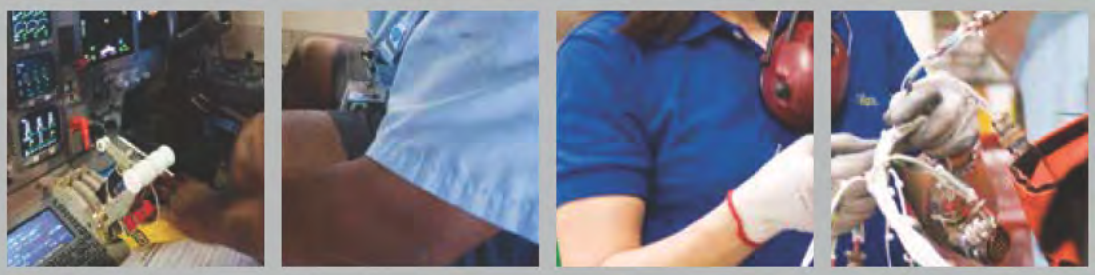
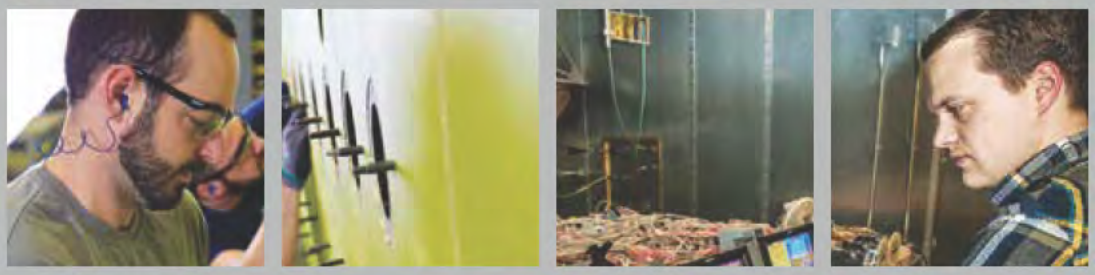
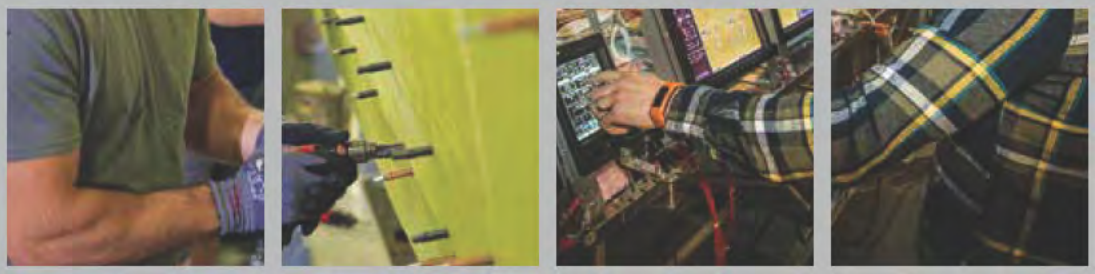
General Aviation
Manufacturers Association

2016 General Aviation Statistical Databook & 2017 Industry Outlook

General Aviation:

- Includes over 416,000 general aviation aircraft flying worldwide today, ranging from two-seat training aircraft and utility helicopters to intercontinental business jets, of which over 210,000 aircraft are based in the United States and over 140,000 aircraft are based in Europe.
- Supports $219 billion in total economic output and 1.1 million total jobs in the United States.
- In the U.S., flies over 24 million flight hours, of which two-thirds are for business purposes.
- Flies to more than 5,000 U.S. public airports, while scheduled airlines serve less than 400 airports. The European general aviation fleet can access over 4,200 airports.
- Is the primary training ground for most commercial airline pilots.

GAMA

GAMA is an international trade association representing more than 90 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 and look for us on Facebook, LinkedIn, and Twitter.

GAMA Mission and Vision

MISSION

The General Aviation Manufacturers Association (GAMA) exists to foster and advance the general welfare, safety, interests, and activities of the global business and general aviation industry. This includes promoting a better understanding of general aviation manufacturing, maintenance, repair, and overhaul and the important role these industry segments play in economic growth and opportunity, and in serving the critical transportation needs of communities, companies, and individuals worldwide.

VISION

Our vision is to be recognized as the most effective trade association in business and general aviation, aerospace manufacturing, and in the maintenance, repair, and overhaul domain through:

- Enhancing Safety through innovation and the promotion of quality training
- Facilitating improvements in certification, audit, and regulatory processes
- Fostering sustainable general and business aviation growth
- Promoting the economic impact and societal benefits of general and business aviation
- Achieving organizational excellence

Welcome from GAMA's Chairman

One of the questions I'm frequently asked by reporters is, what is the state of the general aviation industry? And one of the main sources I turn to is the book you're reading right now. That's why I'm delighted to introduce you to GAMA's *2016 General Aviation Statistical Databook & 2017 Industry Outlook*.

You'll find inside the latest general aviation shipments and billings, fleet data for the United States and Europe and several other regions, as well as pilot, airport, safety, and accident statistics. This handy compendium delivers a comprehensive look at our global industry, which continues to develop and deliver innovative products and contribute to economies around the world.

As you read the following pages, you'll see that 2016 was another impressive year for GAMA. The association welcomed its first associate members for electric and hybrid propulsion aircraft, embracing an emerging segment of the general aviation market and the evolution toward more autonomous aircraft operations. It saw the U.S. Federal Aviation Administration put into place a rule to make it easier to certify products and technologies for small airplanes, with the European Aviation Safety Agency expected to adopt a similar rule in early 2017. And GAMA continued its successful general aviation jobs rallies, hosting U.S. Senator Gary Peters (D-MI) and hundreds of general aviation enthusiasts at Duncan Aviation's facility in Battle Creek, Michigan.

In 2017, GAMA will continue to be the premier advocate for general aviation manufacturers, their suppliers, and those who maintain, repair, and overhaul GA aircraft around the world. While working closely with global policymakers and regulators, GAMA will continue as the international resource for industry data with a redesigned website featuring important statistics about the industry, government resources, and career information for the next generation of general aviation leaders. In fact, some of the data previously published in this book has moved to GAMA's website, so please be sure to visit www.gama.aero for more information.

As one of GAMA's founding members, Piper Aircraft has been pleased to be a part of this excellent association for nearly half a century as it has grown to become the esteemed organization you see today. I'm delighted to be the fourth Piper leader to serve as GAMA's Chairman in the association's 47-year history and look forward to even more progress and accomplishments in the year to come.

Best regards,

Simon Caldecott
President and CEO, Piper Aircraft, Inc.

New Rules to Transform General Aviation Market for Light Airplanes

The U.S. Federal Aviation Administration's (FAA) new Part 23 rule promises to be a breakthrough for the light end of the general aviation marketplace ... and likely much more.

"This rule will usher in a new era of safety and a new era of innovation in general aviation here in the United States," FAA Administrator Michael Huerta said in announcing the rule at a press conference in December held at the U.S. Department of Transportation headquarters in Washington, DC.

U.S. FAA Administrator Michael Huerta, second from left, was joined by Hartzell Propeller's Joe Brown, left, Piper Aircraft's Simon Caldecott, second from right, and GE Aviation's Brad Mottier, right, in announcing the finalization of the Part 23 rule. Caldecott is GAMA's Chairman; both Brown and Mottier are former GAMA Chairmen.

Noting that the new rule represents a "fundamental shift in how the FAA approaches certification," Huerta added that it "will allow American businesses to create good manufacturing jobs and to better compete in the global market."

The Part 23 rewrite—which was years in the making—will allow manufacturers of and suppliers for small airplanes to develop and deliver innovative products to their customers more quickly and to better leverage new technologies. Instead of having to comply with unnecessarily prescriptive design requirements, manufacturers will now

U.S. Senator Amy Klobuchar (D-MN), the lead Senate sponsor of the Small Airplane Revitalization Act, has noted that it will allow general aviation manufacturers to "create the most innovative, advanced, and safest planes in the world."

have the ability to respond more nimbly and cost-effectively through performance-based airworthiness safety rules and consensus standards for compliance.

"This rule is nothing less than a total rethinking of how our industry can bring new models of pistons, diesels, turboprops, light jets, and new electric and hybrid propulsion airplanes to market, as well as facilitating safety-enhancing modifications and upgrades to the existing fleet," GAMA President and CEO Pete Bunce said.

"The new Part 23 rule makes it easier for manufacturers to do so by reducing the time, cost, and risk involved in certification, while improving safety for customers," Bunce added.

"As the leader of an aircraft manufacturing company, I can tell you firsthand that this rule will allow Piper Aircraft to bring new safety-enhancing technologies and aircraft to our customers without being held back by outdated and inflexible regulations," GAMA Chairman Simon Caldecott, President and CEO of Piper Aircraft, noted.

"This new Part 23 rule will help us to keep pace with new developments and allow us to more readily leverage innovation," added Brad Mottier, Vice President and General Manager of Business and General Aviation & Integrated Systems for GE Aviation. As a past Chairman of GAMA's Technical Policy Committee, Mottier worked with the FAA on the Part 23 rewrite effort.

Joe Brown, President of Hartzell Propeller Inc., provided perspective as both a pilot and as a supplier. The new rule will increase his ability to buy a "more attractive airplane in the years ahead," he said. The accelerated rates of innovation and production it enables "are good for me as a supplier, and what that means to me is jobs."

The Part 23 effort is part of a global initiative to streamline the way light aircraft are certified and ensure harmonization. The European Aviation Safety Agency is also in the process of rewriting its CS-23 rule for small airplanes, and is slated to announce the finalization of its rule in 2017. Other regulatory authorities worldwide are expected to follow suit.

The new U.S. rule is based on the work of the Part 23 Reorganization Aviation Rulemaking Committee (ARC), which GAMA co-chaired. The ARC developed recommendations for the rewrite, which were included in the Small Airplane Revitalization Act (SARA) that the U.S. Congress passed unanimously and President Obama signed into law in 2013. U.S. Senator Amy Klobuchar (D-MN) and U.S. Representative Mike Pompeo (R-KS) were the lead SARA co-sponsors in Congress. After the FAA released a Notice of Proposed Rulemaking in March, nine general aviation groups in May jointly called the FAA's process "a poster child for good rulemaking."

Bunce spoke about the importance of the Part 23 effort at an event with Senator Klobuchar and U.S. Representative Rick Nolan (D-MN) in December to celebrate the first delivery of the Cirrus Vision Jet in Duluth, Minnesota.

In addition, Administrator Huerta, Bunce, Caldecott, and GAMA Vice Chairman Phil Straub, Executive Vice President and Managing Director—Aviation of Garmin International, Inc., thanked SARA's sponsors at a reception in January 2017. Members of Congress attending the event included Senators Klobuchar and Jerry Moran (R-KS), and Representatives Dan Lipinski (D-IL), Sam Graves (R-MO), Todd Rokita (R-IN), John Duncan (R-TN), Mark Meadows (R-NC), Buddy Carter (R-GA), and Nolan, as well as staff from other Congressional offices.

U.S. Senator Gary Peters (D-MI) addresses the audience at GAMA's Michigan GA Jobs Rally.

General Aviation Lifts the Michigan Economy

More than 300 general aviation employees, students, veterans, and other enthusiasts packed into a hangar at Duncan Aviation as they celebrated the industry's contributions to the Michigan economy on June 17 in Battle Creek.

U.S. Senator Gary Peters thanked employees and speakers from GAMA companies—including Avfuel Corporation, Duncan Aviation, L-3 Technologies, and Williams International—for working in an industry he called "absolutely vital" to Michigan and to the United States.

"This is not just a job for you; this is a passion," Peters told the crowd. "This is something that's in your blood. This is something that you love and this is something that you're able to do that contributes so much to our country."

2016 GAMA Chairman Aaron Hilkemann, President and CEO of Duncan Aviation, noted that his company's economic impact goes further than its employees. "Our aviation business also supports a lot of good jobs in our communities," he said. "Because most of our customers come from a great distance, they often stay in local hotels, rent cars, eat in our local restaurants, and spend money in our stores."

GAMA President and CEO Pete Bunce said Michigan's general aviation sector is "wonderfully diverse," including maintenance, repair, and overhaul facilities, avionics and engine manufacturers, and their suppliers. "Our rally was a fantastic way to join with hundreds of general aviation employees, students, and other aviation enthusiasts to celebrate how general aviation is lifting Michigan," he concluded.

Separately, GAMA held a roundtable with top staffers of U.S. Senator Cory Booker (D-NJ) in September at Jet Aviation in Teterboro, New Jersey. Other GAMA members with a presence in New Jersey also attended, discussing critical topics of interest to the industry. The roundtables are an excellent way to engage U.S. members of Congress and their staffs in a small-scale setting to develop and deepen awareness of the policy opportunities and challenges facing general aviation manufacturers, and maintenance, repair, and overhaul providers.

Second Circuit Upholds Federal Preemption in Aviation Noise Case

In November, the U.S. Court of Appeals for the Second Circuit issued a victory for the aviation industry in *Friends of the East Hampton Airport et al. v. Town of East Hampton*, setting important precedent on the federal preemption question presented in this airport noise and access case.

The case arose from operators challenging three East Hampton, New York laws limiting access to the airport. GAMA filed an amicus brief supporting the operators' position that East Hampton's laws are preempted by the Airport Noise and Capacity Act of 1990 (ANCA) because, significantly, ANCA applies to all airports regardless of federal funding status. The court recognized that "Congress promulgated ANCA based on findings that 'community noise concerns have led to uncoordinated and inconsistent restrictions on aviation that could impede the national air transportation system' and, therefore, 'noise policy must be carried out at the national level.'" The opinion cited GAMA's brief explaining how East Hampton's laws are inconsistent with FAA and international noise standards.

GAMA's advocacy efforts include its annual Hill Day.
In May, GAMA Board members held 132 meetings with members of Congress and their staffs from 44 states.

U.S. Representative Mario Diaz-Balart (R-FL), in red tie, met with Mark Hood of PPG Aerospace; Chuck Barresi of B/E Aerospace; Rhett Ross of Continental Motors; and David Coleal and Jamie Hunter, both of Bombardier Business Aircraft, on Hill Day.

Wisconsin Students Flourish As They Build an Airplane

Over two weeks in June, the winners of the GAMA/Build A Plane 2016 Aviation Design Challenge transformed from a quiet group of high school students into teenagers confident about their ability to build a Glasair Sportsman airplane and speak before political leaders.

As teacher Mike Hansen said, "The progress each of the students made in the areas of communication, teamwork, and technical skills will serve them well for the rest of their lives."

Hailing from Weyauwega-Fremont High School in Weyauwega, Wisconsin, students Natasha Stemwedel, Derrick Cleaves, Logan Feltz, and Austin Krause—along with Hansen and chaperone Jerry Graf—won GAMA's fourth annual Science, Technology, Engineering, and Mathematics (STEM) Aviation Design Challenge for U.S. high schools. In a classroom setting, they used Fly to Learn curriculum and software powered by X-Plane to learn the basics of aerospace engineering and aviation flight. They then applied what they learned to make modifications to a Cessna 172SP virtual airplane using simulator software, taking part in a virtual fly-off against 75 other schools in 31 states. The competition included their score from the fly-off, a checklist detailing the steps they took to make the successful flight, a summary of the design changes they made, and three videos they created throughout the contest on what they learned.

