbia—Number of General Aviation Aircraft by Type (2014)

Year	Aircraft Type											Total Aircraft
	Aeroplanes		Rotorcraft		Ultralights	Balloons	Motor Gliders	Sailplanes	Amphibian	Gyrocopters	Other Aeroplanes	
	5,700 kg and Below	Above 5,700 kg	Single-Engine	Multi-Engine								
2014	188	10	4	33	34	7	33	50	1	2	18	380

Source: Civil Aviation Directorate of the Republic of Serbia (Директорат цивилног ваздухопловства Републике Србије), [www.cad.gov.rs](http://www.cad.gov.rs)

## 3.20 Slovakia—Number of General Aviation Aircraft by Type (2014)

Year	Aircraft Type						Total Aircraft
	Aeroplanes	Rotorcraft		Ultralights	Balloons	Motor Gliders	
2014	331	55		9	42	21	689

Source: Transport Authority Slovakia (Dopravný úrad), [www.nsat.sk](http://www.nsat.sk)

## 3.21 Spain—Number of General Aviation Aircraft by Type (2014)

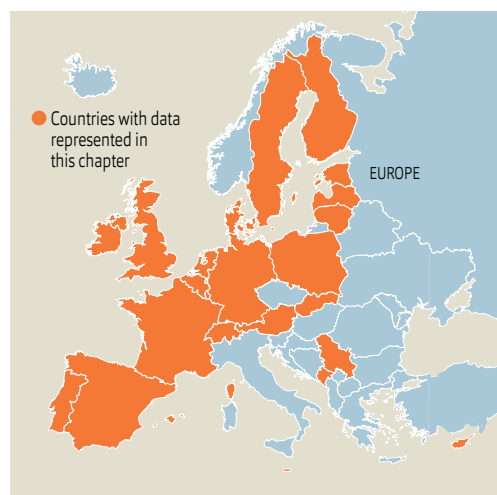
Year	Aircraft Type												Total Aircraft
	Fixed-wing Aeroplanes					Rotorcraft		Amateur-Built	Ultralights	Balloons and Airships	Gliders	Powered Gliders	
	5,700 kg and Below		5,700 kg–15,000 kg		Above 15,000 kg	Single-Engine	Multi-Engine						
	Single-Engine	Multi-Engine	Single-Engine	Multi-Engine									
2014	1,581	356	63	98	89	313	238	1,547	1,575	561	225	27	6,673

Source: Spanish State Aviation Safety Agency (Agencia Estatal de Seguridad Aérea), [www.seguridadaerea.gob.es](http://www.seguridadaerea.gob.es)

## 3.22 Sweden—Number of General Aviation Aircraft by Type (2008–2013)

Year	Motorpowered Aircraft by Weight							Gliders, Powered Gliders, and Balloons	Total Aircraft
	2,000 kg and Below	2,001 kg–5,700 kg	5,701 kg–10,000 kg	10,001 kg–15,000 kg	15,001 kg–25,000 kg	25,001 kg–100,000 kg	Above 100,000 kg		
2008	2,096	187	46	30	64	54	5	436	2,918
2009	2,115	191	44	27	67	59	5	420	2,928
2010	2,251	189	40	27	72	47	5	274	2,905
2011	2,092	198	37	21	75	45	5	255	2,728
2012	2,093	191	34	22	72	44	3	263	2,722
2013	2,094	186	37	23	84	44	2	321	2,791

The number of gliders, powered gliders, and balloons is based on the number of valid airworthiness certificates on December 31 of the year.

Source: Swedish Transport Ministry (Transportstyrelsen), [www.transportstyrelsen.se](http://www.transportstyrelsen.se)

## 3.23 Switzerland—Number of General Aviation Aircraft by Type (1990–2012)

Year	Aircraft Type									Total Aircraft
	Fixed-wing Aeroplanes				Helicopters	Motor Gliders	Gliders	Free Balloons	Airships	
	2,250 kg and Below	2,250 kg–5,700 kg	Above 5,700 kg	Total Aeroplanes						
1990	n/a	n/a	n/a	1,952	199	131	1,035	335	1	3,653
1991	n/a	n/a	n/a	1,992	218	148	1,035	388	4	3,785
1992	n/a	n/a	n/a	2,026	233	173	1,045	433	4	3,914
1993	n/a	n/a	n/a	2,041	240	192	1,061	467	4	4,005
1994	n/a	n/a	n/a	2,043	246	196	1,058	492	4	4,039
1995	n/a	n/a	n/a	2,069	238	199	1,072	524	5	4,107
1996	n/a	n/a	n/a	2,058	234	202	1,080	516	6	4,096
1997	1,549	271	193	2,013	238	209	1,076	516	6	4,058
1998	1,581	197	227	2,005	244	228	1,046	510	6	4,039
1999	1,579	167	265	2,011	246	232	1,033	493	6	4,021
2000	1,572	157	285	2,014	254	246	1,024	504	6	4,048
2001	1,564	154	306	2,024	266	252	1,028	492	5	4,067
2002	1,537	151	304	1,992	265	260	1,016	490	7	4,030
2003	1,539	156	257	1,952	280	259	1,000	474	7	3,972
2004	1,528	142	248	1,918	275	254	974	465	7	3,893
2005	1,502	149	241	1,892	285	254	949	452	9	3,841
2006	1,497	148	248	1,893	284	248	941	445	11	3,822
2007	1,492	161	260	1,913	290	244	908	447	11	3,813
2008	1,468	147	285	1,900	307	246	875	427	10	3,765
2009	1,436	140	293	1,869	320	246	843	397	10	3,685
2010	1,413	197	303	1,913	327	251	824	381	9	3,705
2011	1,419	214	299	1,932	334	254	800	379	10	3,709
2012	1,461	167	294	1,922	326	255	767	377	10	3,657

Source: Swiss Federal Office of Civil Aviation (Bundesamt für Zivilluftfahrt), www.bazl.admin.ch

## 3.24 United Kingdom—Number of General Aviation Aircraft by Type (1994–2013)

Year	Number of Registered Aircraft by Type															Total Aircraft
	Fixed-wing Aeroplanes								Micro-lights	Heli-copters	Gliders	Hang Gliders	Balloons and Min. Lift	Airships	Gyro-planes	
	Am-phibian	750 kg and Below	751 kg–5,700 kg	5,701 kg–15,000 kg	15,001 kg–50,000 kg	Above 50,000 kg	SLMG	Seaplanes								
1994	16	2,593	5,075	279	261	396	239	3	3,266	828	8	-	1,758	47	246	15,015
1995	16	2,657	5,043	285	241	401	239	2	3,207	838	8	-	1,821	44	257	15,059
1996	17	2,712	5,111	267	246	406	245	2	3,231	859	8	-	1,898	40	261	15,303
1997	18	2,758	5,190	257	251	439	255	2	3,314	906	7	-	1,896	40	261	15,594
1998	18	2,827	5,292	247	280	499	263	2	3,450	980	7	-	1,843	40	265	16,013
1999	17	2,813	5,347	254	289	541	268	2	3,548	1,013	7	1	1,907	42	244	16,293
2000	15	2,824	5,429	262	288	592	273	2	3,478	1,057	1	7	1,979	33	233	16,473
2001	15	2,832	5,442	276	296	624	273	2	3,531	1,090	1	10	1,812	28	242	16,474
2002	14	2,859	5,461	267	307	645	270	2	3,618	1,134	1	11	1,799	31	244	16,663
2003	15	2,914	5,556	254	264	644	274	3	3,828	1,159	1	12	1,812	30	247	17,013
2004	17	2,994	5,647	254	271	662	276	3	4,070	1,238	2	12	1,862	29	251	17,588
2005	18	3,022	5,711	254	256	679	280	3	4,118	1,314	45	13	1,905	27	249	17,894
2006	19	3,077	5,822	253	272	712	280	2	4,254	1,386	149	13	1,922	24	260	18,445
2007	21	3,153	5,887	258	257	760	286	2	4,392	1,490	1,107	13	1,962	24	278	19,890
2008	21	3,186	6,000	270	270	760	295	3	4,447	1,495	2,258	13	1,983	24	306	21,331
2009	21	3,235	5,907	256	292	766	292	3	4,375	1,428	2,306	12	1,842	22	306	21,063
2010	20	3,217	5,764	253	306	742	287	2	4,071	1,364	2,295	8	1,720	18	312	20,379
2011	20	3,199	5,663	228	297	742	285	2	4,043	1,299	2,256	8	1,655	19	324	20,040
2012	21	3,245	5,564	219	293	755	296	2	4,045	1,260	2,248	9	1,639	21	322	19,939
2013	21	3,269	5,505	212	289	761	302	2	4,029	1,232	2,247	9	1,625	20	327	19,850

SLMG = Self-Launching Motor Glider Does not differentiate if aeroplane is used for GA or commercial operations.

Data from December 31 of specified year (published first day of the following year).

Source: UK Civil Aviation Authority, Civil Registry Statistics, G-INFO Database, www.caa.co.uk

The UK CAA restated statistics for 5,701-15,000 kg and 15,001-50,000 kg in January 2013. This re-statement does not change the total number of aircraft.

The fixed-wing aeroplane data does not include one (1) aeroplane in the 751-5,700 kg weight group, because it is listed as unmanned for 2013.



## Asia-Pacific Fleet Data



### 4.1 Australia—Number of General Aviation and Regional Aircraft by Category (1995–2010)

Year	Aircraft Type					Total
	Amateur-Built	Fixed-wing Aeroplanes		Rotorcraft	Balloons & Airships	
		Single-Engine	Multi-Engine			
1995	-	6,787	1,779	739	243	9,548
1996	-	6,861	1,799	739	266	9,665
1997	-	6,994	1,803	768	284	9,849
1998	-	7,137	1,783	791	295	10,006
1999	-	7,247	1,743	868	310	10,168
2000	-	7,302	1,755	743	325	10,125
2001	673	6,680	1,736	979	334	10,402
2002	707	6,668	1,706	1,038	336	10,455
2003	789	6,727	1,696	1,121	338	10,671
2004	848	6,794	1,718	1,194	350	10,904
2005	896	6,908	1,733	1,292	351	11,180
2006	910	6,838	1,730	1,320	319	11,117
2007	968	6,955	1,804	1,481	333	11,541
2008	1,037	7,180	1,871	1,619	338	12,045
2009	1,071	7,230	1,885	1,703	340	12,229
2010	1,111	7,375	1,932	1,800	346	12,564

Source: Dept. of Transportation and Regional Services,  
Bureau of Transport and Regional Economics, [www.bitre.gov.au](http://www.bitre.gov.au)

### 4.2 China—Number of General Aviation Aircraft by Type (2012–2013)

Year	Airplanes				Rotorcraft	Balloons	Airships	Other	Total Aircraft
	Piston-Engine		Turbine						
	Single	Twin	Turboprop	Turbojet					
2012	705	102	129	2,134	298	21	6	27	3,422
2013	794	96	151	2,371	385	24	6	30	3,857

The turbojet category includes air carrier data. The 2013 data included 202 business jets.

Source: Civil Aviation Administration of China, [www.caac.gov.cn](http://www.caac.gov.cn)

#### 4.3 Japan—Number of General Aviation Aircraft by Type (1997–2006)

Year	Airlanes					Rotorcraft		Gliders	Airships	Total Aircraft
	Piston		Turboprop		Turbojet or Turbofan					
	Single-Engine	Multi-Engine	Single-Engine	Multi-Engine		Piston-Engine	Turbine-Engine			
1997	605	79	13	120	419	200	804	579	1	2,820
1998	596	69	13	117	443	183	768	596	1	2,786
1999	589	63	13	115	446	182	761	607	1	2,777
2000	584	63	13	110	450	193	764	624	1	2,802
2001	577	62	16	113	455	183	747	644	1	2,798
2002	575	59	17	112	464	166	703	648	1	2,745
2003	570	53	18	112	474	160	661	649	1	2,698
2004	558	52	18	112	474	154	647	658	2	2,675
2005	543	51	18	110	485	160	630	659	2	2,658
2006	540	46	21	112	500	160	618	665	3	2,665

Source: Civil Aviation Bureau, www.mlit.go.jp

#### 4.4 New Zealand—Number of General Aviation Aircraft by Type (1996–2014)

Year	Aircraft Type						Total Aircraft
	Airlanes by Mass				Sport	Rotorcraft	
	Below 2,721 kg	2,721–5,670 kg	5,670–13,608 kg	13,608 kg & Above			
1996	1,548	111	67	67	1,178	449	3,420
1997	1,559	113	68	67	1,163	435	3,405
1998	1,559	113	68	67	1,163	435	3,405
1999	1,539	104	67	73	1,124	420	3,327
2000	1,522	109	69	75	1,127	411	3,313
2001	1,506	107	67	77	1,129	420	3,306
2002	1,492	105	82	77	1,172	450	3,378
2003	1,505	117	74	83	1,245	506	3,530
2004	1,548	132	68	95	1,358	594	3,795
2005	1,564	143	65	103	1,419	643	3,937
	Agricultural	Small	Medium	Large	Sport	Rotorcraft	
2006	127	1,420	78	117	1,638	653	4,033
2007	124	1,449	82	116	1,723	698	4,192
2008	120	1,492	81	121	1,793	747	4,354
2009	110	1,510	84	118	1,833	760	4,415
2010	110	1,515	84	119	1,853	761	4,442
	Airplane	Microlight <sup>16,2</sup>	Amateur-Built <sup>1</sup>	Gliders <sup>2</sup>	Other <sup>3</sup>	Rotorcraft	
2012	1,985	1,029	316	417	311	793	4,851
2013	1,976	1,026	291	443	307	831	4,874
2014	1,964	1,058	289	426	329	862	4,928

The data does not differentiate if airplane is used for GA or commercial operations.

In 2006, the CAA stopped publishing the number of registered aircraft by weight in favor of classes.

In 2012, the CAA began publishing aircraft registry statistics by aircraft class.

1. Amateur-built aircraft includes airplanes, gliders, and helicopters.

2. Gliders includes gliders, paragliders, power gliders, amateur-built gliders, and hang gliders.

3. Other includes parachutes, gyroplanes, and balloons.

Source: Civil Aviation Authority of New Zealand, www.caa.govt.nz

#### 4.5 Singapore—Number of Aircraft by Type (2014)

Year	Type of Aircraft			Total Aircraft
	Airlanes		Rotorcraft	
	Piston	Turbine		
2014	19	1	4	24

Source: Civil Aviation Authority of Singapore, www.caas.gov.sg



## Select Other GA Aircraft Registry Data for Large Fleets



### 5.1 Brazil—Number of Aircraft Registrations by Type (1996–2013)

Year	Aircraft Type									Total Aircraft
	Airplanes				Other Aircraft					
	Piston-Engine	Agricultural	Turboprop	Jet Turbine	Helicopters	Sailplanes	Balloons	Dirigibles	Experimental	
1996	7,987	n/a	1,013	462	547	302	4	n/a	n/a	10,315
1997	8,055	n/a	1,111	488	649	304	4	n/a	n/a	10,611
1998	8,172	n/a	1,182	513	749	306	4	1	n/a	10,927
1999	8,273	684	1,192	497	791	307	4	1	3,152	14,217
2000	8,333	724	1,218	500	841	308	4	1	3,348	14,553
2001	8,412	767	1,260	542	897	309	3	1	3,513	14,937
2002	8,445	810	1,303	579	940	310	3	1	3,684	15,265
2003	8,496	862	1,323	560	955	316	3	1	3,882	15,536
2004	8,604	900	1,348	559	981	316	3	1	4,069	15,881
2005	8,718	955	1,361	596	989	316	3	1	4,286	16,270
2006	8,798	978	1,399	603	1,011	309	3	1	3,001	15,125
2007	8,909	1,005	1,488	647	1,097	303	3	1	3,225	15,673
2008	9,164	1,049	1,617	773	1,194	299	3	1	3,525	16,576
2009	9,354	1,044	1,700	820	1,325	3,000	3	1	3,764	19,765
2010	n/a	1,581	n/a	n/a	1,524	n/a	n/a	n/a	4,051	17,335
2011	n/a	1,695	n/a	n/a	1,717	n/a	n/a	n/a	4,474	18,710
2012	n/a	1,800	n/a	n/a	1,909	n/a	n/a	n/a	4,750	19,769
2013	n/a	1,870	n/a	n/a	2,038	n/a	n/a	n/a	4,906	20,429

The experimental category includes ultralights, balloons, gyrocopters, sailplanes, motorpowered sailplanes, dirigibles, and experimental airplanes.

Source: Agência Nacional de Aviação Civil (ANAC), Brazil, [www.anac.gov.br](http://www.anac.gov.br)

ANAC began identification of agricultural aircraft in 2012. The data set for agricultural aircraft captures aircraft also identified in other columns.

### 5.2 South Africa—Number of General Aviation Aircraft by Type (1999–2014)

Year	Aircraft Type														Total Aircraft	
	Aeroplanes												Helicopters			Sport, Rec., Gliders, & Other
	Piston-Engine Powered				Turboprop				Turbojet							
	One-Engine	Two-Engine	Other	Agricultural	One-Engine	Two-Engine	Other	Agricultural	Two-Engine	Three-Engine	Other	Piston	Turbine			
1999	2,282	695	4	144	66	201	10	43	157	17	21	228	251	3,103	7,222	
2000	2,285	706	6	143	68	215	10	45	160	20	21	248	263	3,294	7,484	
2001	2,280	701	6	144	79	237	10	48	164	27	22	258	271	3,470	7,717	
2002	2,299	698	10	144	83	249	8	46	176	29	27	263	279	3,616	7,927	
2003	2,338	716	12	148	91	271	8	52	197	31	34	308	290	3,907	8,403	
2004	2,422	724	11	151	88	306	9	54	189	34	41	348	318	4,127	8,822	
2005	2,459	731	10	150	93	310	8	56	206	21	44	385	337	4,253	9,063	
2006	2,608	738	8	159	110	331	6	53	261	18	58	514	384	4,941	10,189	
2007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2008	2,666	755	7	153	108	324	10	55	299	18	74	575	434	5,215	10,693	
2009	2,712	751	7	154	105	329	9	54	315	15	82	604	461	5,352	10,950	
2010	2,745	713	8	154	111	353	9	55	339	15	92	635	474	5,500	11,203	
2011	2,808	710	9	152	112	353	9	54	365	16	93	669	459	5,674	11,483	
2012	2,851	707	10	153	113	349	8	54	377	18	87	671	502	5,846	11,746	
2013	2,898	711	12	154	115	341	7	55	381	18	88	680	522	5,964	11,946	
2014	2,893	716	28	157	120	347	8	60	395	18	87	687	540	6,072	12,128	

2007 data is not available from the South African Aircraft Registry.

Source: South African Civil Aviation Authority, [www.caa.co.za](http://www.caa.co.za), and Registry, [www.avdex.co.za](http://www.avdex.co.za)