The winning team received a trip to Glasair Aviation in Arlington, Washington to help build a real Sportsman airplane. From June 20 to July 1, they worked side by side with staff from Glasair, GAMA, and Jeppesen, as well as builder Dennis Willows, his daughter Grace, and his grandsons Angus and Ian. Starting at 7 a.m. each day, their tasks included bucking rivets, fabricating metal and composite brackets, running control cables, sanding the airframe, fabricating and attaching fuel lines, mounting the gear, and attaching the propeller. Before the students left, they saw the airplane taxi for the first time and receive its U.S. Federal Aviation Administration certificate of airworthiness.

ABOVE: The winning Wisconsin high school students, staff from Glasair Aviation, and builder Dennis Willows and his family with the finished Sportsman airplane.

LEFT: Student Natasha Stemwedel works on the wing.

Willows, a retired professor of neuroscience and biology at the University of Washington, had no qualms about letting the teenagers help build his airplane. "They work hard and fast," he told the Everett, Washington *Herald*. "They're sharp," he said.

Before their trip, the Weyauwega-Fremont High School students met with U.S. Representative Reid Ribble (R-WI), who represents their district in the U.S. Congress, at Gulfstream Aerospace Corp's Appleton, Wisconsin facility. While at the build, U.S. Representative Rick Larsen (D-WA), the Ranking Member on the House Aviation Subcommittee and the representative for Arlington, Washington, visited the students and tried his hand at manufacturing. After they returned home, the students spent two days at EAA AirVenture in Oshkosh, Wisconsin, where they met with Wisconsin Lt. Gov. Rebecca Kleefisch and thanked several sponsors.

GAMA President and CEO Pete Bunce noted, "The incredible experiences these very talented young people have had over the last six months make them powerful advocates for our industry as they demonstrate the value of STEM-based education and general aviation's promising future as we develop the next generation of pilots, mechanics, engineers, and maintenance professionals."

The Aviation Design Challenge already has a good track record of inspiring young people to enter the aviation field. In an *Air & Space* magazine profile of the Aviation Design Challenge in October, Lee Luckhardt of Saline, Michigan, a 2013 winner, called the competition "life-changing." A senior at Kettering University, he is now working part-time at Williams International and hopes to get a master's degree in aerospace engineering. Luckhardt is just one of several students now pursuing aviation careers due to the competition.

GAMA thanks the following companies for their generous sponsorship in making the 2016 Aviation Design Challenge possible: BBA Aviation, Bose Corporation, Cirrus Aircraft, Embraer, Garmin International, GE Aviation, Glasair Aviation, Gulfstream Aerospace Corporation, Hartzell Propeller Inc., Jeppesen, Jet Aviation, Lycoming Engines, Rockwell Collins, Textron Aviation, and Wipaire Inc.

Europe Moves to Update Basic Regulation for GA Aircraft

European leaders took several major steps in 2016 toward revisiting how general aviation in Europe is regulated and how the European Aviation Safety Agency (EASA)—the European Union's (EU) aviation regulatory body—will perform its role in the future.

Besides moving from prescriptive to more nimble, performance-based regulations and standards, the revised EASA Basic Regulation is expected to include improved certification processes and assign new roles to the agency in oversight, security, research, and other areas. While EASA has historically focused on large commercial airlines to the detriment of general aviation, European leaders are seeking to correct this by reducing undue burdens and adapting regulations to better address the diversity and specificities of general aviation. The future Basic Regulation is expected to enshrine this key concept.

"For general aviation, it is imperative that we have the appropriate level of regulation for each activity, combined with efficient oversight that facilitates the development of new and innovative products," GAMA President and CEO Pete Bunce said.

Bunce noted that any final regulation must also allow EASA to focus on the areas where safety and utility of general aviation in Europe can receive the most benefit. To do this, GAMA supports basic aggregate data-sharing among European countries. GAMA also supports EASA issuing EU-level regulations for operations and maintenance organizations with facilities across EU Member States to allow the issuance of pan-European certificates.

In December, EU Member State Transport Ministers agreed on the new direction for EASA. This followed a November vote in the European Parliament, where members of its Transport & Tourism Committee overwhelmingly voted to open negotiations with EU Member States and the European Commission on the issue. The three parties are expected to reach agreement on the final regulation by mid-2017.

Bunce added, "There is clear political will to assure a strong future for general aviation and to ensure a risk-based, proportionate approach guides all future EASA work."

GAMA Adds New Associate Members

GAMA welcomed its first associate members in 2016, admitting 10 companies that are researching and developing electric and hybrid propulsion air vehicles. GAMA created this new membership category in 2015 to facilitate coordination of the associate members' technical expertise and GAMA's policy experience to enable the development, growth, and airworthiness certification worldwide of new electric and hybrid propulsion technology to benefit general aviation in the future.

In addition, GAMA launched the Electric Propulsion and Innovation Committee (EPIC), which promotes certified hybrid and electric propulsion aircraft in general aviation design, production, and maintenance among key global aviation regulators. The EPIC, which now includes 40 members, is planning to release the first public standard for measuring the performance of electric and hybrid general aviation aircraft operations in early 2017.

Key Milestone Reached for Single-Engine Commercial Operations in Europe

European Union Member States reached agreement with the European Commission in June to approve a regulatory framework that will allow Commercial Air Transport (CAT) operations to use Single-Engine Turbine airplanes at night or in Instrument Meteorological Conditions (SET-IMC).

The vote came after more than two decades of technical work between industry and regulators, and ensures Europe will meet the International Civil Aviation Organization (ICAO) standards for CAT operations, which were issued in 2005. Single-engine airplane commercial operations are common across the globe with large fleets operating today in Australia, Latin America, and North America. GAMA and several of its member companies played a key role in a rulemaking group created by the European Aviation Safety Agency in 2012 to develop the agency's regulatory framework.

The rule enables passenger, medical service, and cargo operations to enter into new markets that previously were not possible to serve reliably. The regulation is on track to take effect in 2017.

General Aviation Safety Improves in 2016

The general aviation industry's multi-pronged efforts to improve safety technologies and procedures are paying off, with the fewest number of fatal accidents ever recorded.

The 2015 fatal accident rate was 1.09 per 100,000 flight hours—a new low—and the preliminary data for 2016 shows further improvement. A cross-section of initiatives to advance GA safety in the United States—including education, training, and enabling new equipage in the fleet through efforts like the General Aviation Joint Steering Committee—has helped to lower the numbers. GAMA is encouraged that Europe is establishing its own safety program for general aviation airplane and rotorcraft operations, which should help improve safety further.

FAA Issues Modernized Standards for Pilot Testing

The U.S. Federal Aviation Administration (FAA) is seeking to help pilots make safer decisions in the cockpit through the first of several modernized standards for testing pilots it put into place in 2016.

In June, the agency published new standards for private and instrument pilot testing. The Airman Certification Standards (ACS) replaced the Practical Test Standards and Learning Statement reference guides, offering a path to clearer and more relevant training. The ACS standards also better integrate the concept of risk management to help pilots improve their decision-making ability in the cockpit. Additionally, the FAA used the ACS to issue operator standards for small Unmanned Aircraft Systems.

The new standards were the result of five years of close work between the FAA and industry. GAMA chaired the Airman Testing Standards and Training Aviation Rulemaking Committee, which developed the ACS framework in 2012.

The FAA is developing new ACS for other certificates—including those for commercial pilots, airline transport pilots, instructors, and aircraft mechanics—to ensure a consistent approach across the aviation industry. Providing clearer guidance on how to marry up training, knowledge, and risk management in a more meaningful and relevant way will help advance aviation safety without creating new requirements for how the industry teaches airmen to fly and maintain aircraft.

Incentive Prompts Operators to Equip with ADS-B

Giving pilots more information about what's going on in the airspace around them is a key safety feature of Automatic Dependent Surveillance-Broadcast (ADS-B) equipment, which operators installed on their airplanes at increasing rates in 2016.

In the United States, operators face a January 1, 2020 mandate to equip with ADS-B, a linchpin of the FAA's NextGen air traffic modernization program that will allow aircraft to communicate their position using satellite-based technology. The FAA announced the 2020 deadline in 2010, requiring that all aircraft flying in certain controlled airspace equip. Approximately 28,810 U.S.-registered aircraft were equipped with rule-compliant ADS-B by the end of 2016.

As of early 2017, 4,074 operators had opted to take advantage of the rebate and install ADS-B equipment on their airplanes.

Operators in Australia, Europe, and several other regions face similar upcoming ADS-B equipage mandates.

ADS-B offers numerous advantages to pilots, including greater situational awareness, traffic information, and, in the United States, free in-cockpit weather. "By equipping their aircraft with ADS-B, operators will have access to enhanced surveillance—a critical safety feature," GAMA President and CEO Pete Bunce noted.

In September, the FAA began offering a $500 incentive to the first 20,000 single-engine piston airplane operators who equip over a one-year period. The objective of the incentive program is to have operators equip earlier to avoid the risk of constrained maintenance and manufacturer capacity in 2018 and 2019, immediately before the mandate enters into effect. As of early 2017, 4,074 operators had opted to take advantage of the rebate and install ADS-B equipment on their airplanes.

Aviation Security Standards Presented by Rulemaking Group

Taking steps to protect aircraft and systems from cybersecurity threats remained an important priority for regulators in the United States and Europe.

In November, the FAA published 30 recommendations made by the Aircraft Systems Information Security Protection (ASISP) working group to enhance cybersecurity for aircraft and systems. Recommendations covered eight different areas, including updating regulations, guidance, and associated standards for transport/large and small aircraft and their systems; updating the FAA's policy for how special conditions are issued for cybersecurity; and establishing guidance for certain functions, including field loadable software, portable electronic devices, and equipment used for communications, navigation, and surveillance. GAMA co-chaired the ASISP working group, which met over a 14-month period. More than a dozen member companies were involved with the technical work underlying the recommendations.

The FAA and the European Aviation Safety Agency are both working to implement a regulatory framework for aircraft cybersecurity based on the ASISP recommendations.

Efforts Seek to Make Certification Process More Efficient and Effective for New Products and Technologies

Regulators across the globe are seeking ways to facilitate general aviation manufacturers bringing new products and technologies to market. Two of the more notable efforts in 2016 included the publication of a new strategy by the four leading aviation regulators to recognize each other's certification approvals, and the implementation of a scorecard in the U.S. to determine how well the Organizational Designation Authorization (ODA) program is working.

Enhancing Global Acceptance of Certified Products

Aviation regulators in the four leading states of design—Brazil, Canada, Europe, and the United States—are partnering to better leverage scarce resources and improve the certification process for new general aviation products and technologies.

In September, the Certification Management Team (CMT)—which includes the Agência Nacional de Aviação Civil of Brazil (ANAC), European Aviation Safety Agency (EASA), Transport Canada Civil Aviation (TCCA), and the U.S. Federal Aviation Administration (FAA)—published a strategy to better manage the certification process among them. By utilizing their respective bilateral agreements, the four authorities will create a risk-based framework that encourages each authority to accept one another's certification of new products and technologies.

GAMA President and CEO Pete Bunce called the CMT agreement an "extremely important step forward to strengthen global leadership and streamline certification processes among authorities."

Additionally, the FAA and EASA published a joint Validation Improvement Roadmap to implement their part of the overall CMT agreement. This Roadmap includes specific milestones to ensure that the benefits and efficiencies negotiated as part of the European Union/United States Bilateral Aviation Safety Agreement are realized by manufacturers that export aviation products and technologies between Europe and the United States. Bunce said the FAA and EASA agreement "will better facilitate more safety-enhancing products and technologies reaching our global customer base."

Scorecard Aims to Improve ODA Program for Manufacturers

Separately, the FAA launched a nationwide program to support more efficient type certification programs by measuring the effectiveness of ODA programs for manufacturers.

After a successful test of a prototype in 2015, the FAA rolled out the ODA scorecard across the U.S. to monitor performance metrics for both manufacturer compliance activities and FAA utilization and delegation oversight. ODAs offer a way for companies to conduct FAA-approved technical compliance activities without the agency's direct involvement, allowing the FAA to spend its resources more wisely. However, in the past, some general aviation manufacturers have not been able to fully take advantage of their investment in ODA because of case-by-case decisions made by local FAA offices, resulting in significant costs and delays to their certification programs.

To help remedy this issue, the ODA scorecard seeks to facilitate discussions between local offices and manufacturers to improve the overall effectiveness and efficiency of certification programs. It measures how fully a company is able to use its ODA program and how well the company complies with the ODA. Based on the scorecard results, the company and the FAA will mutually develop an improvement plan with specific tasks and milestones to address specific performance issues.

The scorecard aims to ensure that issues specific to a particular program or person are dealt with at the local level, while also providing visibility to the Directorate Regional Office and FAA headquarters in the event that improvement plans and milestones are not met. In addition, it seeks to continuously improve communications so that future needs and goals are reached.

ANAC AGÊNCIA NACIONAL DE AVIAÇÃO CIVIL

EASA European Aviation Safety Agency

Federal Aviation Administration

Transport Canada Transports Canada

Historic Environmental Progress for Aviation

Global aviation reached two milestone agreements at the International Civil Aviation Organization (ICAO) in 2016: one to adopt carbon-neutral growth of emissions and a second to apply a carbon emission standard to most new aircraft.

The efforts mark concrete steps toward achieving three climate change aspirational goals the business aviation industry announced in 2009. These goals are: improving fuel efficiency 2 percent per year from 2010 to 2020; achieving carbon-neutral growth from 2020; and reducing CO_2 emissions 50 percent by 2050 relative to 2005.

GAMA Heralds Agreement to Offset Aviation Carbon Emissions

In October, ICAO adopted the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) at its 39th General Assembly in Montreal, Canada, providing countries with a three-phase framework to adopt carbon-neutral growth from 2021 onward. While the pilot and first implementation phases starting in 2021 and 2024, respectively, are voluntary, 66 states—representing over 86 percent of all international aviation activity—have committed to participate. Subsequently, all participating states must offset all carbon emissions from international aviation when the second phase begins in 2027.

The historic agreement, which marks the first scheme put into place for any industrial sector, "stands as a testament to the global aviation industry's commitment to do its part to mitigate its effect on the earth's climate," GAMA President and CEO Pete Bunce said. GAMA members "worked hard to achieve an agreement that will balance the industry's continued economic growth with the need to address international aviation CO_2 emissions."

While CORSIA will be administered and enforced by each state, least-developed states, small island states, and states whose international aviation activity falls below a minimum threshold are exempt from mandatory participation. In addition, operators that emit under 10,000 metric tons of CO_2 per year and small aircraft below 5,700 kg are also exempt, balancing the needs of small businesses and general aviation.

In September, GAMA published a brochure highlighting the industry's efforts to reduce its impact on the environment.

Milestone Reached on First CO_2 Standard for New Aircraft

Earlier in the year, ICAO finalized development of the first CO_2 emission standard for aircraft.

The result of six years of arduous technical work and negotiations among industry, governments, and other stakeholders, the CO_2 emissions standard applies to new business jet type designs as of 2023, and to all covered aircraft in production by 2028. The CO_2 reductions can be achieved through a range of potential technology developments, including structural, aerodynamic, or propulsion innovations.

The standards, which were announced in February and endorsed at ICAO's 39th General Assembly in October, are expected to be adopted by the ICAO Council in early 2017. This new standard marks the first time carbon emissions from aircraft have been regulated internationally, and will be implemented by national governments. Small business jet aircraft with a maximum take-off weight below 5,700 kg and propeller-driven aircraft below 8,618 kg are exempt.