# U.S. Pilot and Airmen Certificate Statistics



## 6.1 Active FAA Certificated Pilots (1980–2014)

Year	Pilots		Students <sup>7</sup>	Rec. <sup>5</sup>	Sport <sup>6</sup>	Airplane <sup>1</sup>			Rotorcraft (Only)	Glider (Only) <sup>2</sup>	Lighter-Than-Air	Flight Instructor <sup>3</sup>	Instrument Ratings <sup>3,4</sup>	
	Total	% Women				Private	Commercial	ATP					Total	% of Total
1980	827,071	6.40%	199,833	-	-	357,479	183,442	69,569	6,030	7,039	3,679	60,440	260,461	41.5%
1981	764,182	6.24%	179,912	-	-	328,562	168,580	70,311	6,453	7,388	2,976	57,523	252,535	43.2%
1982	733,255	6.18%	156,361	-	-	322,094	165,093	73,471	7,034	7,842	1,360	62,492	255,073	44.2%
1983	718,004	6.08%	147,197	-	-	318,643	159,495	75,938	7,237	8,157	1,337	62,201	254,271	44.5%
1984	722,376	6.14%	150,081	-	-	320,086	155,929	79,192	7,532	8,390	1,166	61,173	256,584	44.8%
1985	709,540	6.13%	146,652	-	-	311,086	151,632	82,740	8,123	8,168	1,139	58,940	258,559	45.9%
1986	709,118	6.08%	150,273	-	-	305,736	147,798	87,186	8,122	8,411	1,133	57,355	262,388	47.0%
1987	699,653	6.09%	146,016	-	-	300,949	143,645	91,287	8,702	7,901	1,153	60,316	266,122	48.1%
1988	694,016	6.09%	136,913	-	-	299,786	143,030	96,968	8,608	7,600	1,111	61,798	273,804	49.1%
1989	700,010	6.05%	142,544	-	-	293,179	144,540	102,087	8,863	7,708	1,089	61,472	282,804	50.7%
1990	702,659	5.77%	128,663	87	-	299,111	149,666	107,732	9,567	7,833	n/a	63,775	297,073	51.8%
1991	692,095	5.91%	120,203	161	-	293,306	148,385	112,167	9,860	8,033	n/a	69,209	303,193	53.0%
1992	682,959	5.95%	114,597	187	-	288,078	146,385	115,855	9,652	8,205	n/a	72,148	306,169	53.9%
1993	665,069	5.93%	103,583	206	-	283,700	143,014	117,070	9,168	8,328	n/a	75,021	305,517	54.4%
1994	654,088	5.99%	96,254	241	-	284,236	138,728	117,434	8,719	8,476	n/a	76,171	302,300	54.2%
1995	639,184	5.67%	101,279	232	-	261,399	133,980	123,877	7,183	11,234	n/a	77,613	298,798	55.6%
1996	622,261	5.57%	94,947	265	-	254,002	129,187	127,486	6,961	9,413	n/a	78,551	297,895	56.5%
1997	616,342	5.59%	96,101	284	-	247,604	125,300	130,858	6,801	9,394	n/a	78,102	297,409	57.2%
1998	618,298	5.72%	97,736	305	-	247,226	122,053	134,612	6,964	9,402	n/a	79,171	300,183	57.7%
1999	635,472	5.81%	97,359	343	-	258,749	124,261	137,642	7,728	9,390	n/a	79,694	308,951	57.5%
2000	625,581	6.11%	93,064	340	-	251,561	121,858	141,596	7,775	9,387	n/a	80,931	311,944	58.6%
2001	612,274	5.82%	86,731	316	-	243,823	120,502	144,702	7,727	8,473	n/a	82,875	315,276	60.0%
2002	631,762	5.49%	85,991	317	-	245,230	125,920	144,708	7,770	21,826	n/a	86,089	317,389	58.2%
2003	625,011	6.12%	87,296	310	-	241,045	123,990	143,504	7,916	20,950	n/a	87,816	315,413	58.7%
2004	618,633	6.09%	87,910	291	-	235,994	122,592	142,160	8,586	21,100	n/a	89,596	313,545	59.1%
2005	609,737	6.11%	87,213	276	134	228,619	120,614	141,992	9,518	21,369	n/a	90,555	311,828	59.7%
2006	597,109	6.13%	84,866	239	939	219,233	117,610	141,935	10,690	21,597	n/a	91,343	309,333	60.5%
2007	590,349	6.12%	84,339	239	2,031	211,096	115,127	143,953	12,290	21,274	n/a	92,175	309,865	61.5%
2008	613,746	5.83%	80,989	252	2,623	222,596	124,746	146,838	14,647	21,055	n/a	93,202	325,247	61.4%
2009	594,285	6.39%	72,280	234	3,248	211,619	125,738	144,600	15,298	21,268	n/a	94,863	323,495	62.4%
2010	627,588	5.86%	119,119	212	3,682	202,020	123,705	142,198	15,377	21,275	n/a	96,473	318,001	63.0%
2011	617,128	6.39%	118,657	227	4,066	194,441	120,865	142,511	15,220	21,141	n/a	97,409	314,122	63.6%
2012	610,576	6.77%	119,946	218	4,493	188,001	116,400	145,590	15,126	20,802	n/a	98,328	311,952	64.2%
2013	599,086	6.78%	120,285	238	4,824	180,214	108,206	149,824	15,114	20,381	n/a	98,842	307,120	64.8%
2014	593,499	6.63%	120,546	220	5,157	174,883	104,322	152,933	15,511	19,927	n/a	100,993	306,066	65.5%

1. Includes pilots with an airplane-only certificate. Also includes those with an airplane and a helicopter and/or glider certificate. Prior to 1995, these pilots were categorized as private, commercial, or airline transport, based on their airplane certificate. Beginning in 1995, they are categorized based on their highest certificate. For example, if a pilot holds a private airplane certificate and a commercial helicopter certificate, prior to 1995, the pilot would be categorized as private; 1995 and after, as commercial.

2. Glider pilots are not required to have a medical examination; however, the totals represent pilots who received a medical examination within the last 25 months.

3. Not included in total.

4. The instrument rating is as shown on pilot certificates but does not indicate an additional certificate. The percent of total does not include student, sport, and recreational pilots.

5. Recreational certificate was first issued in 1990.

6. Sport pilot certificate was first issued in 2005.

7. The Federal Aviation Administration (FAA) changed the validity of student pilot certificates in 2010 through an amendment to 14 CFR 61.19(b)(1), resulting in the duration of validity for student pilot certificates for pilots under 40 years of age, increasing from 36 to 60 months. This created an increase in the active student pilot population to 119,119 active airmen at the end of 2010 compared to 72,280 the prior year.

8. 1994 counts based on medical certificates issued 27 or fewer months ago. All other years based on medical certificates issued 25 or fewer months ago.

Source: FAA



## 6.2 Active FAA Certificated Pilots and Flight Instructors by State and Region (as of December 31, 2014)

FAA Region and State	Total Pilots	Students	Recreational	Sport	Airplane			Other	Flight Instructor <sup>1</sup>
					Private	Commercial	Airline Transport		
<b>Total<sup>2</sup></b>	<b>593,499</b>	<b>120,546</b>	<b>221</b>	<b>5,157</b>	<b>191,336</b>	<b>119,575</b>	<b>156,664</b>	<b>85,455</b>	<b>100,993</b>
<b>United States – Total<sup>3</sup></b>	<b>546,537</b>	<b>109,256</b>	<b>221</b>	<b>5,134</b>	<b>181,532</b>	<b>102,386</b>	<b>148,008</b>	<b>80,213</b>	<b>98,336</b>
<b>Non-U.S. Total<sup>5</sup></b>	<b>46,962</b>	<b>11,290</b>	<b>0</b>	<b>23</b>	<b>9,804</b>	<b>17,189</b>	<b>8,656</b>	<b>5,242</b>	<b>2,657</b>
Alabama	7,260	1,500	2	61	2,377	1,930	1,390	1,794	1,469
Alaska	8,032	1,144	0	52	2,877	1,772	2,187	989	1,374
American Samoa	7	0	0	0	0	2	5	0	0
Arizona	18,029	3,738	1	132	5,070	3,579	5,509	3,554	3,763
Arkansas	4,957	1,082	0	71	1,777	1,146	881	454	746
California	59,213	12,234	3	389	23,092	11,570	11,925	9,746	9,587
Colorado	17,382	2,861	2	108	5,138	3,184	6,089	3,168	3,615
Connecticut	5,023	866	0	25	1,889	821	1,422	763	847
Delaware	1,343	337	0	9	383	211	403	186	256
District of Columbia	572	152	0	8	222	92	98	87	82
Federated States of Micronesia	1	0	0	0	0	1	0	1	0
Florida	52,967	12,501	7	466	13,437	9,786	16,770	6,999	9,592
Georgia	18,131	2,964	4	141	4,959	2,704	7,359	2,255	3,267
Guam	190	20	0	0	21	22	127	28	49
Hawaii	3,134	624	0	12	633	707	1,158	761	661
Idaho	4,850	919	1	70	1,869	1,043	948	842	840
Illinois	16,307	3,034	4	245	5,568	2,712	4,744	1,953	3,349
Indiana	9,558	1,805	8	184	3,612	1,720	2,229	1,019	1,662
Iowa	5,154	990	1	89	2,293	1,062	719	617	834
Kansas	6,866	1,333	2	71	2,748	1,411	1,301	803	1,414
Kentucky	5,629	1,003	10	47	1,598	875	2,096	744	1,060
Louisiana	5,650	1,215	1	61	1,857	1,320	1,196	1,112	898
Maine	2,415	420	2	44	921	487	541	309	387
Marshall Islands	2	0	0	0	0	1	1	0	0
Maryland	7,664	1,902	2	80	2,461	1,372	1,847	1,125	1,361
Massachusetts	7,784	1,728	2	57	3,088	1,345	1,564	1,085	1,227
Michigan	13,672	2,445	11	192	5,292	2,516	3,216	1,664	2,446
Minnesota	12,172	1,929	0	93	4,240	2,089	3,821	1,055	2,547
Mississippi	4,108	1,034	1	30	1,246	854	943	496	640
Missouri	8,986	1,751	5	126	3,232	1,692	2,180	1,211	1,642
Montana	3,681	671	3	29	1,449	916	613	636	661
Nebraska	3,550	824	0	29	1,389	713	595	311	496
Nevada	6,841	1,126	1	46	1,921	1,334	2,413	1,463	1,389
New Hampshire	3,632	514	1	40	1,117	603	1,357	597	704
New Jersey	8,787	1,819	6	33	3,059	1,507	2,363	1,422	1,615
New Mexico	4,527	908	3	60	1,728	1,127	701	1,465	638
New York	15,949	4,069	25	118	5,771	2,910	3,056	2,415	2,617
North Carolina	13,935	2,529	5	129	4,678	2,356	4,238	1,838	2,456
North Dakota	3,535	794	0	12	1,128	1,313	288	269	492
Northern Mariana Islands	14	5	0	0	1	3	5	2	4
Ohio	15,137	2,815	44	221	5,487	2,568	4,002	1,940	2,975
Oklahoma	7,825	2,074	2	46	2,756	1,475	1,472	733	1,287
Oregon	8,573	1,587	2	74	3,485	1,989	1,436	1,792	1,581
Palau	1	0	0	0	1	0	0	1	0
Pennsylvania	15,187	2,889	30	168	5,336	2,610	4,154	2,434	2,726
Puerto Rico	1,605	573	1	48	355	268	360	175	231
Rhode Island	975	215	0	7	363	161	229	109	153
South Carolina	6,498	1,154	0	62	2,196	1,203	1,883	899	1,091
South Dakota	2,234	408	0	51	878	516	381	279	422
Tennessee	11,540	1,971	3	94	3,312	1,959	4,201	1,637	2,118
Texas	49,614	9,951	6	344	14,514	8,534	16,265	6,753	8,728
Utah	7,998	1,727	0	58	2,371	1,525	2,317	1,267	1,584
Vermont	1,221	203	1	10	523	246	238	259	171
Virgin Islands	172	43	0	1	59	27	42	17	25
Virginia	14,126	2,739	8	135	4,271	2,757	4,216	2,345	2,732
Washington	18,665	3,358	4	177	6,052	3,330	5,744	2,799	3,518
West Virginia	1,756	426	0	36	666	332	296	242	274
Wisconsin	9,073	1,604	7	221	3,768	1,430	2,043	813	1,579
Wyoming	1,852	374	0	18	790	366	304	267	288
AA – Americas <sup>4</sup>	21	2	0	0	5	5	9	10	6
AE – Europe and Canada <sup>4</sup>	400	98	0	2	93	139	68	103	91
AP – Pacific <sup>4</sup>	555	255	0	2	110	138	50	101	69

1. Not included in total.

2. Includes non-U.S. total.

3. Includes American Samoa, Federated States of Micronesia, Guam, Marshall Islands, Northern Mariana Islands, Palau, Puerto Rico, and Virgin Islands.

4. Military personnel holding civilian certificates and stationed in foreign country.

5. Non-U.S. are non-U.S. nationals who hold FAA certificates.

Source: FAA

## 6.3 Active FAA Pilot Certificates Held by Category and Age Group of Holder (as of December 31, 2014)

Age Group	Type of Pilot Certificate							
	Total Pilots	Student	Recreational	Sport Pilot	Private	Commercial	Airline Transport	CFI
<b>Total</b>	<b>593,499</b>	<b>120,546</b>	<b>221</b>	<b>5,157</b>	<b>191,336</b>	<b>119,575</b>	<b>156,664</b>	<b>100,993</b>
14–15	140	140	0	0	0	0	0	0
16–19	16,701	12,890	7	27	3,500	277	0	54
20–24	55,865	30,363	57	92	14,921	9,956	476	3,190
25–29	63,069	24,289	26	143	14,438	19,103	5,070	8,630
30–34	54,462	15,791	16	171	13,330	13,082	12,072	11,930
35–39	48,094	10,800	2	206	12,945	9,124	15,017	10,700
40–44	51,344	8,509	5	271	14,753	8,814	18,992	11,013
45–49	51,866	4,792	10	421	15,342	8,057	23,244	11,072
50–54	62,325	4,542	13	690	21,146	9,800	26,134	10,410
55–59	63,671	3,476	24	920	25,411	10,537	23,303	9,454
60–64	53,281	2,342	26	880	23,561	10,739	15,733	8,426
65–69	40,573	1,471	15	662	17,654	10,652	10,119	7,707
70–74	18,758	743	10	421	8,384	5,119	4,081	4,648
75–79	8,590	254	5	178	3,804	2,692	1,657	2,364
80 and over	4,760	144	5	75	2,147	1,623	766	1,395

Source: FAA

## 6.4 Average Age of Active FAA Pilots by Category (1993–2014)

Year	Average All Pilots	Type of Pilot Certificate					
		Student	Recreational	Sport Pilot	Private	Commercial	Airline Transport
1993	41.3	33.7	45.5	-	42.7	41.9	44.1
1994	41.9	34.3	46.5	-	43.2	42.4	44.4
1995	42.9	34.5	48.3	-	44.6	43.7	44.9
1996	43.2	34.6	49.3	-	45.1	44.1	45.1
1997	43.6	34.6	49.5	-	45.6	44.6	45.6
1998	43.8	34.7	49.8	-	45.9	45.0	45.4
1999	43.6	34.6	49.5	-	45.6	44.6	45.3
2000	43.7	34.1	49.8	-	45.6	44.9	45.8
2001	44.0	33.3	50.8	-	46.0	45.0	46.0
2002	44.4	33.7	51.0	-	46.2	45.5	46.6
2003	44.7	34.0	51.5	-	46.5	45.6	47.0
2004	45.1	34.2	51.3	-	47.0	45.9	47.5
2005	45.5	34.6	50.9	53.2	47.4	46.0	47.8
2006	45.6	34.4	51.5	52.9	47.7	46.1	48.1
2007	45.7	34.0	52.4	52.9	48.0	46.1	48.3
2008	45.1	33.6	50.1	53.2	46.9	44.8	48.5
2009	45.3	33.5	50.4	53.5	47.1	44.2	48.9
2010	44.2	31.4	50.8	53.8	47.6	44.2	49.4
2011	44.4	31.4	48.8	54.4	47.9	44.4	49.7
2012	44.7	31.5	47.8	54.7	48.3	44.8	49.9
2013	44.8	31.5	44.8	55.2	48.5	45.4	49.7
2014	44.8	31.5	43.1	55.8	48.5	45.5	49.8

Source: FAA

## 6.5 FAA Pilot Certificates Issued by Category (1978–2013)

Year	Student		Private		Commercial		Airline Transport		Helicopter (only)		Glider (only)	
	Original	Additional	Original	Additional	Original	Additional	Original	Additional	Original	Additional	Original	Additional
1978	137,032	-	58,064	16,048	11,789	17,501	6,912	5,921	1,122	287	759	188
1979	135,956	-	54,466	16,466	12,627	17,793	8,981	6,603	1,300	283	642	157
1980	102,301	-	50,458	16,035	12,452	16,015	7,116	6,289	1,721	272	583	151
1981	111,531	-	45,713	14,897	10,657	12,146	4,763	5,991	1,985	302	629	164
1982	90,816	-	52,144	16,276	11,048	11,910	5,037	7,956	2,256	330	793	184
1983	92,239	-	41,210	12,721	8,789	9,513	5,643	8,187	1,932	315	606	162
1984	90,167	-	36,545	11,784	7,702	8,895	5,099	9,335	1,808	319	524	139
1985	86,060	-	35,402	11,636	8,404	7,197	6,081	9,192	2,105	207	537	138
1986	88,699	-	34,816	12,672	8,889	9,241	6,498	10,372	2,209	234	514	109
1987	85,611	-	42,287	16,302	11,314	11,635	7,678	11,956	2,217	293	542	74
1988	86,193	-	39,900	15,800	12,042	10,597	7,461	11,209	1,947	287	475	28
1989	87,698	-	35,360	22,240	13,759	11,778	7,829	12,698	2,240	252	336	22
1990	88,586	-	41,749	19,299	15,500	12,584	8,013	13,540	2,700	266	378	41
1991	82,205	-	49,580	23,630	16,869	13,506	8,437	13,979	3,344	291	487	29
1992	78,377	-	39,968	19,419	14,354	11,630	7,699	13,391	2,684	291	376	32
1993	69,178	-	39,060	18,801	12,645	10,466	6,129	12,995	2,310	30	341	28
1994	66,501	-	32,787	14,568	9,237	8,630	5,360	10,963	1,801	267	320	25
1995	60,497	-	28,333	15,331	9,133	9,042	5,965	13,641	1,724	290	373	83
1996	56,653	-	24,714	18,199	10,245	10,494	7,444	17,229	1,638	349	633	195
1997	60,941	-	21,552	13,522	8,988	9,587	7,045	16,266	1,385	296	501	161
1998	63,037	756	26,297	15,966	10,042	10,269	7,547	19,085	1,530	211	472	105
1999	58,278	1,030	24,630	15,222	9,737	9,963	6,721	19,380	1,514	222	423	98
2000	58,042	1,070	27,223	17,223	11,813	11,652	7,715	20,558	1,776	234	455	62
2001	61,897	1,161	25,372	16,807	11,499	11,115	7,070	21,357	1,698	218	403	77
2002	65,421	1,317	28,659	18,607	12,299	11,628	4,718	18,502	2,073	275	336	38
2003	58,842	1,230	23,866	14,899	9,670	8,872	3,892	13,196	2,013	269	312	47
2004	59,202	1,302	23,031	14,234	9,836	9,635	4,255	15,328	2,736	366	309	43
2005	53,576	1,418	20,889	12,952	8,834	8,874	4,750	15,534	2,917	521	290	27
2006	61,448	1,551	20,217	13,079	8,687	9,603	4,748	15,942	3,569	816	298	42
2007	66,953	1,450	20,299	13,970	9,318	9,574	5,918	15,973	4,073	1,041	263	14
2008	61,194	1,507	19,052	14,409	10,595	10,202	5,204	15,658	3,639	930	204	11
2009	54,876	2,006	19,893	14,570	11,350	9,399	3,113	11,605	3,648	1,011	249	10
2010	54,064	1,057	14,977	10,260	8,056	7,778	3,072	10,890	2,686	670	222	8
2011	55,298	857	16,802	10,703	8,559	10,027	4,677	13,694	3,123	894	219	10
2012	54,370	694	16,571	10,720	8,651	9,341	6,396	12,768	2,892	900	180	0
2013	49,566	676	15,776	10,098	8,140	7,922	8,346	13,288	2,888	899	163	1

An additional rating is added to an existing pilot certificate (e.g., Instrument rating added to a private certificate).

Source: FAA

## DEFINITIONS

**Active Pilot** — A pilot who holds a pilot certificate and a valid medical certificate (except for sport pilots).

**Airman** — A pilot, mechanic, or other licensed aviation technician. The term refers to men and women.

**Airman Certificate** — A document issued by the Administrator of the Federal Aviation Administration. The Airman Certificate certifies that the holder complies with the regulations governing the capacity in which the certificate authorizes the holder to act as an airman in connection with an aircraft.

## 6.6 FAA Non-Pilot Certificates (2000–2014)

Year	Mechanic	Repairman	Parachute Rigger	Ground Instructor	Dispatcher	Flight Navigator	Flight Engineer	Flight Attendant <sup>1</sup>
2000	344,434	38,208	10,477	72,326	16,340	570	65,098	n/a
2001	310,850	40,085	7,927	72,261	16,070	509	65,398	n/a
2002	315,928	37,114	8,063	73,658	16,695	431	63,681	n/a
2003	313,032	37,248	7,883	72,692	16,955	382	61,643	n/a
2004	317,111	39,231	8,011	73,735	17,493	336	59,376	n/a
2005	320,293	40,030	8,150	74,378	18,079	298	57,756	125,032
2006	323,097	40,329	8,252	74,849	18,610	264	55,952	134,874
2007	322,852	40,277	8,186	74,544	19,043	250	54,394	147,013
2008	326,276	41,056	8,248	74,983	19,590	222	53,135	154,671
2009	329,027	41,389	8,362	75,461	20,132	181	51,022	156,741
2010	308,367	41,196	8,009	70,560	16,576	171	48,569	156,368
2011	335,431	40,802	8,491	74,586	21,363	146	47,659	167,037
2012	337,775	40,444	8,474	73,599	21,862	141	46,639	172,357
2013	338,844	39,952	8,491	72,493	22,401	126	45,317	179,531
2014	341,409	39,566	8,702	71,755	23,113	115	43,803	188,936

Number of non-pilot certificates represents all certificates on record since no medical examination is required.  
 1. Flight attendant information was first available from FAA Registry in 2005.

Source: FAA

## PILOT CATEGORIES

**Student Pilot** — A student pilot must be 16 years old, medically certificated by a Federal Aviation Administration (FAA) medical examiner, and may only fly solo under the supervision of a flight instructor. A student pilot may not operate an aircraft that is carrying passengers or that is carrying property for compensation or hire.

**Recreational Pilot** — A recreational pilot may fly no more than one passenger in a light, single-engine aircraft with no more than four seats, during good weather and daylight hours, and unless otherwise authorized, not more than 50 miles from his or her home airport.

**Sport Pilot** — A sport pilot may operate a light-sport aircraft under a limited set of flight conditions. The certificate does not require an FAA medical examination, but the pilot can carry a driver's license as proof of medical competence. Holders of a sport pilot certificate may fly an aircraft with a standard airworthiness certificate if the aircraft meets the definition of a light-sport aircraft.

**Private Pilot** — A private pilot may carry passengers in any aircraft. The private pilot may not act as pilot-in-command of an aircraft that is carrying passengers for compensation or hire or act as pilot-in-command of an aircraft that is being operated for compensation or hire (such as an aircraft hired to conduct pipeline patrol but carrying no passengers).