"This landmark environmental measure reinforces the industry's strong record of bringing to market technology that improves aviation's efficiency, and is an important part of our industry's commitment to address climate change," Bunce noted.

FAA Selects Two Unleaded Avgas Candidate Fuels for Further Testing

In March, the U.S. Federal Aviation Administration (FAA) selected two unleaded aviation fuels, developed by Shell and Swift Fuels, for further testing as part of its effort to qualify and deploy an unleaded aviation gasoline to replace the 100 low-lead avgas currently used in the piston aircraft fleet. This is a key milestone of the Piston Aviation Fuels Initiative (PAFI), a government-industry program leading the unleaded avgas development. GAMA is a member of the PAFI Steering Group.

The full-scale engine and aircraft testing of the two fuels began during the summer at the FAA's William J. Hughes Technical Center in Atlantic City, New Jersey, and is being supported by engine and aircraft manufacturers and commercial operators. Testing is expected to wrap up in 2018, and the results will be used to address certification requirements and FAA issuance of a fleet-wide authorization for general aviation aircraft that can use the fuels, as well as support the development of an ASTM International Production Specification for commercialization.

The unleaded avgas testing process began in 2013. The FAA has winnowed 17 candidate unleaded fuels to two fuels through evaluations and a first phase of rigorous laboratory and rig testing.

GAMA President and CEO Pete Bunce said that identifying a viable unleaded avgas option for operators is "critical to the future of general aviation." He added, "A successful transition from leaded to unleaded avgas will mean the continued safety and utility of the fleet, a reduced environmental impact, and lower economic transition costs for our industry."

Table of Contents

The *2016 General Aviation Statistical Databook & 2017 Industry Outlook* contains aircraft shipment and billing information for 39 manufacturers of general aviation aircraft worldwide. The U.S. fleet data in this Databook provides an overview of how the 210,000 active general aviation aircraft currently registered in the United States are used: from personal and recreational flying to various types of business operations, flight instruction, and aeromedical.

Additional North American data is provided for more than 32,000 aircraft in Canada. The European data section contains aircraft registry data from 33 countries—over 142,000 individual registered aircraft. The Databook also includes information about other key general aviation markets: Australia, Brazil, China, New Zealand, and South Africa. In addition, it provides historical data about general aviation safety in both Europe and the U.S.

Aircraft Shipments and Billings

More than $24 billion in new general aviation aircraft were delivered in 2016. The year-end results were mixed across the market segments and among the manufacturers, and showed a decline from the $29 billion in general aviation aircraft deliveries in 2015. GA aircraft sales were strongest in North America, particularly in the United States, and in Europe. The market remained soft in several important markets in the Latin America and Asia-Pacific regions.

The number of business jet deliveries declined from 718 units in 2015 to 661 units in 2016. Business jet deliveries were strongest in the North American market at 62.0 percent, an increase in market share compared to 2015. North America comprised the largest market share for business jets in 2016 since GAMA started publishing data in 2007. Deliveries to Europe also increased in share from 18.0 to 18.8 percent, while the Asia-Pacific, Latin America, and the Middle East and African market shares contracted compared to the prior year.

Turboprop shipments maintained pace in 2016 at 582 units, a slight increase from 557 units from the same companies the prior year. The share of turboprop shipments in 2016 in North America increased slightly compared to the prior year, 57.8 percent compared to 56.2 percent. The second largest market share for turboprop airplane shipments in 2016 was the Asia-Pacific region at 13.2 percent. Shipments of turboprop airplanes to Europe regained their footing in 2016 after two unusually slow years, at 10.6 percent. Latin America accounted for 9.9 percent, a decline from 2015, while the combined Middle East and Africa region accounted for 8.4 percent.

The preliminary turbine (*) results for the rotorcraft industry point to a decline in shipments from 753 units in 2015 to 637 units in 2016, a 15.4 percent drop.

In 2016, piston airplane shipments fell to 1,019 units compared to 1,056 units the prior year. The decline in shipments was 4.9 percent for the same reporting companies. The North American market share, however, retained its position and increased to 69.6 percent, which is its largest share of total deliveries in the past decade. The second largest market for piston airplane shipments in 2016 was the Asia-Pacific region at 10.2 percent, closely followed by Europe at 10.1 percent. Latin America accounted for 5.8 percent of shipments, and the Middle East and Africa were 4.3 percent.

Piston rotorcraft shipments decreased in 2016 by 19.7 percent from 2015. There were 224 piston rotorcraft deliveries in 2016.

Turbine Aircraft Operators

The worldwide business aircraft fleet continued to grow in 2016. At the end of the year, JETNET, LLC, showed that the turbine fleet consisted of 36,674 airplanes and 21,225 rotorcraft. There were an additional 9,670 piston rotorcraft in operation, a slight decline from the prior year.

JETNET, LLC also tracks the number of operators. There were 21,968 business airplane operators and 14,171 rotorcraft operators at the end of 2016.

The fractional aircraft fleet grew for the second year in a row according to JETNET, LLC. In 2016, 882 aircraft were used in fractional operations, up from 837 aircraft in 2015. The number of fractional owners, however, declined from 4,369 owners at the end of 2015 to 4,145 owners at the end of 2016.

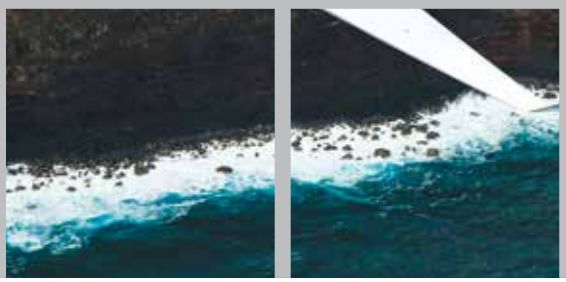
U.S. Pilot Population

The U.S. active pilot population continued its downward trajectory in 2016 and reached one of its lowest numbers in decades at 584,362 pilots at the end of 2015, based on preliminary data. There was, however, an uptick in the number of student pilot certificates held at the end of 2016 (128,501 compared to 122,749 the prior year). The number of active private pilots decreased by 4.9 percent to 162,313 pilots. The Databook also includes 20,362 Remote Pilots, a new certificate created by the FAA in 2016. Additional data about pilot population can be found in Chapter 6 of the Databook.

Additional data can be accessed online at www.GAMA.aero. If you have questions about GAMA's Databook, please contact GAMA staff at +1-202-393-1500 or via email at info@GAMA.aero.

(*) Leonardo Helicopters Q4 data was not available at the time of publication. Leonardo Helicopters will release year-end results in March 2017. GAMA will update the online 2016 report then. For the purpose of comparison in the market overview, GAMA excluded 2015 Q4 data for Leonardo in the above text.

(**) AVIC General was added to the shipment report in 2016. The 2016 piston and turboprop airplane data includes shipments from AVIC General.



1

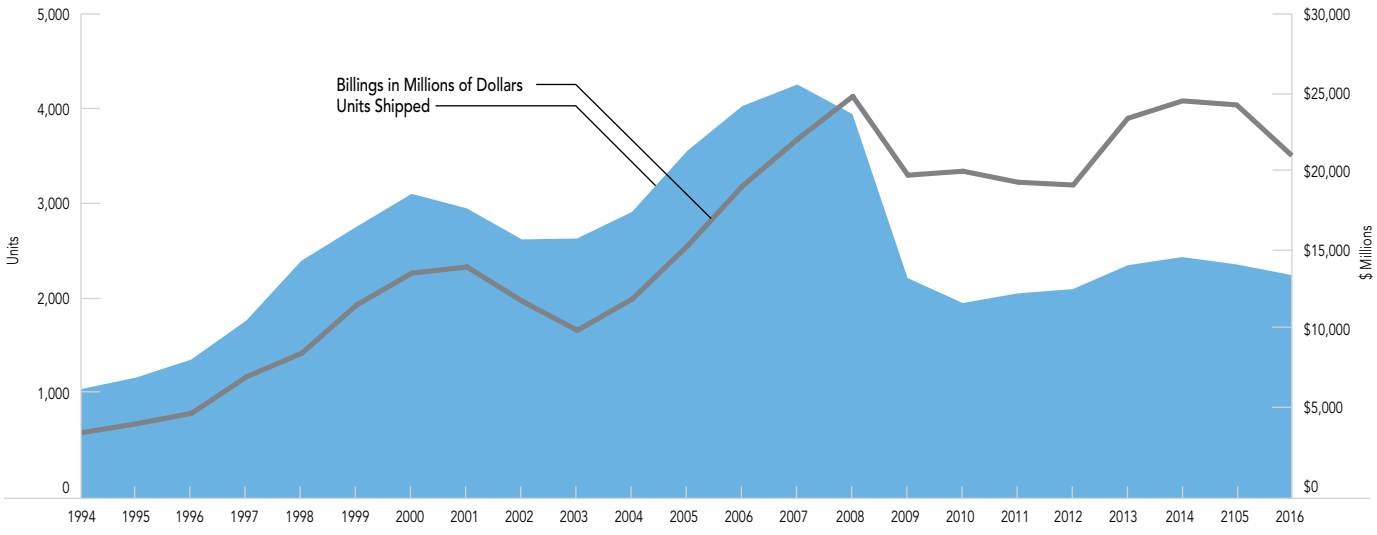
General Aviation Shipments and Billings

1.1 General Aviation Airplane Shipments by Type of Airplane Manufactured Worldwide (1994–2016)

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**
2015	**2,331**	946	110	**1,056**	557	718	**1,275**
2016	**2,262**	890	129	**1,019**	582	661	**1,243**

Source: GAMA

FIGURE 1.1 **General Aviation Airplane Shipments and Billings Worldwide (1994–2016)**



Source: GAMA

1.2 Estimated Billings (in Millions) for General Aviation Airplane Shipments by Type of Airplane Manufactured Worldwide (1994–2016)

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**
2015	**24,129**	n/a	n/a	**601**	1,651	21,877	**23,528**
2016	**20,719**	n/a	n/a	**661**	1,705	18,353	**20,058**

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

1.3 Customer Delivery Region (in Percent of Total) for General Aviation Airplane Shipments by Type of Airplane Manufactured Worldwide (2007–2016)

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
2015	66.7	11.4	13.5	6.3	2.2	56.2	6.6	16.3	14.5	6.3	60.8	18.0	9.2	7.1	4.9
2016	69.6	10.1	10.2	5.8	4.3	57.8	10.6	13.2	9.9	8.4	62.0	18.8	7.7	6.2	5.3

Source: GAMA

1.4a **Worldwide Business Jet Shipments by Manufacturer (2003–2016)**

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Airbus	**0**	**0**	**9**	**11**	**13**	**11**	**13**	**15**	**10**	**9**	**6**	**5**	**4**	**1**
Airbus Corporate Jet (all models)	0	0	9	10	12	9	11	-	-	-	-	-	-	-
ACJ318	-	-	-	-	-	-	-	2	2	2	1	0	1	0
ACJ319	-	-	-	-	-	-	-	8	6	6	4	1	1	0
ACJ320	-	-	-	-	-	-	-	3	1	0	0	4	1	0
ACJ321	-	-	-	-	-	-	-	-	-	-	1	0	0	0
ACJ330	-	-	-	-	1	1	1	1	1	1	0	0	1	1
ACJ340	-	-	-	1	0	1	1	1	0	0	0	0	0	0
Avcraft (prev. Fairchild)	**9**	**9**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Envoy 3	9	9	1	-	-	-	-	-	-	-	-	-	-	-
Boeing Business Jets	**7**	**3**	**4**	**13**	**7**	**6**	**6**	**12**	**8**	**12**	**7**	**10**	**11**	**4**
Boeing Business Jet	4	2	3	12	7	3	3	4	8	2	5	3	4	1
Boeing Business Jet 2	3	1	1	1	0	1	0	2	0	2	1	2	1	0
Boeing Business Jet 3	-	-	-	-	-	2	1	4	0	0	0	0	1	0
Boeing 737-800	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Boeing Business Jet 747	-	-	-	-	-	-	-	-	-	8	0	0	0	0
Boeing Business Jet 767	-	-	-	-	-	-	1	0	0	0	0	0	0	0
Boeing Business Jet 777	-	-	-	-	-	-	1	2	0	0	0	1	1	1
Boeing Business Jet 787	-	-	-	-	-	-	-	-	-	-	1	4	4	0
Bombardier Business Aircraft	**70**	**130**	**188**	**213**	**224**	**247**	**173**	**150**	**182**	**179**	**180**	**204**	**199**	**163**
Learjet 31A	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Learjet 40/XR	-	17	21	26	57	48	33	16	24	24	1	-	-	-
Learjet 45/XR	17	22	28	30										
Learjet 60/XR	12	9	18	15	23	26	13	12	19	15	10	1	0	-
Learjet 70/75	-	-	-	-	-	-	-	-	-	-	18	33	32	24
Challenger 300/350	1	28	50	55	51	60	33	29	37	48	55	54	68	62
Challenger 604/605	24	29	36	29	35	44	36	38	43	34	32	36	25	26
Global 5000	-	4	17	18	46	52	51	49	53	54	62	80	73	51
Global 6000/Express	14	20	13	22										
CL 850/870/890	-	1	5	18	12	17	7	6	6	4	2	0	1	0
Cirrus Aircraft	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**
SF50	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Dassault Falcon Jet	**49**	**63**	**51**	**61**	**70**	**72**	**77**	**95**	**63**	**66**	**77**	**66**	**55**	**49**
Falcon 50EX	8	5	5	5	2	1	-	-	-	-	-	-	-	-
Falcon 900C	3	3	1	-	-	-	-	-	-	-	-	-	-	-
Falcon 900EX	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	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	-	-
Falcon 2000S/2000LXS/900LX/7X/8X	-	-	-	-	-	-	-	-	-	-	-	-	55	49
Embraer	**13**	**13**	**20**	**27**	**36**	**38**	**122**	**145**	**99**	**99**	**119**	**116**	**120**	**117**
Phenom 100/E	-	-	-	-	-	2	97	100	41	29	30	19	12	10
Phenom 300	-	-	-	-	-	-	1	26	42	48	60	73	70	63
Legacy 450	-	-	-	-	-	-	-	-	-	-	-	-	3	12
Legacy 500	-	-	-	-	-	-	-	-	-	-	-	3	20	21
Legacy 600/650	13	13	20	27	36	36	18	11	13	17	21	18	12	9
Lineage 1000/E190 Head of State	-	-	-	-	-	-	5	5	3	2	4	3	3	2
Shuttles (ERJs and E-Jets)	-	-	-	-	-	-	1	3	0	3	4	0	0	0
Emivest (prev. Sino Swearingen)	**0**	**0**	**0**	**1**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
SJ30-2	-	-	-	1	1	0	2	0	0	0	0	0	0	0
Gulfstream Aerospace Corporation	**74**	**78**	**89**	**113**	**138**	**156**	**94**	**99**	**99**	**94**	**144**	**150**	**154**	**115**
G100/150 (prev. IAI Astra) G200 (prev. IAI Galaxy)	24	22	26	42	59	68	19	24	21	11	23	33	34	27
G300/350/400/450 (prev. GIV/GIVSP) G500/G550 (prev. GV/GVSP), G650	50	56	63	71	79	88	75	75	78	83	121	117	120	88
Honda Aircraft Company	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**23**
HA-420 HondaJet	-	-	-	-	-	-	-	-	-	-	-	-	2	23
ONE Aviation Corp. (prev. Eclipse Aero)	**0**	**0**	**0**	**1**	**98**	**161**	**0**	**0**	**0**	**0**	**0**	**12**	**7**	**8**
Eclipse 500	-	-	-	1	98	161	-	-	-	-	-	-	-	-
Eclipse 550	-	-	-	-	-	-	-	-	-	-	-	12	7	8
Textron Aviation (Beechcraft)	**100**	**115**	**141**	**140**	**162**	**160**	**98**	**73**	**52**	**32**	**6**	**0**	**0**	**0**
Premier I/A	29	37	30	23	54	31	16	11	11	3	-	-	-	-
Hawker 400XP	24	28	53	53	41	35	11	12	1	-	-	-	-	-
Hawker 750	-	-	-	-	-	23	13	5	7	-	-	-	-	-
Hawker 800XP	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	-	-	-