**Commercial Pilot** — A commercial pilot may act as pilot-in-command of an aircraft that is carrying passengers for compensation or hire, and as pilot-in-command of an aircraft that is being operated for compensation or hire, but not as pilot-in-command of an aircraft in air carrier service.

**Airline Transport Pilot** — An airline transport pilot may act as pilot-in-command of an aircraft in air carrier service.



## Airports and Aeronautical Facilities



### 7.1 Airports by Country, Europe, 2010–2014 Estimates

Country	Airports with Paved Runways						Airports with Unpaved Runways						Heliports
	Total Airports	Over 10,000 ft	8,000 ft to 10,000 ft	5,000 ft to 8,000 ft	3,000 ft to 5,000 ft	Under 3,000 ft	Total Airports	Over 10,000 ft	8,000 ft to 10,000 ft	5,000 ft to 8,000 ft	3,000 ft to 5,000 ft	Under 3,000 ft	
Albania	4	-	3	1	-	-	1	-	-	-	1	1	1
Andorra	-	-	-	-	-	-	-	-	-	-	-	-	-
Armenia	10	2	2	4	2	-	1	-	-	-	1	-	-
Austria	24	1	5	1	4	13	28	-	-	1	3	24	1
Azerbaijan	30	5	5	13	4	3	7	-	-	-	-	7	1
Belarus	33	1	20	4	1	7	32	1	-	1	2	28	1
Belgium	27	6	9	2	1	9	18	-	-	-	-	16	1
Bosnia-Herz	7	-	4	1	-	2	18	-	-	1	6	11	6
Bulgaria	124	2	17	15	-	90	78	-	-	-	6	72	2
Croatia	24	2	6	3	3	10	45	-	-	1	6	38	1
Cyprus	13	-	6	3	3	1	2	-	-	-	-	2	9
Czech Rep.	41	2	9	12	2	16	87	-	-	1	26	60	1
Denmark	28	2	7	4	12	3	61	-	-	-	2	59	-
Estonia	13	2	8	2	1	-	5	-	-	1	1	3	1
Finland	75	3	26	10	21	15	73	-	-	-	3	70	-
France	297	14	26	98	83	76	176	-	-	-	67	109	1
Germany	322	14	48	60	70	130	219	-	-	2	32	185	2
Georgia	18	1	7	3	5	2	4	-	-	1	2	1	-
Greece	67	6	15	19	18	9	15	-	-	-	2	13	9
Hungary	20	2	6	5	6	1	21	-	-	2	8	11	3
Iceland	6	1	-	3	2	-	93	-	-	3	27	63	-
Ireland	16	1	1	4	5	5	23	-	-	-	2	21	-
Italy	99	9	31	18	29	12	31	-	-	1	11	19	5
Latvia	19	1	3	5	3	7	23	-	-	-	-	23	1
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-
Lithuania	26	3	1	7	2	13	55	1	-	-	2	52	-
Luxembourg	1	1	-	-	-	-	1	-	-	-	-	1	1
Macedonia	10	-	2	-	-	8	4	-	-	-	1	3	-
Malta	1	1	-	-	-	-	-	-	-	-	-	-	2
Moldova	5	1	2	2	-	-	2	-	-	-	1	1	-
Monaco	-	-	-	-	-	-	-	-	-	-	-	-	1
Montenegro	5	-	2	1	1	1	1	-	-	-	1	-	1
Netherlands	20	2	10	2	5	1	7	-	-	-	3	4	1
Norway	67	1	12	11	19	24	31	-	-	-	6	25	1
Poland	86	5	29	37	9	6	39	-	-	1	17	21	6
Portugal	43	5	7	8	13	10	22	-	-	-	1	21	-
Romania	26	4	10	11	-	1	27	-	-	-	6	21	4
Serbia	11	2	3	3	3	-	19	-	-	1	10	8	2
Slovakia	19	2	2	3	3	9	18	-	-	-	10	8	1
Slovenia	7	1	1	1	3	1	9	-	-	1	3	5	-
Spain	98	18	12	19	25	24	54	-	-	2	14	38	10
Sweden	149	3	12	74	23	37	81	-	-	-	5	76	2
Switzerland	41	3	2	13	6	17	23	-	-	-	-	23	1
Turkey	89	16	35	17	17	4	9	-	-	1	4	4	20
Ukraine	108	13	42	22	3	28	79	-	-	5	5	69	9
United Kingdom	272	7	31	93	76	65	190	-	-	2	25	163	9
Europe Total	2,401	165	479	614	483	660	1,732	2	-	28	322	1,378	137
United States	5,054	189	235	1,478	2,249	903	8,459	1	6	140	1,552	6,760	5,287

Source: CIA World Factbook

## 7.2 U.S. Civil and Joint Use Airports, Heliports, and Seaplane Bases on Record by Type of Ownership (2010)

State or Territory	State or Territory Total	Public Use		Civil Private Use Landing Facilities							Military-Only Use
		Total	Part 139	Total	Airports	Heliports	Seaplane Bases	Other			
								Gliderports	Balloon Ports	Ultralight Flightparks	
Grand Total	19,750	5,178	559	14,120	8,405	5,425	290	31	13	134	274
United States – Total	19,729	5,168	551	14,111	8,403	5,418	290	31	13	134	272
Alabama	281	98	10	172	87	81	4	-	-	-	11
Alaska	734	408	26	307	245	38	24	-	-	-	19
American Samoa	4	3	3	1	1	-	-	-	-	-	-
Arizona	314	79	14	219	107	112	-	2	-	6	8
Arkansas	307	99	9	199	118	81	-	2	-	4	3
California	960	257	36	671	263	404	4	3	-	1	28
Colorado	449	76	16	365	186	179	-	1	1	1	5
Connecticut	146	23	5	122	35	82	5	-	-	1	-
Delaware	42	11	1	30	21	9	-	-	-	-	1
District of Columbia	20	3	2	13	-	13	-	-	-	-	4
Florida	857	127	25	697	370	289	38	2	-	5	26
Georgia	461	110	10	339	227	110	2	1	-	1	10
Guam	3	1	1	1	-	1	-	-	-	-	1
Hawaii	50	14	7	30	14	16	-	-	-	-	6
Idaho	280	119	7	158	108	49	1	-	-	2	1
Illinois	788	115	17	665	413	247	5	2	-	5	1
Indiana	610	107	12	487	348	123	16	-	-	11	5
Iowa	289	121	8	162	79	83	-	-	-	3	3
Kansas	383	141	10	238	203	35	-	1	1	-	2
Kentucky	223	60	7	157	95	62	-	-	-	4	2
Louisiana	480	75	9	381	150	219	12	-	-	20	4
Maine	175	68	6	104	64	17	23	-	-	2	1
Maryland	226	37	3	182	111	67	4	-	-	-	7
Massachusetts	241	40	8	198	39	142	17	-	1	1	1
Michigan	467	228	20	236	142	89	5	-	-	2	1
Midway Atoll	2	1	1	1	1	-	-	-	-	-	-
Minnesota	469	154	9	313	203	59	51	-	-	1	1
Mississippi	244	80	11	157	107	50	-	-	-	1	6
Missouri	518	132	11	380	251	128	1	-	-	3	3
Montana	258	121	15	134	102	31	1	-	-	1	2
N. Mariana Islands	11	5	3	6	-	6	-	-	-	-	-
Nebraska	244	86	9	156	122	34	-	-	-	-	2
Nevada	125	49	5	69	43	26	-	1	-	1	5
New Hampshire	139	25	3	114	28	79	7	-	-	-	-
New Jersey	314	46	4	256	54	196	6	-	5	-	7
New Mexico	174	61	9	107	81	26	-	-	-	1	5
New York	603	148	24	448	263	175	10	2	1	3	1
North Carolina	429	112	15	300	212	88	-	1	1	4	11
North Dakota	281	89	8	190	175	15	-	-	-	-	2
Ohio	729	170	13	554	344	209	1	2	1	1	1
Oklahoma	390	140	4	240	160	80	-	-	-	4	6
Oregon	420	97	10	322	231	90	1	1	-	-	-
Pennsylvania	821	132	16	662	316	339	7	2	-	18	7
Puerto Rico	52	12	4	39	6	31	2	-	-	-	1
Rhode Island	31	8	1	22	3	17	2	-	1	-	-
South Carolina	196	68	8	119	86	31	2	1	-	3	5
South Dakota	178	74	7	103	70	33	-	-	-	-	1
Tennessee	311	81	8	226	124	101	1	-	-	2	2
Texas	2,006	391	31	1,578	1,050	528	-	6	-	9	22
Utah	142	46	9	93	44	49	-	-	-	-	3
Vermont	81	16	2	65	45	14	6	-	-	-	-
Virgin Islands	8	2	2	6	-	4	2	-	-	-	-
Virginia	427	66	7	340	213	125	2	1	1	1	18
Wake Island	1	-	-	-	-	-	-	-	-	-	1
Washington	552	137	11	403	240	157	6	-	-	3	9
West Virginia	120	35	8	83	38	35	10	-	-	1	1
Wisconsin	565	133	9	422	315	95	12	-	-	8	2
Wyoming	119	41	10	78	52	26	-	-	-	-	-

U.S. total does not include U.S. territories.

Source: FAA Airport Engineering Division

## 7.3 U.S. Airports Ranked by Number of General Aviation Operations at Tower (2014)

Rank 2014	Facility	Airport Name and State	General Aviation Operations					Total Airport Operations	Total GA Operations	GA as % of Total	Tower Operations
			IFR GA		VFR GA		Local Civil GA				
			Itinerant	Overflight	Itinerant	Overflight					
1	DVT	Phoenix Deer Valley, AZ	7,699	713	112,213	6,983	214,112	339,493	341,720	98.3%	347,493
2	LGB	Long Beach, CA	26,169	547	91,909	19,604	164,597	316,009	302,826	90.0%	336,615
3	DAB	Daytona Beach, FL	41,349	306	154,542	3,432	81,790	292,144	281,419	95.0%	296,246
4	APA	Centennial Airport, CO	46,056	54	94,077	6,615	129,090	309,457	275,892	86.6%	318,507
5	PRC	Ernest A. Love Field, AZ	2,336	10	83,348	866	185,538	275,384	272,098	98.3%	276,664
6	TMB	Kendall-Tamiami Executive Airport, FL	29,301	333	106,624	5,042	120,008	258,197	261,308	99.0%	263,851
7	VNY	Van Nuys, CA	35,159	1,724	105,423	29,609	77,831	232,931	249,746	92.7%	269,424
8	CHD	Chandler Municipal Airport, AZ	1,987	2	74,715	8,774	138,887	217,549	224,365	98.6%	227,494
9	MYF	Montgomery Field Airport, CA	21,010	179	79,985	10,522	110,368	215,120	222,064	98.1%	226,274
10	HIO	Portland-Hillsboro Airport, OR	14,886	282	61,567	3,711	140,889	221,932	221,335	97.9%	226,029
11	VRB	Vero Beach Municipal Airport, FL	21,948	248	68,215	2,450	128,142	222,128	221,003	98.3%	224,895
12	GFK	Grand Forks Int'l, ND	7,419	15	7,671	217	201,067	317,751	216,389	68.0%	318,120
13	SEE	Gillespie Field, CA	11,301	308	69,705	4,092	125,617	207,388	211,023	99.5%	212,070
14	SNA	John Wayne-Orange County, CA	33,143	722	68,625	13,426	85,369	282,614	201,285	67.3%	298,907
15	FFZ	Falcon Field, AZ	3,596	79	61,122	6,576	129,839	236,423	201,212	82.1%	245,034
16	IWA	Phoenix-Mesa Gateway Airport, AZ	9,685	162	50,932	5,762	125,871	228,368	192,412	81.1%	237,388
17	CNO	Chino, CA	14,316	1,338	53,152	9,506	109,819	179,811	188,131	98.5%	190,933
18	PAO	Palo Alto Airport, CA	5,751	2,848	70,763	8,443	97,756	175,803	185,561	96.4%	192,570
19	FRG	Republic Airport, NY	12,860	179	80,751	3,295	87,516	191,619	184,601	90.8%	203,390
20	DWH	David Wayne Hooks Mem. Airport, TX	18,708	111	64,114	5,239	79,655	169,729	167,827	95.2%	176,381
21	SFB	Sanford-Orlando, FL	15,922	25	26,164	1,186	124,474	220,726	167,771	75.6%	222,019
22	FXE	Fort Lauderdale Executive Airport, FL	35,752	392	82,800	12,270	35,152	168,772	166,366	91.3%	182,237
23	HWO	North Perry Airport, FL	2,789	587	49,714	7,284	102,944	155,776	163,318	99.5%	164,146
24	EVB	New Smyrna Beach Municipal, FL	5,495	676	47,911	3,152	106,013	161,721	163,247	98.6%	165,612
25	DTO	Denton Municipal Airport, TX	10,872	132	59,479	2,731	85,708	158,210	158,922	98.6%	161,204
26	FPR	Saint Lucie Country Int'l Airport, FL	19,446	257	50,605	2,237	85,388	157,308	157,933	98.7%	159,970
27	PMP	Pompano Beach Airpark, FL	5,619	6,315	42,159	14,348	89,267	138,402	157,708	94.2%	167,466
28	BFI	Boeing Field, King County Airport, WA	27,216	1,361	63,017	18,376	45,017	179,394	154,987	73.7%	210,319
29	CMA	Camarillo Airport, CA	12,349	5,044	61,981	6,470	66,776	144,637	152,620	95.0%	160,651
30	LVK	Livermore Municipal Airport, CA	9,274	42	49,613	3,086	85,369	145,537	147,384	99.1%	148,683
31	RHV	Reid-Hillview, CA	2,674	4,824	52,216	5,945	79,537	135,326	145,196	80.6%	180,134
32	SDL	Scottsdale Airport, AZ	30,180	128	44,530	10,817	58,830	150,419	144,485	88.3%	163,690
33	XFL	Flagler County Airport, FL (KFIN)	3,605	24	34,805	146	104,681	144,415	143,261	99.0%	144,682
34	TOA	Torrance (Zamperini Field), CA	8,214	176	58,456	14,656	58,097	125,935	139,599	98.4%	141,929
35	RVS	Richard Lloyd Jones, OK	12,083	83	41,369	1,420	83,938	140,015	138,893	97.5%	142,490
36	PDK	DeKalb-Peachtree Airport, GA	46,169	362	46,390	10,677	30,186	139,554	133,784	86.7%	154,330
37	CRQ	McClellan-Palomar Airport, CA	30,810	201	44,858	6,455	51,071	137,971	133,395	89.5%	148,967
38	PUB	Pueblo Memorial Airport, CO	6,304	15	53,709	729	72,255	142,524	133,012	92.7%	143,467
39	SGJ	Springfield-Beckley Municipal Airport, OH	10,792	8	47,656	1,180	70,272	138,446	129,908	92.5%	140,451
40	OPF	Opa-Locka Executive Airport, FL	33,331	120	35,164	10,369	50,824	136,581	129,808	88.1%	147,300
41	RNM	Ramona Airport, CA	1,435	4	29,420	8,232	88,389	120,116	127,480	99.3%	128,427
42	HWD	Hayward Executive Airport, CA	7,370	8,231	37,240	10,229	63,695	112,726	126,765	72.1%	175,854
43	RAL	Riverside Municipal Airport, CA	9,401	6,528	40,610	9,806	58,143	110,668	124,488	97.5%	127,736
44	VGJ	North Las Vegas Airport, NV	9,494	222	44,399	4,311	65,027	126,942	123,453	92.7%	133,238
45	BED	Laurence G Hanscom Field Airport, MA	25,732	268	38,479	4,488	50,274	134,295	119,241	85.3%	139,800
46	MLB	Melbourne International Airport, FL	25,822	290	45,340	1,747	44,003	122,655	117,202	92.8%	126,356
47	MRI	Merrill Field Airport, AK	2,363	105	49,469	2,839	60,822	125,588	115,598	87.7%	131,790
48	BUR	Bob Hope Airport, CA	13,365	5,020	20,477	53,530	23,001	118,554	115,393	64.1%	179,998
49	SQL	San Carlos Airport, CA	3,772	68	43,325	11,634	55,506	117,547	114,305	87.3%	130,982
50	OMN	Ormond Beach Municipal Airport, FL	7,032	371	54,662	607	49,074	110,786	111,746	99.9%	111,814

General aviation operations are defined by the FAA based on the traffic operations counted in the OPSNET. Total operations include general aviation operations as well as commercial and military operations. GA does not include FAR Part 135 on-demand operations in this table.

Source: FAA Operations Network (OPSNET)

## 7.4 FAA Air Route Facilities and Services (1972–2014)

Year	VOR VORTAC	Non-Directional Beacons	Air Route Traffic Control Centers	Air Route Traffic Control Towers	Flight Service Stations	International Flight Service Stations	Instrument Landing Systems	WAAS-Enabled Procedures	Airport Surveillance Radar	ADS-B Radios (IOC)
1972	991	706	27	355	324	7	403	n/a	125	0
1973	995	739	27	403	315	7	467	n/a	142	0
1974	1,000	793	26	417	320	7	490	n/a	156	0
1975	1,011	848	25	487	321	7	580	n/a	177	0
1976	1,020	920	25	488	321	7	640	n/a	175	0
1977	1,021	959	25	495	319	7	678	n/a	182	0
1978	1,020	988	25	494	319	6	698	n/a	185	0
1979	1,028	1,015	25	499	318	6	753	n/a	192	0
1980	1,037	1,055	25	502	317	6	796	n/a	192	0
1981	1,033	1,123	25	501	316	6	840	n/a	199	0
1982	1,029	1,143	25	492	316	6	884	n/a	197	0
1983	1,032	1,183	25	494	316	5	934	n/a	197	0
1984	1,035	1,211	25	497	310	5	955	n/a	197	0
1985	1,039	1,222	25	500	302	4	968	n/a	198	0
1986	1,043	1,239	25	686	293	3	977	n/a	312	0
1987	1,039	1,212	25	500	302	4	968	n/a	312	0
1988	1,043	1,239	25	686	293	3	977	n/a	311	0
1989	1,046	1,263	25	686	255	3	1,100	n/a	312	0
1990	1,045	1,271	25	686	235	3	1,120	n/a	311	0
1991	1,045	1,295	24	694	192	3	1,114	n/a	318	0
1992	1,044	1,314	24	691	179	3	1,177	n/a	312	0
1993	1,046	1,263	24	686	255	3	1,100	n/a	312	0
1994	1,045	1,271	24	686	235	3	1,120	n/a	311	0
1995	1,045	1,295	24	694	192	3	1,114	n/a	318	0
1996	1,044	1,314	24	691	179	3	1,177	n/a	312	0
1997	1,041	1,344	24	684	135	3	1,231	n/a	310	0
1998	1,039	1,348	24	683	128	3	1,238	n/a	307	0
1999	1,041	1,320	24	680	75	3	1,327	n/a	295	0
2000	993	1,199	25	663	75	3	1,370	n/a	297	0
2001	1,116	1,675	24	678	76	3	1,388	n/a	292	0
2002	n/a	n/a	21	n/a	76	3	n/a	n/a	n/a	0
2003	n/a	n/a	21	n/a	76	3	n/a	n/a	n/a	0
2004	1,119	1,685	21	688	76	3	1,473	n/a	227	0
2005	1,111	1,613	21	693	76	3	1,490	n/a	226	0
2006	n/a	n/a	21	494	76	n/a	n/a	n/a	n/a	0
2007	n/a	n/a	21	499	76	n/a	n/a	n/a	n/a	0
2008	n/a	n/a	21	503	4	n/a	n/a	n/a	n/a	n/a
2009	n/a	n/a	21	508	4	n/a	n/a	n/a	n/a	n/a
2010	n/a	n/a	21	508	4	n/a	n/a	n/a	n/a	202
2011	n/a	n/a	21	512	4	n/a	n/a	11,828	n/a	339
2012	n/a	n/a	22	514	4	n/a	n/a	12,876	n/a	440
2013	967	n/a	22	516	4	n/a	n/a	13,102	n/a	556
2014	967	n/a	22	516	4	n/a	n/a	13,554	230	634

The FAA stopped publishing the "Air Traffic Factbook" in 2008. GAMA is working to backfill missing data. Air Traffic Control data shows federal, non-federal, and military through 2005, while 2006 through 2011 are FAA and contract.

Honolulu control facility as well as San Juan and Guam CERAP not included in ARTCC data. ADS-B radios only lists those that have reached Initial Operating Capability (IOC). The 2010 and 2012 figures are from November. Figures from other years are from December. WAAS-capable approach procedures include LNAV, LNAV/VNAV, LPV, LP procedures, and GPS stand-alone procedures, of which 3,552 are LPV in the 2014 data.