CONTINUED ON NEXT PAGE

1.4a **Worldwide Business Jet Shipments by Manufacturer (2003–2016)** *Continued*

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Textron Aviation (Cessna Aircraft)	**196**	**181**	**247**	**307**	**388**	**466**	**289**	**178**	**183**	**181**	**139**	**159**	**166**	**178**
CE-510 Citation Mustang	-	-	-	1	45	101	125	73	43	38	20	8	8	10
CE-525 Citation CJ1	22	20	14	-	-	-	-	-	-	-	-	-	-	-
CE-525 Citation CJ1+	-	-	4	25	34	20	14	3	2	-	-	-	-	-
CE-525 Citation M2	-	-	-	-	-	-	-	-	-	-	12	46	41	38
CE-525A Citation CJ2	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	23	25
CE-525C Citation CJ4	-	-	-	-	-	-	-	19	48	44	33	28	33	29
CE-550 Citation Bravo	31	25	21	18	-	-	-	-	-	-	-	-	-	-
CE-560 Citation Encore	21	24	13	12	-	-	-	-	-	-	-	-	-	-
CE-560 Citation Encore+	-	-	-	-	23	28	5	5	4	-	-	-	-	-
CE-560 Citation Excel	48	23	-	-	-	-	-	-	-	-	-	-	-	-
CE-560 Citation XLS	-	32	64	73	82	72	7	-	-	-	-	-	-	-
CE-560 Citation XLS+	-	-	-	-	-	8	37	22	27	31	31	22	21	19
CE-680 Citation Sovereign	-	9	46	57	65	77	33	16	19	22	5	-	-	-
CE-680 Citation Sovereign+	-	-	-	-	-	-	-	-	-	-	8	28	18	11
CE-680A Citation Latitude	-	-	-	-	-	-	-	-	-	-	-	-	16	42
CE-750 Citation X	18	15	14	12	17	16	7	3	3	6	-	-	-	-
CE-750 Citation X+	-	-	-	-	-	-	-	-	-	-	-	9	6	4
Total Number of Airplanes	**518**	**592**	**750**	**887**	**1,137**	**1,317**	**874**	**767**	**696**	**672**	**678**	**722**	**718**	**661**
% Change	-23.4%	14.3%	26.7%	18.3%	28.2%	15.8%	-33.6%	-12.2%	-9.3%	-3.4%	0.9%	6.5%	-0.6%	-7.9%
Total Billings for Airplanes ($M)	**8,616**	**10,404**	**13,161**	**16,555**	**19,347**	**21,948**	**17,443**	**18,000**	**17,235**	**17,108**	**21,058**	**22,015**	**21,877**	**18,353**
% Change	-17.4%	20.7%	26.5%	25.8%	16.9%	13.4%	-20.5%	3.2%	-4.2%	-0.7%	23.1%	4.5%	-0.6%	-16.1%

Source: GAMA

1.4b **Worldwide Turboprop Airplane Shipments by Manufacturer (2003–2016)**

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Air Tractor	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**130**	**168**	**174**	**145**	**113**	**112**
AT-402A	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	1	0	0	0	4
AT-402B	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9	21	33	20	11	10
AT-502A	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3	1	2	1	0	8
AT-502B	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	57	81	70	61	36	22
AT-504	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4	6	2	3	3	1
AT-602	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	10	10	18	14	14	16
AT-802	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	26	18	9	10	8	5
AT-802A	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	21	30	40	36	29	40
AT-802AF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	10	3
AT-802F	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	3
AVIC General	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**
Y12 Series	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	6
Daher	**34**	**31**	**31**	**42**	**46**	**60**	**36**	**38**	**38**	**38**	**40**	**51**	**55**	**54**
TBM 700	34	31	31	-	-	-	-	-	-	-	-	-	-	-
TBM 850	-	-	-	42	46	60	36	38	38	38	40	-	-	-
TBM 900	-	-	-	-	-	-	-	-	-	-	-	51	55	8
TBM 930	-	-	-	-	-	-	-	-	-	-	-	-	-	46
Extra Aircraft	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**1**	**2**	**0**	**0**
EA500	-	-	-	-	-	-	-	-	-	2	1	2	-	-
Maule Air Incorporated	**1**	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
M-7-420AC	0	0	0	0	0	1	0	0	0	0	0	0	0	0
MT-7-420	1	2	0	0	0	0	0	0	0	0	0	0	0	0
Pacific Aerospace Corporation	**2**	**8**	**10**	**5**	**10**	**15**	**12**	**11**	**10**	**10**	**6**	**4**	**5**	**8**
PAC 750XL	2	8	10	5	10	15	12	11	10	10	6	4	5	8
Piaggio Aerospace	**12**	**16**	**14**	**19**	**21**	**30**	**24**	**11**	**14**	**5**	**2**	**2**	**3**	**3**
P.180 Avanti	12	16	13	-	-	-	-	-	-	-	-	-	-	-
P.180 Avanti II	-	-	1	19	21	30	24	11	14	5	2	2	-	-
P.180 Avanti Evo	-	-	-	-	-	-	-	-	-	-	-	-	3	3
Pilatus	**61**	**70**	**80**	**90**	**98**	**100**	**105**	**84**	**69**	**67**	**69**	**76**	**74**	**100**
PC-6 Porter	n/a	n/a	n/a	n/a	6	3	5	5	6	5	4	10	4	9
PC-12	61	70	80	90	92	97	100	79	63	62	65	66	70	91
Piper Aircraft, Inc.	**24**	**26**	**40**	**49**	**53**	**52**	**29**	**25**	**32**	**32**	**34**	**36**	**27**	**34**
PA-46-500 TP Meridian/M500	24	26	40	49	53	52	29	25	32	32	34	36	27	12
PA-46-600 TP M600	-	-	-	-	-	-	-	-	-	-	-	-	-	22
Quest Aircraft Company	**0**	**0**	**0**	**0**	**1**	**7**	**24**	**14**	**13**	**15**	**28**	**30**	**32**	**36**
Kodiak 100	-	-	-	-	1	7	24	14	13	15	28	30	32	36
Textron Aviation (Beechcraft)	**81**	**102**	**114**	**140**	**157**	**172**	**119**	**90**	**92**	**89**	**135**	**127**	**117**	**106**
King Air C90	18	27	35	52	46	66	44	28	29	27	27	21	15	11
King Air B200 / B250	38	39	37	42	58	54	37	24	25	22	36	35	28	32
King Air 350	24	36	42	46	53	52	38	38	38	40	72	71	74	63
1900D	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Textron Aviation (Cessna Aircraft)	**57**	**64**	**86**	**67**	**79**	**101**	**97**	**95**	**93**	**107**	**105**	**94**	**102**	**84**
CE-208 Caravan 675	8	13	11	8	11	12	12	8	10	11	11	13	9	13
CE-208B Grand Caravan	49	51	75	59	68	89	85	87	83	96	94	81	93	71

CONTINUED ON NEXT PAGE

1.4b **Worldwide Turboprop Airplane Shipments by Manufacturer (2003–2016)** *Continued*

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Thrush Aircraft, Inc.	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**35**	**51**	**51**	**36**	**29**	**39**
S2R-T34	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	30	39	20	10	8	10
S2RHG-T65	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1	0	1	0	0	2
S2R-T660	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1	0	1	1	7	17
S2R-G10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3	3	2	1	0	0
S2R-H80	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	9	27	24	14	10
Total Number of Airplanes	**272**	**319**	**375**	**412**	**465**	**538**	**446**	**368**	**526**	**584**	**645**	**603**	**557**	**582**
% Change	-2.9%	17.3%	17.6%	9.9%	12.9%	15.7%	-17.1%	-17.5%	n/a	11.0%	10.4%	-6.5%	-7.6%	3.4%
Total Billings for Airplanes ($M)	**837**	**997**	**1,189**	**1,389**	**1,593**	**1,953**	**1,589**	**1,300**	**1,365**	**1,359**	**1,821**	**1,849**	**1,651**	**1,705**
% Change	-3.5%	19.1%	19.3%	16.9%	14.6%	22.7%	-18.7%	-18.2%	n/a	-0.4%	33.9%	1.5%	-10.7%	3.3%

Source: GAMA

1.4c **Worldwide Piston-Engine Airplane Shipments by Manufacturer (2003–2016)**

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Adam Aircraft	**0**	**0**	**2**	**4**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
A500	-	-	2	4	3	-	-	-	-	-	-	-	-	-
Air Tractor	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**1**	**0**
AT-401B	-	-	-	-	-	-	-	-	-	1	0	1	1	0
Alpha Aviation	**0**	**0**	**0**	**5**	**13**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
120T	-	-	-	-	2	-	-	-	-	-	-	-	-	-
160A	-	-	-	5	9	1	-	-	-	-	-	-	-	-
160Ai	-	-	-	-	2	0	-	-	-	-	-	-	-	-
American Champion	**63**	**94**	**89**	**60**	**70**	**54**	**26**	**37**	**29**	**18**	**26**	**30**	**19**	**19**
7EC Champ	-	-	-	1	21	7	1	0	3	0	3	1	1	2
7ECA Aurora	2	2	3	2	4	3	2	2	1	0	0	2	1	0
7GCAA Adventurer	9	12	12	6	6	2	1	2	0	0	0	0	0	0
7GCBC Citabria Explorer	12	24	26	16	8	8	4	4	6	3	1	3	0	1
8GCBC Scout	8	18	9	14	8	10	8	15	13	7	6	7	6	10
8KCAB Super Decathlon	32	38	39	21	23	24	10	14	6	8	10	14	6	6
8KCAB Xtreme Decathlon	-	-	-	-	-	-	-	-	-	-	6	3	5	0
Aviat Aircraft	**47**	**42**	**47**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
A-1B Husky	37	30	41	n/a	n/a	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	n/a	n/a
S-2C Pitts	7	9	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
AVIC General	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**26**
YB5	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	4
LE500	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	11
A2C	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	11
Columbia Aircraft (prev. Lancair)	**51**	**78**	**114**	**185**	**152**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Columbia 300	19	-	-	-	-	-	-	-	-	-	-	-	-	-
Columbia 350	32	28	25	39	34	-	-	-	-	-	-	-	-	-
Columbia 400	-	50	89	146	118	-	-	-	-	-	-	-	-	-
Cirrus Aircraft	**469**	**553**	**600**	**721**	**710**	**549**	**266**	**264**	**255**	**253**	**276**	**308**	**301**	**317**
Cirrus SR20	112	91	116	150	112	115	28	42	48	84	32	31	31	35
Cirrus SR22	355	459	475	565	588	427	238	165	105	81	112	117	128	133
Cirrus SR22T	-	-	-	-	-	-	-	57	102	88	132	160	142	149
Cirrus SRV	2	3	9	6	10	7	-	-	-	-	-	-	-	-
CubCrafters	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**47**	**58**	**63**	**60**	**52**	**26**
CC11-100 Sport Cub S2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	0	2	0	0	0
CC11-160 Carbon Cub SS	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	38	57	52	53	47	24
CC18-180 Top Cub	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7	1	9	7	5	2
CC19-180 XCub	-	-	-	-	-	-	-	-	-	-	-	-	-	8
Daher	**40**	**5**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TB-9 Tampico	2	0	1	-	-	-	-	-	-	-	-	-	-	-
TB-10	7	3	4	-	-	-	-	-	-	-	-	-	-	-
TB-20	19	0	1	-	-	-	-	-	-	-	-	-	-	-
TB-21	9	2	3	-	-	-	-	-	-	-	-	-	-	-
TB-200	3	0	0	-	-	-	-	-	-	-	-	-	-	-
Diamond Aircraft	**228**	**261**	**329**	**438**	**471**	**308**	**163**	**130**	**185**	**156**	**139**	**202**	**144**	**132**
HK-36	-	-	-	-	-	-	13	10	3	3	1	0	1	0
DA-20	75	58	54	55	58	69	14	31	40	32	14	16	22	20
DA-40	153	203	207	220	232	154	98	57	72	93	102	136	75	48
DA-42	-	-	68	163	181	85	38	32	70	28	22	50	44	34
DA-62	-	-	-	-	-	-	-	-	-	-	-	-	2	30
Discovery Aviation (prev. Liberty)	**0**	**0**	**2**	**29**	**38**	**33**	**13**	**14**	**3**	**0**	**0**	**0**	**0**	**0**
XL2	-	-	2	29	38	33	13	14	3	0	0	0	0	0
Extra Aircraft	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**27**	**29**	**31**	**27**	**27**
EA300	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	27	29	31	27	27
Flight Design GmbH	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**89**	**76**	**89**	**88**	**59**	**23**
ASTM CT Series	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	89	76	89	88	59	23
Mahindra Aerospace (prev. GippsAero)	**19**	**20**	**22**	**20**	**17**	**19**	**11**	**14**	**10**	**14**	**12**	**17**	**14**	**9**
Airvan 8	19	20	22	20	17	19	11	14	10	14	12	17	14	9

CONTINUED ON NEXT PAGE

1.4c **Worldwide Piston-Engine Airplane Shipments by Manufacturer (2003–2016)** *Continued*

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Maule Air Incorporated	**31**	**25**	**27**	**38**	**36**	**27**	**7**	**4**	**4**	**9**	**6**	**2**	**13**	**3**
M-4-180A, V	-	-	1	7	5	-	-	-	-	-	-	1	-	-
M-7-235, A, B, C	12	8	11	8	6	7	1	3	-	1	-	1	-	1
M-7-260, C	4	3	4	2	4	4	4	-	1	3	4	-	-	1
MT-7-235	7	1	2	9	2	6	2	-	-	1	-	-	-	-
MT-7-260	-	-	2	4	-	-	-	-	-	-	-	-	-	-
MX-7-180, A, B, C, AC	6	5	3	4	6	4	-	1	1	1	1	-	12	1
MXT-7-160	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MXT-7-180, A, AC	2	8	4	4	12	6	-	-	2	3	-	-	-	-
M-8-235	-	-	-	-	1	-	-	-	-	-	-	-	-	-
M-9-235	-	-	-	-	-	-	-	-	-	-	1	-	1	-
Mooney International Corporation	**36**	**37**	**85**	**75**	**79**	**65**	**19**	**2**	**0**	**0**	**0**	**1**	**11**	**7**
M20M Bravo	5	9	20	5	1	-	-	-	-	-	-	-	-	-
M20R Ovation	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M20R Ovation 2	30	28	65	63	20	21	4	0	0	0	0	0	3	1
M20S Eagle 2	1	-	-	-	-	-	-	-	-	-	-	-	8	-
M20TN Acclaim	-	-	-	7	58	44	15	2	0	0	0	1	0	6
Pacific Aerospace Corporation	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
CT/4E Airtrainer	-	6	-	-	-	-	-	-	-	-	-	-	-	-
Piper Aircraft, Inc.	**205**	**163**	**193**	**189**	**168**	**216**	**61**	**135**	**104**	**126**	**154**	**136**	**111**	**93**
PA-28-161 Warrior III	31	18	37	19	27	23	8	23	15	20	2	3	20	5
PA-28-181 Archer III	49	19	16	29	16	7	1	21	2	4	48	45	25	42
PA-28R-201 Arrow IV	16	12	9	5	8	1	0	4	0	2	1	8	5	7
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	9	9	8	10	-	-	-	-	-	-	-	-	-	-
PA-32-301T Saratoga II TC	28	31	37	37	39	12	-	-	-	-	-	-	-	-
PA-34-220T Seneca V	28	10	12	26	22	27	7	22	21	17	22	10	8	3
PA-44-180 Seminole	16	11	29	11	14	24	5	16	16	22	23	22	17	10
PA-46-350P Malibu Mirage/M350	7	15	11	31	30	21	7	26	33	49	42	37	34	26
PA-46R-350T Matrix	-	-	-	-	-	101	33	23	17	12	16	11	2	0
Quartz Mountain Aerospace	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
QMA 11E	-	-	-	-	-	11	-	-	-	-	-	-	-	-
Symphony Aircraft (prev. OMF)	**19**	**1**	**10**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Symphony 160	19	1	10	5	-	-	-	-	-	-	-	-	-	-
TECNAM Aircraft	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**197**	**190**	**191**	**191**
ASTM - LSA	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	108	108	102	73
P2002JF	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	33	18	20	33
P92JS	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	15	7	4	7
P2002JR	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	0	0	0
P2008JC	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	19	36	24	24
P2006T	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	20	21	21	32
P2010P Twenty Ten	-	-	-	-	-	-	-	-	-	-	-	-	20	22
Textron Aviation (Beechcraft)	**82**	**93**	**99**	**118**	**111**	**103**	**56**	**51**	**54**	**36**	**70**	**72**	**41**	**45**
Beechcraft Bonanza A/G36	55	62	71	80	73	63	36	22	24	12	35	32	23	25
Beechcraft Bonanza B36TC	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beechcraft Baron B/G58	27	31	28	38	38	40	20	29	30	24	35	40	18	20
Textron Aviation (Cessna Aircraft)	**588**	**654**	**822**	**865**	**807**	**733**	**355**	**261**	**413**	**283**	**206**	**220**	**271**	**217**
CE-162 SkyCatcher	-	-	-	-	-	-	1	22	168	19	-	-	-	-
CE-172R Skyhawk	58	32	37	87	133	55	16	8	26	27	0	0	-	-
CE-172S Skyhawk	291	204	314	322	240	228	110	77	77	113	106	155	143	100
CE-182T Skylane	118	196	241	140	161	109	58	64	40	48	13	0	33	50
CE-T182T Turbo Skylane	47	133	118	187	140	105	75	36	37	19	26	0	-	-
CE-206H Stationair	16	22	29	25	20	17	3	4	11	16	3	0	-	-
CE-T206H Turbo Stationair	58	67	83	104	111	95	46	42	53	40	37	43	51	36
CE-350 Corvalis	-	-	-	-	1	14	5	1	0	1	0	0	-	-
CE-240 TTx (prev. CE-400 Corvalis TTx)	-	-	-	-	1	110	41	7	1	0	21	22	44	31
Tiger Aircraft	**18**	**19**	**15**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
AG-5B Tiger	18	19	15	3	-	-	-	-	-	-	-	-	-	-
WACO Classic Aircraft	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**5**	**6**	**7**	**11**	**10**	**7**
2T-1A-2	-	-	-	-	-	-	-	-	-	-	1	6	6	3
YMF-5D	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5	6	6	5	4	4
XtremeAir GmbH	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**9**	**9**	**8**	**9**	**0**	**0**
XA41	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4	2	2	0	n/a	n/a
XA42	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5	7	6	9	n/a	n/a
Total Number of Airplanes	**1,896**	**2,051**	**2,465**	**2,755**	**2,675**	**2,119**	**977**	**912**	**1,207**	**1,072**	**1,282**	**1,378**	**1,265**	**1,142**
% Change	10.2%	8.2%	20.2%	11.8%	-2.9%	-20.8%	-53.9%	-6.7%	n/a	-11.2%	n/a	7.5%	-8.2%	-9.7%
Total Billings for Airplanes ($M)	**545**	**692**	**805**	**857**	**897**	**945**	**442**	**415**	**441**	**428**	**571**	**635**	**601**	**661**
% Change	12.9%	27.0%	16.3%	6.5%	4.7%	5.3%	-53.1%	-7.7%	n/a	-3.0%	n/a	11.1%	-5.3%	10.0%

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 (2003–2016) Civil-Commercial and Military-Government Combined

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Airbus Helicopters	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**507**	**440**	**451**	**418**	**360**	**380**
HC120 (prev. EC120)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	10	11	12	7	2	5
AS350 B2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	59	36	32	23	9	7
H125/H125M (prev. EC125/AS350 B3e/AS550 C3e)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	150	130	187	134	95	104
H130 (prev. EC130)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	42	43	35	58	69	54
AS355 NP/AS555 AP	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	7	8	5	3	3	7
H135/H135M (prev. EC135/EC635)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	74	67	48	42	35	40
H145/H145M (prev. EC145/EC645/UH-72A)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	89	82	69	73	68	107
AS365 N3/AS565 Mbe	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	14	11	8	4	7	11
H155 (prev. EC155)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12	7	10	10	10	3
H175 (prev. EC175)	-	-	-	-	-	-	-	-	-	-	-	3	4	4
H215/H215M (prev. AS332/AS532)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	4	3	4	6	7	10
H225/H225M (prev. EC225/EC725)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	26	32	30	43	35	9
TIGER	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	20	10	11	12	16	19
Bell Helicopter	**105**	**111**	**123**	**159**	**181**	**n/a**	**n/a**	**132**	**125**	**188**	**213**	**178**	**223**	**171**
206B	10	7	16	20	28	-	-	5	-	-	-	-	-	-
206L/LT	6	18	22	21	24	-	-	15	14	9	11	13	12	10
407/GX/GXP	46	40	41	67	73	-	-	62	55	85	110	86	99	57
412/EP/EPI	29	33	29	35	39	-	-	28	20	39	36	26	12	10
427	7	9	5	7	10	-	-	1	4	4	-	-	-	-
429/WLG	-	-	-	-	-	-	-	20	28	43	56	53	52	28
430	7	4	10	9	7	-	-	-	-	-	-	-	-	-
Huey II	-	-	-	-	-	-	-	1	4	8	-	-	-	9
H-1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	28	21	25	24	24	35
V22	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	35	38	41	37	24	22
Brantly	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
B-2B	1	0	2	0	0	0	0	0	0	0	0	0	0	0
Enstrom Helicopter Corp.	**17**	**23**	**29**	**23**	**19**	**10**	**6**	**4**	**n/a**	**16**	**27**	**26**	**20**	**12**
F-28/280	7	5	15	10	6	1	1	1	n/a	2	4	2	5	3
480	10	18	14	13	13	9	5	3	n/a	14	23	24	15	9
Hélicoptères Guimbal	**0**	**0**	**0**	**0**	**0**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**27**	**44**	**50**
Cabri G2	-	-	-	-	-	n/a	n/a	n/a	n/a	n/a	n/a	27	44	50
Leonardo Helicopters (prev. AgustaWestland)	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**214**	**180**	**160**	**n/a**
AW119Ke	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	22	17	16	n/a
AW109Power	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	9	7	8	n/a
GRANDNEW	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	35	14	14	n/a
AW139	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	118	101	72	n/a
AW169	-	-	-	-	-	-	-	-	-	-	-	-	1	n/a
AW189	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	10	16	n/a
AW159	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	15	11	13	n/a
SUPER LYNX	-	-	-	-	-	-	-	-	-	-	-	-	4	n/a
T129	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	5	4	n/a
AW101	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5	5	5	n/a
CH47F	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	5	3	n/a
SW4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0	0	0	n/a
W3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	10	5	4	n/a
MD Helicopters	**16**	**10**	**3**	**13**	**18**	**52**	**40**	**12**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
500	3	1	0	n/a	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
520N	1	0	2	n/a	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
530	3	1	0	n/a	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
600	1	4	1	n/a	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
900	8	4	0	n/a	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NH Industries	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**33**	**35**	**43**	**53**	**35**	**38**
NH90	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	33	35	43	53	35	38
Robinson Helicopter Company	**422**	**690**	**806**	**749**	**823**	**893**	**433**	**162**	**356**	**517**	**523**	**329**	**347**	**234**
R22	128	234	243	97	159	164	25	40	56	40	42	42	34	19
R44 Raven I / II	294	456	563	652	664	729	408	112	212	286	289	186	196	152
R66	-	-	-	-	-	-	-	10	88	191	192	101	117	63
Schweitzer	**38**	**48**	**58**	**61**	**70**	**51**	**27**	**29**	**n/a**	**n/a**	**0**	**0**	**0**	**0**
300C	20	13	12	12	11	16	10	14	n/a	n/a	-	-	-	-
300CB/300CBi	15	27	40	44	51	27	13	6	n/a	n/a	-	-	-	-
330/333	3	8	6	5	8	8	4	9	n/a	n/a	-	-	-	-
Sikorsky	**23**	**34**	**49**	**52**	**79**	**78**	**58**	**42**	**249**	**227**	**231**	**231**	**178**	**181**
S-70	0	1	0	0	0	0	0	0	0	0	0	0	0	0
S-76	23	29	30	36	50	53	34	21	16	5	26	17	13	5
S-92	0	4	19	16	29	25	24	21	20	30	37	42	16	7
Blackhawk	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	125	123	106	133
Seahawk	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	43	49	43	36
Military (Model Detail Not Available)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	213	192	-	-	-	-
Total Number of Rotorcraft	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**1,768**	**1,501**	**1,367**	**n/a**
% Change	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-15.1%	-8.9%	n/a

Leonardo Helicopters Q4 data was not available at time of publication. Q4 data will be published in March by Leonardo. GAMA will update the online 2016 shipment report then at www.GAMA.aero.

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

1.5 **U.S.-Manufactured General Aviation Airplane Shipments by Type (1947–2016)**

Year	Grand Total	Single-Engine Piston	Multi-Engine Piston	Total Piston	Turboprop	Business Jet	Total Turbine	Companies Reporting	Factory Net Billings ($ Millions)
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
2015	**1,592**	740	43	**783**	420	389	**809**	17	$11,982
2016	**1,525**	685	33	**718**	411	396	**807**	18	$10,577

Source: GAMA

1.6 U.S.-Manufactured General Aviation Airplane Billings (in Millions of Dollars) by Type (2000–2016)

Year	Grand Total	Single-Engine Piston	Multi-Engine Piston	Total Piston	Turboprop	Business Jet	Total Turbine
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**
2015	**11,982**	n/a	n/a	**477**	1,282	10,224	**11,506**
2016	**10,577**	n/a	n/a	**511**	1,180	8,886	**10,067**

Source: GAMA

1.7 U.S.-Manufactured General Aviation Airplane Exports by Type and Billings (2000–2016)

Year	Single-Engine Piston	Multi-Engine Piston	Turboprop	Business Jet	Total Airplanes Exported		Billings Exported	
					Units	% of Shipments	(in $ Millions)	% of Total Billings
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%
2015	170	23	203	128	524	32.9%	$5,431.2	45.3%
2016	161	12	156	124	453	29.7%	$4,451.3	42.1%

Source: GAMA

1.8 European-Manufactured General Aviation Airplane Shipments by Type (2008–2016)

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
2015	**612**	354	67	**421**	132	59	**191**	9	$3,736.2
2016	**580**	277	96	**373**	157	50	**207**	9	$3,008.6

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

2





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

2.1 Canada—Registered Aircraft by Type and Weight Group (1983–2016)

Year	Number of Registered Aircraft by Type									By Weight Group		Total Aircraft
	Aeroplanes	Ultralights	Amateur-Builts	Helicopters	Gliders	Balloons	Gyroplanes	Airships	Ornithopters	≤ 12,500 lbs	12,500 > lbs	
1983	22,354	1,282	n/a	1,410	560	177	116	n/a	n/a	n/a	n/a	**25,899**
1984	22,330	1,971	n/a	1,326	572	197	118	n/a	n/a	n/a	n/a	**26,514**
1985	22,231	2,376	n/a	1,276	582	219	117	n/a	n/a	n/a	n/a	**26,801**
1986	22,105	2,706	n/a	1,264	589	247	116	n/a	n/a	n/a	n/a	**27,027**
1987	22,270	2,946	n/a	1,299	602	279	121	n/a	n/a	n/a	n/a	**27,517**
1988	22,469	3,105	n/a	1,338	613	308	122	n/a	n/a	n/a	n/a	**27,955**
1989	22,463	3,212	n/a	1,366	614	339	127	n/a	n/a	n/a	n/a	**28,121**
1990	22,278	3,363	n/a	1,416	609	361	128	n/a	n/a	27,173	982	**28,155**
1991	21,973	3,477	n/a	1,433	601	384	135	n/a	n/a	23,553	981	**28,003**
1992	21,795	3,607	n/a	1,502	602	405	155	n/a	n/a	27,070	996	**28,066**
1993	21,452	3,744	n/a	1,533	597	424	162	n/a	n/a	26,977	935	**27,912**
1994	21,212	3,840	n/a	1,582	601	444	169	n/a	n/a	26,885	963	**27,848**
1995	21,169	3,956	n/a	1,605	601	440	166	n/a	n/a	26,914	1,023	**27,937**
1996	21,089	4,070	n/a	1,643	592	440	168	n/a	n/a	26,919	1,084	**28,002**
1997	20,985	4,208	n/a	1,655	587	450	169	n/a	n/a	26,862	1,192	**28,054**
1998	20,830	4,305	2,457	1,676	592	440	174	n/a	n/a	26,809	1,208	**28,017**
1999	20,768	4,346	2,540	1,711	596	442	181	2	1	26,783	1,264	**28,047**
2000	25,256	4,467	2,621	1,753	600	444	186	2	1	26,922	1,320	**28,242**
2001	25,435	4,584	2,709	1,798	613	453	190	3	1	27,171	1,322	**28,493**
2002	25,650	4,746	2,778	1,831	617	453	189	3	1	27,374	1,370	**28,744**
2003	25,902	4,922	2,895	1,894	674	450	188	3	1	27,752	1,360	**29,112**
2004	26,335	5,123	2,996	1,940	686	459	189	4	1	28,166	1,448	**29,614**
2005	26,870	5,339	3,124	2,019	683	475	192	4	1	28,745	1,499	**30,244**
2006	27,512	5,568	3,255	2,145	687	478	191	4	1	29,422	1,596	**31,018**
2007	28,195	5,745	3,380	2,317	695	481	192	5	1	30,223	1,663	**31,886**
2008	29,043	5,985	3,514	2,504	703	486	191	5	1	31,154	1,779	**32,933**
2009	29,567	6,184	3,639	2,576	715	479	190	5	1	31,709	1,824	**33,533**
2010	30,118	6,396	3,748	2,658	713	486	194	5	1	32,330	1,845	**34,175**
2011	30,805	6,585	3,885	2,728	720	490	198	5	1	32,986	1,961	**34,947**
2012	31,341	6,803	3,984	2,776	722	500	195	5	1	33,563	1,977	**35,540**
2013	31,780	6,973	4,074	2,849	726	511	206	5	1	34,050	2,028	**36,078**
2014	32,045	7,125	4,141	2,871	725	517	214	1	1	34,310	2,064	**36,374**
2015	32,127	7,246	4,185	2,853	721	516	222	0	1	34,359	2,081	**36,440**
2016	32,138	7,355	4,213	2,836	717	517	227	0	1	34,355	2,081	**36,436**