Source: FAA Air Traffic Organization

## 7.5 Airports by Type (2001–2011)

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
<b>Total Civil Public Use Airports</b>	<b>5,294</b>	<b>5,286</b>	<b>5,286</b>	<b>5,288</b>	<b>5,270</b>	<b>5,233</b>	<b>5,221</b>	<b>5,202</b>	<b>5,178</b>	<b>5,175</b>	<b>5,172</b>
Civil Public Use Part 139	635	633	628	599	575	604	565	560	559	551	547
Civil Public Use Non-Part 139	n/a	n/a	n/a	n/a	n/a	n/a	4,556	4,642	4,619	4,624	4,625
Civil Public Use Abandoned	26	16	19	10	14	27	18	16	18	14	20
Newly Established Public Use	n/a	n/a	n/a	n/a	n/a	n/a	9	3	5	16	6
<b>Total Civil Private Use Airports</b>	<b>14,062</b>	<b>14,286</b>	<b>14,295</b>	<b>14,532</b>	<b>14,584</b>	<b>14,757</b>	<b>14,839</b>	<b>14,451</b>	<b>14,298</b>	<b>14,353</b>	<b>14,339</b>
Civil Private Use Airports Abandoned	220	121	214	117	115	133	297	461	360	121	183
Newly Established Private Use	n/a	n/a	n/a	n/a	n/a	n/a	274	151	214	212	20
Military Airports	75	75	73	57	n/a	n/a	261	277	274	274	271
<b>Total Airports by Type</b>	<b>19,356</b>	<b>19,572</b>	<b>19,581</b>	<b>19,820</b>	<b>19,854</b>	<b>19,983</b>	<b>20,341</b>	<b>19,930</b>	<b>19,750</b>	<b>19,802</b>	<b>19,782</b>
Airports	n/a	n/a	n/a	n/a	n/a	n/a	13,822	13,589	13,494	13,473	13,450
Heliports	n/a	n/a	n/a	n/a	n/a	n/a	5,708	5,568	5,571	5,650	5,686
Seaplane Bases	n/a	n/a	n/a	n/a	n/a	n/a	527	503	497	496	497
Gliderports	n/a	n/a	n/a	n/a	n/a	n/a	35	35	35	35	35
Stolports	n/a	n/a	n/a	n/a	n/a	n/a	87	82	n/a	n/a	n/a
Balloon Ports	n/a	n/a	n/a	n/a	n/a	n/a	15	14	14	13	13
Ultralight Flightparks	n/a	n/a	n/a	n/a	n/a	n/a	147	139	139	135	131

The category "stolport" was eliminated in 2009. The data is as of December 31 for the years listed.

Certificated airports service air carrier operations with aircraft seating more than 9 passengers (Part 139).

Source: FAA Administrator's Factbook



## Safety and Accident Statistics



### 8.1 U.S. General Aviation Accidents, Fatal Accidents, and Fatalities (1940–2014)

Year	Accidents		Accidents		Fatalities		Flight Hours	Rate	
	All	Excluded	Fatal	Excluded	Total	Aboard		All	Fatal
1940	3,471	n/a	232	n/a	n/a	n/a	3,202,000	108.40	7.30
1941	4,252	n/a	217	n/a	n/a	n/a	4,462,000	95.30	4.90
1942	3,324	n/a	143	n/a	n/a	n/a	3,790,000	87.70	3.80
1943	3,871	n/a	167	n/a	n/a	n/a	-	-	-
1944	3,343	n/a	169	n/a	n/a	n/a	-	-	-
1945	4,652	n/a	322	n/a	n/a	n/a	-	-	-
1946	7,618	n/a	690	n/a	n/a	n/a	9,792,000	77.80	7.00
1947	9,253	n/a	882	n/a	n/a	n/a	16,348,000	56.60	5.30
1948	7,850	n/a	850	n/a	n/a	n/a	15,154,000	51.80	5.60
1949	5,459	n/a	562	n/a	n/a	n/a	11,051,000	49.40	5.00
1950	4,505	n/a	499	n/a	n/a	n/a	9,667,000	46.60	5.10
1951	3,824	n/a	441	n/a	n/a	n/a	8,460,000	45.20	5.20
1952	3,657	n/a	401	n/a	n/a	n/a	8,200,000	44.60	4.80
1953	3,232	n/a	387	n/a	n/a	n/a	8,528,000	37.90	4.50
1954	3,381	n/a	393	n/a	n/a	n/a	8,968,000	37.70	4.30
1955	3,343	n/a	384	n/a	n/a	n/a	9,524,000	35.10	4.00
1956	3,474	n/a	356	n/a	n/a	n/a	10,218,000	34.00	3.40
1957	4,200	n/a	438	n/a	n/a	n/a	10,938,000	38.40	4.00
1958	4,584	n/a	384	n/a	n/a	n/a	12,593,000	36.40	3.10
1959	4,576	n/a	450	n/a	n/a	n/a	12,890,000	35.50	3.50
1960	4,793	n/a	429	n/a	n/a	n/a	13,132,000	36.50	3.27
1961	4,625	n/a	426	n/a	n/a	n/a	13,603,000	34.00	3.13
1962	4,840	n/a	430	n/a	n/a	n/a	14,491,000	33.40	2.97
1963	4,690	n/a	482	n/a	n/a	n/a	15,129,000	31.00	3.19
1964	5,069	n/a	526	n/a	n/a	n/a	15,742,000	32.20	3.34
1965	5,196	n/a	538	n/a	n/a	n/a	16,707,000	31.10	3.22
1966	5,712	n/a	573	n/a	n/a	n/a	21,000,000	27.20	2.73
1967	6,115	n/a	603	n/a	n/a	n/a	22,156,000	27.60	2.72
1968	4,968	n/a	692	n/a	n/a	n/a	24,117,000	20.60	2.86
1969	4,767	n/a	647	n/a	n/a	n/a	25,356,000	18.80	2.55
1970	4,712	n/a	641	n/a	n/a	n/a	26,033,000	18.10	2.46
1971	4,648	n/a	661	n/a	n/a	n/a	25,538,000	18.20	2.59

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## 8.1 U.S. General Aviation Accidents, Fatal Accidents, and Fatalities (1940–2014) CONTINUED

Year	Accidents		Accidents		Fatalities		Flight Hours	Rate	
	All	Excluded	Fatal	Excluded	Total	Aboard		All	Fatal
1972	4,256	n/a	695	n/a	n/a	n/a	26,937,000	15.80	2.67
1973	4,255	n/a	723	n/a	n/a	n/a	29,965,000	14.20	2.52
1974	4,234	n/a	689	n/a	n/a	n/a	27,855,000	15.20	2.47
1975	4,001	n/a	636	n/a	n/a	n/a	28,784,000	13.90	2.20
1976	4,023	n/a	662	n/a	n/a	n/a	30,477,000	13.20	2.16
1977	4,083	n/a	663	n/a	n/a	n/a	31,651,000	12.90	2.09
1978	4,218	n/a	721	n/a	n/a	n/a	34,860,000	12.10	2.06
1979	3,625	n/a	636	n/a	n/a	n/a	36,690,000	9.88	1.63
1980	3,597	n/a	622	n/a	n/a	n/a	36,481,000	9.86	1.69
1981	3,502	n/a	654	n/a	n/a	n/a	36,824,000	9.51	1.78
1982	3,233	n/a	591	n/a	1,187	1,170	29,640,000	10.91	1.99
1983	3,075	15	555	5	1,068	1,061	28,673,000	10.67	1.92
1984	3,017	26	545	11	1,042	1,021	29,099,000	10.28	1.84
1985	2,739	11	498	6	956	945	28,322,000	9.63	1.73
1986	2,581	11	474	5	967	879	27,073,000	9.49	1.73
1987	2,495	18	446	7	837	822	26,972,000	9.18	1.62
1988	2,388	13	460	4	797	792	27,446,000	8.65	1.66
1989	2,242	17	432	8	769	766	27,920,000	7.97	1.52
1990	2,242	4	444	1	770	765	28,510,000	7.85	1.55
1991	2,197	8	439	5	800	786	27,678,000	7.91	1.57
1992	2,110	2	450	1	866	864	24,780,000	8.51	1.81
1993	2,064	5	401	4	744	740	22,796,000	9.03	1.74
1994	2,021	3	404	2	730	723	22,235,000	9.08	1.81
1995	2,056	10	412	6	734	727	24,906,000	8.21	1.63
1996	1,908	4	361	0	636	619	24,881,000	7.65	1.45
1997	1,840	5	350	2	631	625	25,591,000	7.17	1.36
1998	1,902	6	364	4	624	618	25,518,000	7.43	1.41
1999	1,905	3	340	1	621	615	29,246,000	6.50	1.16
2000	1,837	7	345	7	596	585	27,838,000	6.57	1.21
2001	1,727	3	325	1	562	558	25,431,000	6.78	1.27
2002	1,716	7	345	6	581	575	25,545,000	6.69	1.33
2003	1,741	4	352	3	633	630	25,998,000	6.68	1.34
2004	1,619	3	314	0	559	559	24,888,000	6.49	1.26
2005	1,671	2	321	1	563	558	23,168,000	7.20	1.38
2006	1,523	2	308	1	706	547	23,963,000	6.35	1.28
2007	1,654	2	288	2	496	491	23,819,000	6.94	1.20
2008	1,569	2	277	0	496	487	22,805,000	6.87	1.21
2009	1,480	3	275	0	479	470	20,862,000	7.08	1.32
2010	1,440	2	270	1	457	454	21,688,000	6.63	1.24
2011	1,470	1	266	0	448	437	21,488,000	6.84	1.24
2012	1,471	1	273	1	440	440	20,881,000	7.04	1.30
2013	1,222	1	221	1	387	482	20,887,000	5.85	1.05
2014P	1,213	n/a	250	n/a	405	n/a	n/a	n/a	n/a

P = Preliminary

General Aviation as defined by NTSB includes operations under Part 91, Part 91K, Part 125, Part 133, and Part 137 for the purpose of accident statistics.

Excluded "Accidents" and "Fatalities" are suicide/sabotage and stolen/unauthorized events, which are not included in rates.