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

2.2 Active U.S. General Aviation and On-Demand Part 135 Aircraft by Primary Use and Aircraft Type (2015)

		General Aviation FAR Part 91 Use												On-Demand FAR Part 135 Use		
Aircraft Type	**Total Active (76.7% of 273,663)**	**Personal/ Recre-ational**	**Business (w/o crew)**	**Business (with crew)**	**Instruc-tional**	**Aerial Apps.**	**Aerial Obs.**	**Other Aerial App.**	**External Load**	**Other Work**	**Sight-seeing**	**Air Medical**	**Other**	**Air Taxi**	**Air Tours**	**Air Medical**
Total All Aircraft	**210,030**	**139,700**	**15,887**	**11,276**	**15,667**	**3,303**	**5,477**	**870**	**321**	**1,272**	**1,164**	**516**	**5,674**	**6,494**	**521**	**1,887**
% Std. Error	1.4%	2.0%	1.6%	.9%	1.6%	1.0%	1.1%	0.9%	0.8%	1.5%	1.4%	1.5%	1.3%	0.7%	0.7%	0.6%
Piston Total	**141,141**	**104,669**	**12,474**	**1,446**	**12,182**	**991**	**2,531**	**253**	**0**	**727**	**310**	**386**	**3,365**	**1,567**	**199**	**39**
One-Engine Piston	127,887	97,811	9,964	705	10,800	958	2,121	196	0	714	294	328	2,908	913	173	2
Two-Engine Piston	13,254	6,859	2,510	741	1,382	34	411	58	0	13	16	57	457	654	26	36
Turboprop Total	**9,712**	**1,263**	**1,237**	**2,342**	**162**	**1,729**	**278**	**229**	**0**	**135**	**3**	**14**	**522**	**1,548**	**13**	**238**
One-Engine Turboprop	4,391	600	544	410	43	1,713	23	115	0	36	0	4	298	545	13	49
Two-Engine Turboprop	5,321	663	693	1,932	119	16	255	113	0	100	3	10	224	1,003	0	189
Business Jet	**13,440**	**1,537**	**1,047**	**6,814**	**185**	**0**	**37**	**64**	**0**	**186**	**0**	**9**	**696**	**2,675**	**0**	**190**
Rotorcraft Total	**10,506**	**1,277**	**336**	**640**	**1,603**	**521**	**2,482**	**299**	**321**	**43**	**133**	**81**	**379**	**684**	**291**	**1,417**
Piston Total	3,286	903	207	48	1,215	210	251	22	8	3	117	0	232	61	8	0
Turbine Total	7,220	374	129	591	388	311	2,231	278	313	40	15	81	146	623	283	1,417
- One-Engine Turbine	5,458	311	122	111	349	272	2,122	258	228	30	15	16	99	421	272	833
- Two-Engine Turbine	1,762	63	7	481	40	38	109	20	86	10	0	65	48	202	11	584
Gliders	**1,870**	**1,455**	**0**	**0**	**360**	**0**	**0**	**0**	**0**	**0**	**40**	**0**	**15**	**0**	**0**	**0**
Lighter-Than-Air	**3,071**	**2,268**	**9**	**4**	**158**	**0**	**0**	**0**	**0**	**27**	**582**	**2**	**8**	**0**	**13**	**0**
Experimental Total	**27,922**	**25,284**	**739**	**31**	**697**	**59**	**128**	**22**	**0**	**147**	**96**	**23**	**669**	**19**	**6**	**4**
Amateur-Built	21,195	19,438	616	5	541	36	76	3	0	61	83	21	313	0	0	2
Exhibition	1,966	1,613	47	10	43	4	0	5	0	42	0	2	199	0	0	0
Exp. Light-Sport	3,942	3,730	10	0	88	2	23	0	0	21	2	0	66	0	0	0
Other Experimental	820	503	66	15	26	17	29	14	0	23	10	0	90	19	6	2
Special Light-Sport	**2,369**	**1,948**	**45**	**0**	**320**	**2**	**22**	**2**	**0**	**7**	**0**	**0**	**21**	**2**	**0**	**0**

Source: FAA Survey

2.3 U.S. General Aviation and On-Demand Part 135 Total Hours Flown by Use and Aircraft Type (2015)

		General Aviation FAR Part 91 Use												On-Demand FAR Part 135 Use		
Aircraft Type	**Total Hours**	**Personal/ Recre-ational**	**Business (w/o crew)**	**Business (with crew)**	**Instruc-tional**	**Aerial Apps.**	**Aerial Obs.**	**Other Aerial App.**	**External Load**	**Other Work**	**Sight-seeing**	**Air Medical**	**Other**	**Air Taxi**	**Air Tours**	**Air Medical**
Total All Aircraft	**24,141,864**	**7,437,602**	**1,838,773**	**2,384,200**	**4,648,448**	**941,208**	**1,411,526**	**178,405**	**176,364**	**240,751**	**161,575**	**77,055**	**1,080,165**	**2,524,126**	**328,102**	**713,564**
% Std. Error	1.0%	1.2%	2.4%	3.0%	3.1%	5.9%	5.1%	8.6%	13.9%	10.8%	8.8%	13.8%	3.3%	3.8%	14.4%	6.8%
Piston Total	**12,824,828**	**5,609,359**	**1,360,051**	**197,236**	**3,701,905**	**159,508**	**661,741**	**41,257**	**-**	**111,271**	**70,223**	**33,183**	**374,628**	**435,794**	**59,932**	**-**
One-Engine Piston	11,217,005	5,183,934	1,122,293	90,023	3,238,268	156,541	562,895	31,246	-	110,368	67,141	25,448	315,529	255,007	56,042	-
Two-Engine Piston	1,607,823	425,425	237,758	107,214	463,637	2,967	98,846	10,011	-	902	3,082	-	59,099	180,787	3,890	6,469
Turboprop Total	**2,537,913**	**190,019**	**174,073**	**437,374**	**65,930**	**631,979**	**77,694**	**50,374**	**-**	**55,177**	**707**	**4,241**	**116,301**	**620,101**	**5,934**	**108,009**
One-Engine Turboprop	1,237,144	81,335	73,430	112,781	8,945	613,093	10,942	25,077	-	11,880	198	1,395	38,177	234,271	5,891	19,728
Two-Engine Turboprop	1,300,769	108,684	100,643	324,593	56,984	18,886	66,751	25,297	-	43,297	-	2,846	78,124	385,830	43	88,281
Business Jet	**3,837,291**	**295,692**	**194,395**	**1,693,383**	**24,305**	**-**	**7,316**	**8,109**	**-**	**33,911**	**-**	**4,608**	**420,294**	**1,068,684**	**-**	**86,251**
Rotorcraft Total	**3,294,118**	**103,306**	**40,595**	**51,881**	**678,961**	**133,753**	**644,107**	**76,390**	**175,526**	**24,086**	**52,377**	**33,836**	**118,676**	**391,870**	**259,332**	**509,420**
Piston Total	797,870	54,520	16,976	8,952	515,036	36,708	79,466	2,049	2,635	878	43,857	-	13,122	17,275	6,396	-
Turbine Total	2,496,247	48,786	23,619	42,929	163,925	97,045	564,641	74,341	172,891	23,208	8,520	33,836	105,554	374,595	252,936	509,420
- One-Engine Turbine	1,912,091	40,665	22,032	20,966	150,883	86,830	526,068	62,885	124,015	18,793	7,684	11,005	68,292	241,689	246,502	283,781
- Two-Engine Turbine	584,156	8,120	1,587	21,963	13,042	10,215	38,573	11,456	48,877	4,415	836	22,832	37,262	132,906	6,434	225,640
Gliders	**94,370**	**60,879**	**-**	**-**	**27,132**	**-**	**-**	**-**	**-**	**-**	**5,005**	**-**	**-**	**-**	**-**	**-**
Lighter-Than-Air	**67,587**	**37,686**	**-**	**-**	**2,738**	**-**	**-**	**-**	**-**	**-**	**23,916**	**-**	**-**	**-**	**-**	**-**
Experimental Total	**1,294,985**	**1,024,594**	**64,853**	**-**	**84,509**	**-**	**-**	**-**	**-**	**14,905**	**8,879**	**-**	**44,292**	**-**	**-**	**-**
Amateur-Built	999,670	821,049	55,818	-	68,605	-	3,993	-	-	-	7,016	-	27,131	-	-	-
Exhibition	76,331	58,086	672	-	2,512	-	-	-	-	-	882	-	7,180	-	-	-
Exp. Light-Sport	131,860	115,665	-	-	5,206	-	-	-	-	-	-	-	-	-	-	-
Other Experimental	87,124	29,794	5,697	-	8,187	6,452	12,102	1,454	-	4,627	942	-	5,288	6,862	-	-
Special Light-Sport	**190,772**	**116,067**	**4,214**	**-**	**62,969**	**-**	**1,616**	**-**	**-**	**476**	**139**	**-**	**4,265**	**-**	**-**	**-**

Source: FAA Survey

2.4 Active U.S. General Aviation and On-Demand Part 135 Aircraft by Type (1996–2015) and Forecast (2016–2025)

		Airplane			Rotorcraft		Balloons, Dirigibles, Gliders	Experimental	Light-Sport Aircraft		
Year	Total Aircraft	Piston	Turboprop	Business Jet	Piston	Turbine			Total	Experimental	Special
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
2014	**204,408**	139,182	9,777	12,362	3,154	6,812	4,699	26,191	-	4,204	2,231
2015	**210,030**	141,141	9,712	13,440	3,286	7,220	4,941	27,922	-	3,942	2,369
Forecast											
2016	**203,425**	137,080	9,420	12,635	3,340	7,200	4,570	26,590	-	-	2,590
2017	**203,300**	136,095	9,310	12,870	3,435	7,410	4,560	26,850	-	-	2,770
2018	**203,200**	135,150	9,235	13,125	3,525	7,615	4,550	27,055	-	-	2,945
2019	**203,185**	134,220	9,195	13,395	3,610	7,820	4,545	27,270	-	-	3,130
2020	**203,195**	133,295	9,190	13,680	3,690	8,020	4,525	27,485	-	-	3,310
2021	**203,225**	132,345	9,215	13,975	3,770	8,215	4,525	27,690	-	-	3,490
2022	**203,340**	131,405	9,270	14,285	3,850	8,410	4,520	27,925	-	-	3,675
2023	**203,365**	130,440	9,350	14,610	3,930	8,605	4,510	28,060	-	-	3,860
2024	**203,555**	129,470	9,465	14,965	4,010	8,795	4,500	28,310	-	-	4,040
2025	**203,745**	128,505	9,600	15,340	4,090	8,990	4,490	28,500	-	-	4,230
Average Annual Growth											
2016–25	**-0.3%**	**-0.9%**	**-0.1%**	**1.3%**	**2.2%**	**2.2%**	**-1.0%**	**0.2%**	**-**	**-**	**6.0%**

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

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);
- sight-seeing (commercial sight-seeing operations under FAR Part 91); and
- on-demand FAR Part 135 operations including air taxi (that is, charter), air tours, and airmedical operations.

2.5 U.S. General Aviation and On-Demand Part 135 Estimated Hours Flown (in Thousands) by Type (1980–2015) and Forecast (2016–2025)

		Airplane			Rotorcraft		Balloons, Dirigibles, Gliders	Experimental	Light-Sport Aircraft		
Year	Total Hours	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
2014	**23,271**	11,967	2,613	3,881	818	2,424	159	1,244	-	142	165
2015	**24,142**	12,825	2,538	3,837	798	2,496	162	1,295	-	132	191
Forecast											
2016	**23,300**	11,767	2,564	4,016	739	2,585	152	1,283	-	-	194
2017	**23,490**	11,681	2,556	4,164	737	2,680	152	1,311	-	-	208
2018	**23,714**	11,603	2,554	4,315	756	2,775	152	1,337	-	-	223
2019	**23,956**	11,532	2,561	4,464	774	2,871	152	1,364	-	-	238
2020	**24,201**	11,451	2,570	4,619	799	2,967	152	1,391	-	-	253
2021	**24,461**	11,377	2,589	4,771	824	3,061	152	1,418	-	-	268
2022	**24,708**	11,295	2,611	4,921	849	3,150	151	1,448	-	-	284
2023	**24,960**	11,217	2,639	5,068	873	3,239	151	1,473	-	-	299
2024	**25,223**	11,141	2,671	5,227	896	3,317	151	1,505	-	-	315
2025	**25,513**	11,086	2,710	5,389	918	3,396	151	1,533	-	-	331
Average Annual Growth											
2016–25	**0.6%**	**-1.4%**	**0.7%**	**3.5%**	**1.4%**	**3.1%**	**-0.7%**	**1.7%**	**-**	**-**	**5.7%**

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

2.6 Active General Aviation and On-Demand FAR Part 135 Aircraft and Hours Flown (in Thousands) by U.S. State or Territory (2008–2015)

State or Territory	2008		2009		2010		2012		2013		2014		2015		
	Active Aircraft	Hours Flown	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	3,549	546	3,145	299	5,095	643	4,763	527	2,825	244	4,221	535	5,623	4,418	504
Alaska	6,076	701	6,017	688	6,113	681	5,703	696	5,526	675	5,641	772	8,276	5,882	696
Arizona	5,767	579	6,896	809	7,531	1,135	6,070	666	5,658	718	5,301	731	7,604	5,909	809
Arkansas	2,291	354	2,661	346	3,028	354	3,053	366	3,065	328	2,584	311	3,864	2,879	298
California	25,292	2,651	24,811	2,555	22,830	2,350	21,316	2,309	20,560	2,331	20,516	2,166	26,977	20,972	2,408
Colorado	6,268	626	4,973	525	5,483	716	5,412	772	5,338	611	5,592	715	6,842	5,468	654
Connecticut	2,228	445	1,868	355	1,566	201	1,657	281	1,342	175	1,431	182	1,903	1,613	204
Delaware	1,830	313	2,261	221	1,934	220	1,885	212	1,350	349	856	131	2,286	1,307	198
D.C.	29	88	80	4	17	4	415	107	52	13	441	151	578	578	175
Florida	16,143	2,382	16,804	2,047	16,126	1,839	14,754	1,958	14,450	1,868	15,028	2,052	17,920	14,543	2,034
Georgia	6,674	709	5,970	805	5,843	618	5,228	566	5,932	571	4,966	487	7,114	5,659	609
Hawaii	530	93	499	148	741	179	486	203	448	141	415	121	571	473	152
Idaho	2,816	234	3,282	300	2,860	204	2,966	301	2,666	322	2,405	263	3,561	2,867	302
Illinois	5,480	423	6,786	655	6,112	574	5,202	444	5,169	530	4,697	434	6,567	5,077	525
Indiana	3,764	294	4,008	412	3,151	255	3,675	266	3,280	359	3,810	354	4,560	3,679	408
Iowa	3,361	294	2,935	281	2,629	232	3,064	371	3,024	236	2,913	242	3,759	2,868	216
Kansas	3,814	397	3,805	366	3,547	344	3,138	543	3,704	378	4,431	530	5,249	4,176	402
Kentucky	1,726	131	1,780	137	2,082	157	1,934	159	1,797	142	1,600	109	1,972	1,431	111
Louisiana	3,136	777	2,970	913	3,512	862	3,264	1,017	3,156	757	3,480	650	3,517	2,807	622
Maine	1,284	112	1,230	81	1,347	86	1,188	107	1,203	80	1,384	99	1,489	1,090	88
Maryland	2,671	248	2,971	176	2,774	235	2,505	274	2,184	245	2,647	216	3,024	2,284	194
Massachusetts	2,417	310	2,539	224	2,426	244	2,663	477	2,279	218	2,173	225	2,937	2,307	223
Michigan	8,668	572	6,068	477	6,112	471	5,663	468	4,999	410	5,361	445	7,078	5,366	375
Minnesota	4,840	453	5,187	413	4,690	415	4,365	383	4,720	437	4,869	401	6,213	4,388	493
Mississippi	1,298	233	2,237	296	2,543	354	2,037	300	2,033	243	1,693	254	2,545	2,063	262
Missouri	3,596	272	4,119	412	3,847	303	3,953	399	3,479	328	3,309	361	5,132	3,985	377
Montana	2,152	239	2,576	188	2,536	164	1,755	158	2,065	211	2,400	213	3,620	2,385	226
Nebraska	2,074	201	2,314	197	2,076	183	2,013	191	2,159	194	1,873	173	2,993	2,175	225
Nevada	3,093	377	2,022	276	2,030	343	2,246	319	2,322	323	2,782	418	3,348	2,589	332
New Hampshire	1,624	150	1,361	123	1,316	148	1,187	103	1,170	103	1,141	134	1,429	1,073	85
New Jersey	4,076	742	3,232	331	2,954	315	2,379	294	2,593	434	3,198	391	3,479	2,852	376
New Mexico	3,519	276	2,663	190	3,411	246	2,562	201	2,493	137	2,570	206	2,977	2,238	155
New York	6,074	549	5,577	463	6,457	787	5,116	478	5,131	477	4,888	594	7,480	5,911	698
North Carolina	5,376	644	6,004	637	5,883	723	5,451	463	5,627	559	5,281	480	6,885	5,527	501
North Dakota	1,276	348	1,101	106	1,366	217	1,376	341	1,412	275	1,325	241	2,230	1,480	332
Ohio	6,200	700	6,329	608	5,823	631	6,319	578	5,117	537	5,793	716	7,479	5,250	662
Oklahoma	4,911	794	4,229	809	4,794	910	3,915	566	4,001	862	3,743	756	5,343	4,068	822
Oregon	4,614	431	5,234	559	5,200	784	4,692	653	4,626	569	4,611	607	6,501	5,077	776
Pennsylvania	7,410	851	6,539	652	6,012	662	5,386	562	5,091	510	5,842	621	7,234	5,331	486
Puerto Rico	620	78	319	50	397	154	345	36	235	54	308	41	500	418	75
Rhode Island	299	20	234	19	352	36	2,538	193	319	43	284	38	425	366	46
South Carolina	2,845	300	2,425	189	2,634	205	1,478	153	2,414	186	2,801	183	2,850	2,258	171
South Dakota	1,554	112	1,843	176	1,024	96	3,557	429	1,080	167	1,454	130	2,119	1,229	134
Tennessee	4,438	559	3,820	315	3,993	362	18,500	2,140	3,718	411	3,240	372	4,512	3,460	365
Texas	18,117	2,071	19,416	2,042	17,595	2,039	2,601	433	16,811	2,243	18,232	2,002	25,921	20,143	2,251
Utah	2,583	443	1,859	262	2,298	325	545	30	1,906	284	2,420	425	3,285	2,909	433
Vermont	628	35	553	35	603	49	4,451	549	495	22	587	40	672	523	37
Virginia	5,605	691	3,961	376	5,178	645	7,249	679	5,184	499	4,555	484	4,947	4,064	466
Washington	7,198	691	6,604	614	7,585	602	855	47	6,612	513	6,718	480	9,754	6,943	540
West Virginia	1,247	95	1,160	97	1,292	80	4,485	352	886	66	718	73	1,267	1,021	60
Wisconsin	3,911	297	5,134	376	5,694	318	1,010	120	5,002	318	4,753	387	7,425	5,316	423
Wyoming	1,493	144	1,299	118	836	88	492	124	1,149	156	1,036	99	1,691	1,219	111
Otr. US Territories	182	15	166	10	-	-	174	44	70	15	90	32	140	117	17
Grand Total	228,663	26,009	223,877	23,763	223,370	24,802	209,034	24,403	199,927	22,876	204,408	23,271	273,663	210,030	24,142

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 **Active U.S. General Aviation and On-Demand FAR Part 135 Average Hours Flown Per Aircraft by Year (2000–2015)**

Year	All Aircraft	Airplane			Rotorcraft		Balloons, Dirigibles, Gliders	Experimental	Light-Sport Aircraft	
		Piston	Turboprop	Business Jet	Piston	Turbine			Total	Special
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
2014	**114**	86	267	314	260	356	34	48	-	74
2015	**115**	91	261	286	243	346	33	46	-	81

Data for 2011 is unavailable at time of publication.

Source: FAA Survey

2.8 **U.S. Experimental Aircraft Fleet and Flight Hours (in Thousands) (2000–2015)**

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
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%**
2014	18,873	1,893	4,204	1,221	**26,191**	**12.8%**	834	79	142	189	**1,244**	**5.3%**
2015	21,195	1,966	3,942	820	**27,922**	**13.3%**	1,000	76	132	87	**1,295**	**5.4%**

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

2.9 **Total Fuel Consumed and Average Fuel Consumption Rate by Aircraft Type (2015)**

Fuel Type	Fixed-Wing			Rotorcraft		Other Aircraft	Experimental	Special Light-Sport	Total All Aircraft
	Piston	Turboprop	Turbojet	Piston	Turbine				
Jet Fuel									
Avg. Rate (GPH)	36.6	75.7	277.2	-	51.4	-	41.8	-	**154.9**
Estimated Fuel Use (Thousand Gal.)	2,160.9	190,753.8	1,062,001.2	-	128,170.0	-	1,226.5	-	**1,384,412.4**
% Standard Error	19.7	1.2	1.0	-	1.3	-	19.0	-	**0.9**
100 Low-Lead									
Avg. Rate (GPH)	13.0	29.6	-	12.8	-	4.7	10.8	6.0	**12.8**
Estimated Fuel Use (Thousand Gal.)	154,169.8	515.8	-	10,004.7	33.9	9,535.1	413.9	413.9	**174,933.6**
% Standard Error	1.8	12.4	-	3.0	-	21.7	3.7	4.8	**1.6**
100 Octane									
Avg. Rate (GPH)	15.0	-	-	10.9	-	-	10.0	5.6	**15.8**
Estimated Fuel Use (Thousand Gal.)	7,909.2	-	-	71.7	-	-	266.2	12.6	**8,923.9**
% Standard Error	10.1	-	-	25.2	-	-	9.0	15.4	**15.2**
Automotive Gasoline									
Avg. Rate (GPH)	8.2	-	-	-	-	4.3	5.0	6.4	**6.7**
Estimated Fuel Use (Thousand Gal.)	2,896.7	-	-	-	-	13.8	1,541.7	765.9	**5,229.4**
% Standard Error	8.1	-	-	-	-	17.5	3.3	5.9	**3.7**
Other Fuel									
Avg. Rate (GPH)	12.1	81.7	-	-	-	18.0	12.2	-	**18.0**
Estimated Fuel Use (Thousand Gal.)	269.5	115.0	-	-	-	1,478.3	35.8	-	**1,902.2**
% Standard Error	19.8	37.6	-	-	-	8.1	25.3	-	**9.0**
Total Fuel Use									
Avg. Rate (GPH)	13.1	75.4	277.0	12.8	51.4	17.1	10.1	6.3	**65.6**
Estimated Fuel Use (Thousand Gal.)	167,406.1	191,394.0	1,062,904.5	10,181.2	128,185.1	1,527.2	12,605.3	1,198.2	**1,575,401.4**
% Standard Error	1.8	1.2	1.0	3.0	1.3	7.8	3.9	4.2	**1.9**

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

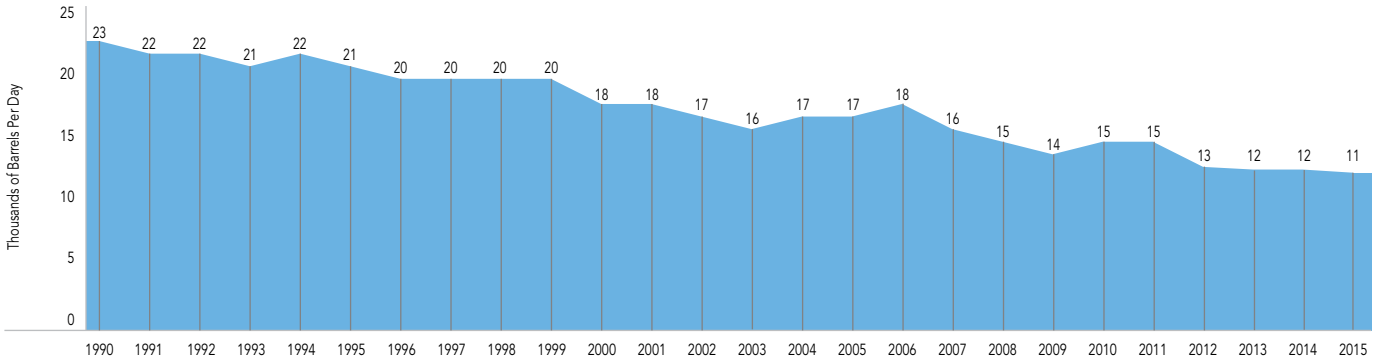
Source: FAA Survey

2.10 **U.S. Refinery and Blender Net Production of Aviation Gasoline (1990–2015) (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	12	11	-	-	-	-

Source: U.S. Energy Information Administration

FIGURE 2.1 **Refinery and Blender Net Production of Aviation Gasoline (1990–2015)**



Source: U.S. Energy Information Administration

2.11 **U.S. General Aviation Fuel Consumption (2000–2015)**

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**
2013	117.2	53.9	188.6	945.0	8.8	126.0	16.5	0.9	197.3	1,259.6	**1,456.9**
2014	120.0	48.2	198.8	1,135.2	11.0	132.3	29.5	0.8	209.5	1,466.4	**1,676.0**
2015	119.0	47.7	195.5	1,140.5	10.1	135.4	30.6	0.9	208.2	1,471.4	**1,679.7**

E = Estimated

Source: FAA Survey and Forecast

2.12 **Average Age of Registered U.S. General Aviation Fleet (2007–2015)**

Aircraft Type	Engine Type	Seats	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	Average Age in 2014 in Years	Average Age in 2015 in Years
Single-Engine	Piston	1–3	38	48.1	-	-	-	-	-	-	-
		4	36	38.2	-	-	-	-	-	-	-
		5–7	32	33.5	-	-	-	-	-	-	-
		8+	43	49.3	-	-	-	-	-	-	-
		All	-	-	42.2	46.3	n/a	43.4	40.7	44.8	45.4
	Turboprop	All	14	13.6	16.1	15.2	n/a	14.9	12.5	13.5	13.2
	Jet	All	35	44.4	44.0	44.1	n/a	n/a	n/a	n/a	n/a
	Helicopter – Piston	All	-	-	-	n/a	n/a	20.8	17.1	21.4	21.5
	Helicopter – Turbine	All	-	-	-	n/a	n/a	22.9	22.3	22.1	22.4
Multi-Engine	Piston	1–3	33	48.9	-	-	-	-	-	-	-
		4	35	36.0	-	-	-	-	-	-	-
		5–7	39	39.3	-	-	-	-	-	-	-
		8+	40	41.6	-	-	-	-	-	-	-
	All	All	-	-	41.2	39.0	n/a	40.2	38.5	41.9	42.5
	Turboprop	All	27	28.8	28.0	27.0	n/a	26.1	25.2	27.6	27.2
	Jet	All	16	16.2	17.0	16.2	n/a	15.3	14.7	15.8	15.8
	Helicopter – Turbine	All	-	-	-	-	-	17.5	14.7	17.6	18.1
All Aircraft			**35**	**39.3**	**39.5**	**37.3**	**n/a**	**35.1**	**33.2**	**36.7**	**36.9**

Source: GAMA

2.13 U.S. General Aviation Operations (in Thousands) at FAA and Contract Towers (1992–2016)

Year	General Aviation Operations at Towers								Grand Total
	FAA Control Towers				Contract Towers				
	Total	Itinerant & Overflight	Local	Number of Towers	Total	Itinerant & Overflight	Local	Number of Towers	
1992	**36,945**	21,281	15,664	n/a	**1,409**	767	642	n/a	**38,355**
1993	**35,228**	20,377	14,851	n/a	**1,373**	760	613	n/a	**36,601**
1994	**34,092**	20,208	14,484	n/a	**1,561**	855	706	n/a	**36,254**
1995	**32,265**	18,886	13,379	n/a	**3,661**	1,974	1,687	n/a	**35,927**
1996	**29,250**	17,575	11,675	n/a	**6,049**	3,249	2,801	n/a	**35,298**
1997	**28,232**	17,097	11,135	n/a	**8,601**	4,572	4,029	n/a	**36,833**
1998	**28,522**	17,157	11,365	n/a	**10,118**	5,240	4,877	n/a	**38,046**
1999	**29,110**	17,422	11,688	n/a	**10,890**	5,597	5,292	n/a	**40,000**
2000	**27,002**	16,286	10,717	n/a	**12,876**	6,558	6,318	n/a	**39,879**
2001	**24,784**	14,949	9,835	266	**12,843**	6,484	6,359	206	**37,627**
2002	**24,092**	14,553	9,539	n/a	**13,562**	6,898	6,634	n/a	**37,653**
2003	**22,598**	13,577	9,021	n/a	**12,926**	6,654	6,272	n/a	**35,524**
2004	**21,762**	13,190	8,572	n/a	**13,205**	6,817	6,388	n/a	**34,968**
2005	**20,705**	12,430	8,275	n/a	**13,456**	6,885	6,571	n/a	**34,161**
2006	**19,728**	11,897	7,830	n/a	**13,392**	6,844	6,549	n/a	**33,120**
2007	**19,367**	11,616	7,751	n/a	**13,768**	6,961	6,807	n/a	**33,135**
2008	**18,336**	10,828	7,509	264	**12,953**	6,540	6,413	239	**31,289**
2009	**17,429**	10,770	6,659	264	**12,156**	6,585	5,571	244	**29,585**
2010	**16,741**	10,430	6,310	264	**11,837**	6,517	5,319	244	**28,577**
2011	**16,324**	10,206	6,118	264	**11,737**	6,374	5,363	248	**28,061**
2012	**16,265**	10,111	6,154	264	**11,878**	6,479	5,399	250	**28,143**
2013	**16,027**	9,857	6,170	264	**11,998**	6,438	5,560	252	**28,025**
2014	**15,791**	9,707	6,084	264	**11,951**	6,356	5,595	252	**27,742**
2015	**15,544**	9,449	6,096	264	**12,024**	6,441	5,584	252	**27,569**
2016E	**15,554**	9,380	6,174	264	**11,990**	6,535	5,455	252	**27,544**