Source: NTSB, FAA, and GAMA

## 8.2 U.S. On-Demand FAR Part 135 Accidents, Fatal Accidents, and Fatalities (1987–2014)

Year	Accidents		Accidents		Fatalities		Flight Hours	Rate	
	All	Excluded	Fatal	Excluded	Total	Aboard		All	Fatal
1987	96	0	30	0	65	63	2,657,000	3.61	1.13
1988	102	0	28	0	59	55	2,632,000	3.88	1.06
1989	110	0	25	0	83	81	3,020,000	3.64	0.83
1990	107	0	29	0	51	49	2,249,000	4.76	1.29
1991	88	0	28	0	78	74	2,241,000	3.93	1.25
1992	76	0	24	0	68	65	2,844,000	2.67	0.84
1993	69	0	19	0	42	42	2,324,000	2.97	0.82
1994	85	0	26	0	63	62	2,465,000	3.45	1.05
1995	75	0	24	0	52	52	2,486,000	3.02	0.97
1996	90	0	29	0	63	63	3,220,000	2.80	0.90
1997	82	0	15	0	39	39	3,098,000	2.65	0.48
1998	77	0	17	0	45	41	3,802,000	2.03	0.45
1999	74	0	12	0	38	38	3,204,000	2.31	0.37
2000	80	0	22	0	71	68	3,930,000	2.04	0.56
2001	72	0	18	0	60	59	2,997,000	2.40	0.60
2002	60	0	18	0	35	35	2,911,000	2.06	0.62
2003	73	0	18	0	42	40	2,927,000	2.49	0.61
2004	66	0	23	0	64	63	3,238,000	2.04	0.71
2005	65	0	11	0	18	16	3,815,000	1.70	0.29
2006	52	0	10	0	16	16	3,742,000	1.39	0.27
2007	61	0	14	0	43	43	4,033,000	1.51	0.35
2008	58	0	20	0	69	69	3,408,000	1.70	0.59
2009	47	0	2	0	17	14	3,064,000	1.53	0.07
2010	30	0	6	0	17	17	3,113,000	0.96	0.19
2011	50	0	16	0	41	41	3,082,000	1.62	0.52
2012	37	0	7	0	9	9	3,522,000	0.99	0.20
2013	44	0	10	0	27	27	3,562,000	1.24	0.28
2014P	34	n/a	8	n/a	20	n/a	n/a	n/a	n/a

P = Preliminary  
 Excluded "Accidents" and "Fatalities" are suicide/sabotage and stolen/unauthorized events, which are not included in rates.  
 In 2002, FAA changed its estimate of air taxi activity. The revision was retroactively applied to the years 1992 to present. In 2003, the FAA again revised flight activity estimates for 1999 to 2002.

U.S. air carriers operating under 14 CFR Part 135 were previously referred to as Scheduled and Nonscheduled Services. Current tables now refer to these same air carriers as Commuter Operations and On-Demand Operations, respectively, in order to be consistent with definitions in 14 CFR 119.3 and terminology used in 14 CFR 135.1. On-Demand Part 135 operations encompass charters, air taxis, air tours, or medical services (when a patient is on board).

Source: NTSB



### 8.3 European Union General Aviation and Aerial Work Accident Data (2006–2013)

Year	Aircraft with Mass Below 2,250 Kg				Aircraft with Mass Above 2,250 Kg				All Aircraft Accidents	
	Accidents		Fatalities		Accidents		Fatalities		Accidents	
	Total	Fatal	Aboard	Ground	Total	Fatal	Aboard	Ground	Total	Fatal
2006	1,121	151	231	3	36	10	29	-	1,157	161
2007	1,157	142	238	5	30	10	18	1	1,187	152
2008	1,145	140	216	2	32	10	23	1	1,177	150
2009	1,234	163	253	4	19	9	18	-	1,253	172
2010	1,047	129	189	1	31	6	14	-	1,078	135
2011	1,109	169	253	1	34	12	29	-	1,143	181
2012	918	133	226	1	10	2	2	1	995	148
2013	948	128	202	-	15	3	7	-	1,006	139

The European Aviation Safety Agency (EASA) includes aircraft registered in Member States that are balloons, aeroplanes, gliders, gyroplanes, helicopters, microlights, motor gliders, and other aircraft among general aviation accidents that occurred in general aviation operations and while conducting aerial work. This data does not include general aviation aeroplanes conducting Commercial Air Transport operations. Data from 2006–2008 does not include Italy, Liechtenstein, Luxembourg, and Slovenia. Data after 2012 includes aerial work accidents in the "All Aircraft" total data only and is not part of the other columns.

Source: EASA Annual Safety Review

FIGURE 8.1 Accident Rates in U.S. General Aviation (1980–2013)

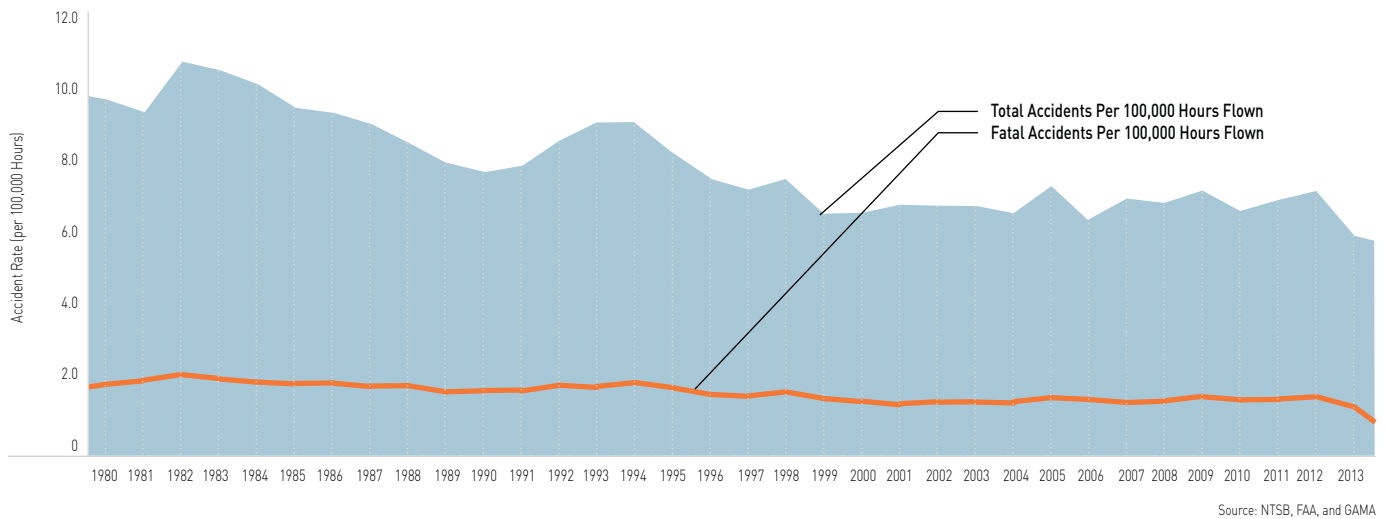
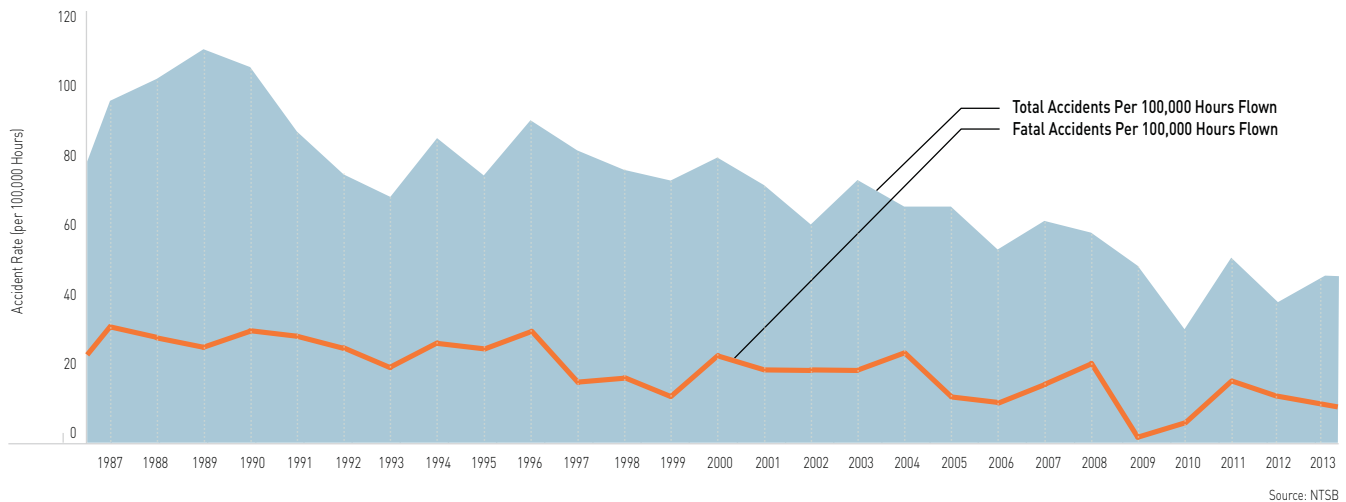


FIGURE 8.2 Accident Rates in U.S. On-Demand FAR Part 135 Operations (1987–2013)





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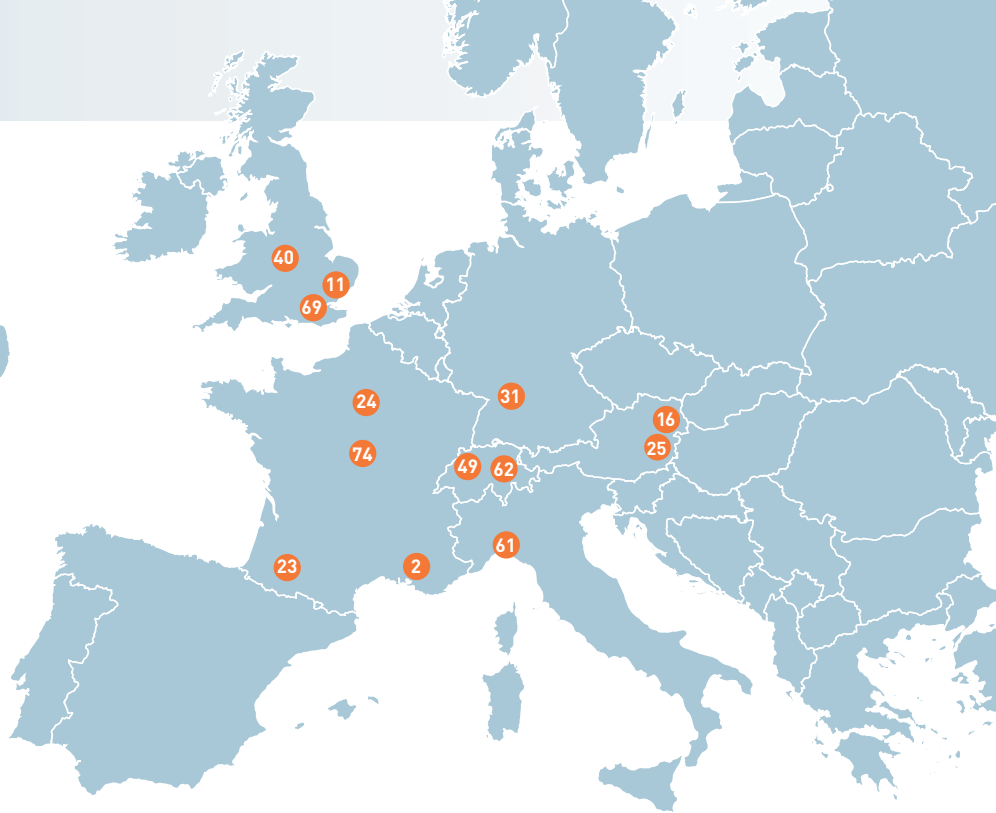
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