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

2.14 Summary of U.S. General Aviation Operations and Contacts (in Thousands) at FAA Facilities (2000–2016)

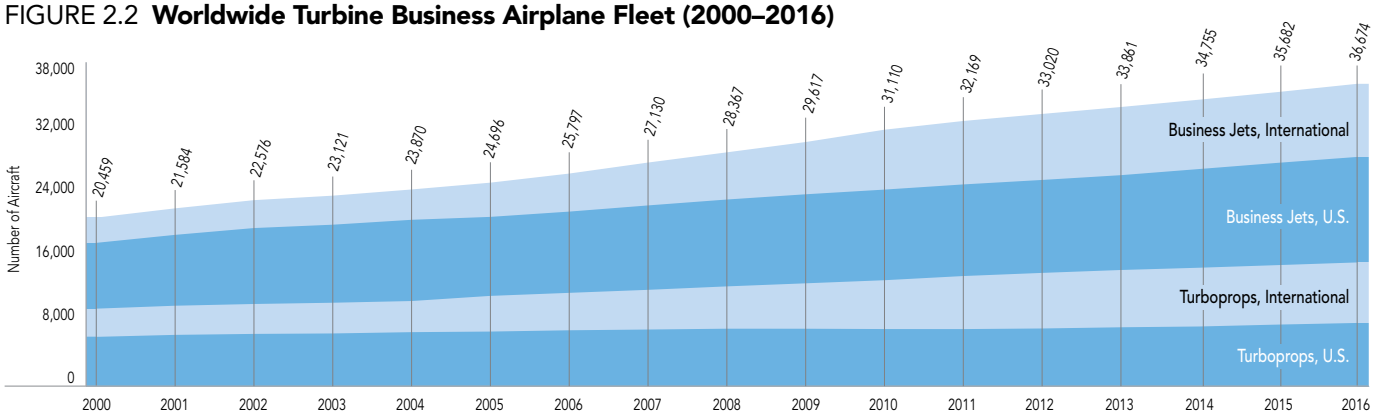
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015E	2016F
GA IFR Aircraft Handled at FAA Air Route Traffic Control Centers	8,744.4	8,024.0	8,180.7	7,999.8	8,350.4	8,367.7	8,197.0	8,294.3	7,670.7	6,331.6	6,550.3	6,557.3	6,472.1	6,439.1	6,741.0	7,007.0	7,061.0
GA Instrument Operations at FAA & Contract Facilities	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	13,017.6	13,079.0	13,040.0
Total Aircraft Contacts at FSS	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 2004.

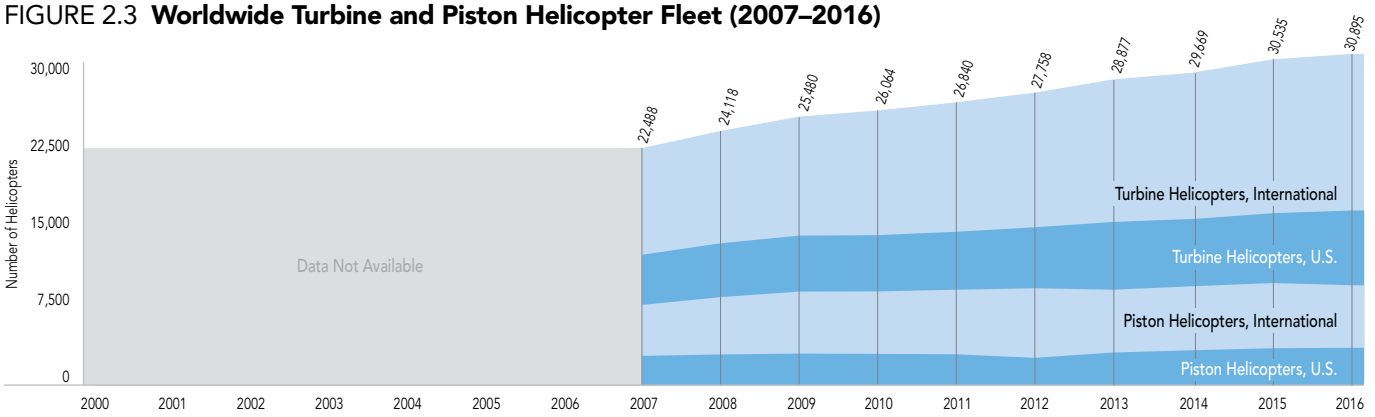
Source: FAA Air Traffic Activity

FIGURE 2.2 **Worldwide Turbine Business Airplane Fleet (2000–2016)**



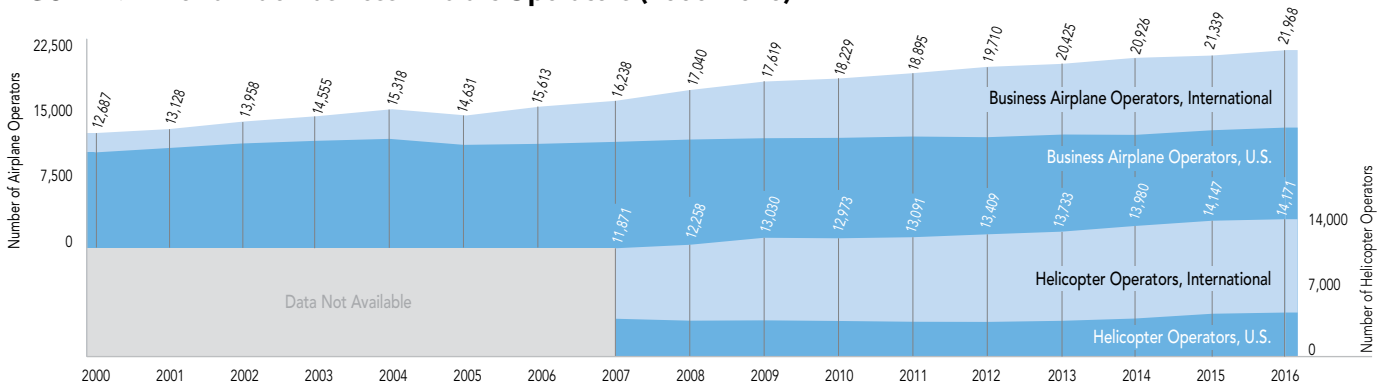
Source: JETNET LLC; www.JETNET.com

FIGURE 2.3 **Worldwide Turbine and Piston Helicopter Fleet (2007–2016)**



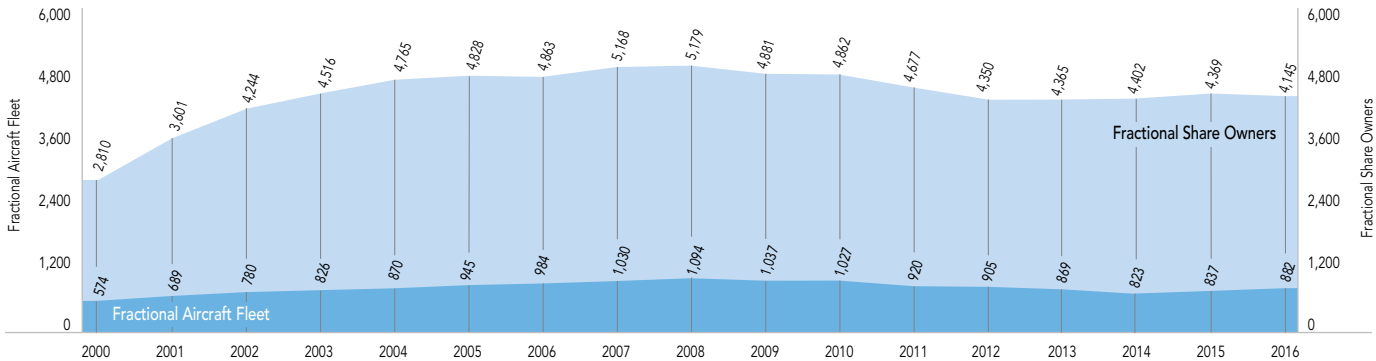
Source: JETNET LLC; www.JETNET.com

FIGURE 2.4 **Worldwide Business Aircraft Operators (2000–2016)**



Source: JETNET LLC; www.JETNET.com

FIGURE 2.5 **Fractional Aircraft and Share Owners (2000–2016)**



The fractional owner and fleet information for 2007 and later also includes helicopters.

Source: JETNET LLC; www.JETNET.com


3 European Fleet Data

3.1 Austria—Number of Aircraft by Type (2011–2016)

Year	Aircraft Type									Total Aircraft
	Fixed-wing Aeroplanes				Rotorcraft			Federal Aircraft	Remote Piloted Aircraft	
	1,999 kg and Below	2,000 kg–5,700 kg	Above 5,700 kg	Motor Gliders	Single-Engine	Multi-Engine	Gyroplanes			
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**
2015	710	95	292	176	100	54	7	17	-	**1,451**
2016	696	96	303	174	104	64	7	18	2	**1,464**

Source: Austrocontrol (österreichisches Luftfahrzeugregister), www.austrocontrol.at

3.2 Belgium—Number of Aircraft by Type (2014–2016)

Year	Aircraft Type									Total Aircraft
	Fixed-wing Aeroplanes	Rotorcraft	Balloons and Airships	Homebuilt	Microlights	Ultralights	Gliders and Sailplanes	Powered Parachutes	Remote Piloted Aircraft	
2014	999	203	510	56	265	-	408	-	-	**2,441**
2015	-	-	-	-	-	-	-	-	-	**-**
2016	814	194	504	-	163	406	410	879	679	**4,049**

Source: Belgian Civil Aviation Authority (SPF Mobilité et Transport), www.mobilit.belgium.be

3.3 Bulgaria—Number of Aircraft by Type (2015)

Year	Aircraft Type							Total Aircraft
	Fixed-wing Aeroplanes	Rotorcraft	Ultralights	Balloons	Gliders	Motor Gliders	Autogyros	
2015	561	126	69	99	355	112	18	**1,340**

Source: Bulgarian Civil Aviation Administration (Гражданска въздухоплавателна администрация), http://www.caa.bg/

3.4 Croatia—Number of Aircraft by Type (2015–2016)

Year	Aircraft Type									Total Aircraft
	Fixed-wing Aeroplanes		Rotorcraft	Ultralights and Microlights	Balloons	Amphibian	Gliders and Motor Gliders	Amateur-Built	Gyrocopters	
	5,700 kg and Below	Above 5,700 kg								
2015	153	1	16	112	20	2	60	12	2	**378**
2016	157	3	19	114	19	2	69	-	3	**386**

Source: Croatia Civil Aviation Authority http://www.ccaa.hr/ and GAMA Analysis

3.5 Cyprus—Number of Aircraft by Type (2014–2016)

Year	Aircraft Type										Total Aircraft
	Fixed-wing Aeroplanes			Rotorcraft	Microlights	Gliders	Amphibian	Seaplanes	Powered Parachute	Remote Piloted Aircraft	
	5,700 kg and Below		Above 5,700 kg								
	Single-Engine	Multi-Engine									
2014	47	9	1	2	18	1	1	1	1	0	**81**
2015	53	12	1	13	20	1	1	1	1	1	**104**
2016	53	13	1	13	21	0	0	0	0	1	**102**

Source: Department of Civil Aviation Cyprus (Κυπριακή Δημοκρατία, Υπουργείο Συγκοινωνιών και Εργών), www.mcw.gov.cy and GAMA Analysis

3.6 Czech Republic—Number of Aircraft by Type (2008–2016)

Year	Aircraft Type										Total Aircraft
	Fixed-wing Aeroplanes			Rotorcraft	Motor Gliders	Gliders	Balloons	Airships	Microlights	Remote Piloted Aircraft	
	5,700 kg and Below		Above 5,700 kg								
	Single-Engine	Multi-Engine									
2008	788		102	70	89	702	156	2	3,911	-	**8,943**
2009	870		96	82	95	725	165	2	4,171	-	**9,507**
2010	867		94	106	101	762	181	2	4,434	-	**10,114**
2011	915		84	118	101	838	191	2	4,745	-	**10,824**
2012	943		104	127	106	908	204	2	4,957	-	**11,365**
2013	940		86	134	109	956	209	2	5,199	-	**11,894**
2014	977		91	142	115	976	218	2	5,416	-	**12,376**
2015	964		85	153	130	987	233	2	5,649	-	**12,888**
2016	918	101	89	161	133	1,013	243	2	5,843	620	**13,947**

Drones having Unmanned Aircraft Special Authorisation issued by the Civil Aviation Authority of the Czech Republic

Source: Czech Civil Aviation Authority (Urad Pro Civilni Letectvi), http://www.caa.cz/ and Light Aircraft Association of the Czech Republic, http://www.laacr.cz/

3.7 Denmark—Number of Aircraft by Type (2012–2016)

Year	Aircraft Type								Total Aircraft
	Fixed-wing Aeroplanes				Rotorcraft	Balloons	Motor Gliders	Gliders	
	2,730 kg and Below	2,730 kg–5,700 kg	5,700 kg–50,000 kg	50,000 kg–100,000 kg					
2012	684	43	127	48	125	66	136	330	**1,559**
2013	673	40	121	58	129	66	134	324	**1,545**
2014	670	36	135	61	124	70	136	314	**1,546**
2015	658	38	135	56	118	71	138	305	**1,519**
2016	646	39	129	53	114	73	135	304	**1,493**

Source: Danish Transport Authority (Trafikstyrelsen), www.trafikstyrelsen.dk

3.8 Estonia—Number of Aircraft by Type (2014–2016)

Year	Aircraft Type							Total Aircraft
	Fixed-wing Aeroplanes		Rotorcraft		Gyroplanes	Balloons	Gliders and Motor Gliders	
	5,700 kg and Below	Above 5,700 kg	Single-Engine	Multi-Engine				
2014	71	26	8	3	2	8	39	**157**
2015	67	27	9	3	2	8	43	**159**
2016	62	35	10	3	2	8	42	**162**

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

3.9 Finland—Number of Aircraft by Type (2008–2016)

Year	Aircraft Type						Total Aircraft
	Fixed-wing Aeroplanes		Rotorcraft and Gyrocopters	Gliders and Motor Gliders	Lighter-Than-Air	Microlights	
	Aeroplanes	Airliners Below					
2008	540	88	79	402	62	239	**1,410**
2009	555	91	84	404	64	274	**1,472**
2010	562	99	90	406	68	292	**1,517**
2011	573	94	95	403	64	315	**1,544**
2012	581	101	104	400	58	318	**1,562**
2013	575	87	111	396	56	320	**1,545**
2014	552	109	111	390	54	318	**1,534**
2015	567	110	105	366	52	318	**1,518**
2016	578	84	99	359	52	324	**1,496**

TRAFI use the term airliner. Since 2014, airliners are defined as aeroplanes with a maximum take-off weight (MTOW) of more than 8618 kg.

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

3.10 France—Number of Aircraft by Type (2008–2015)

Year	Activity at Aeroclubs														Total Aircraft
	Fixed-wing Aeroplanes			Gliders			Rotorcraft			Hang 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	
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**
2012	2,252	554,401	40,680	1,984	207,130	9,350	28	7,524	215	20,500	22,345	8,643	481,456	14,221	**33,407**
2013	2,302	550,319	40,643	1,924	204,371	10,397	42	9,223	226	20,900	21,841	9,571	483,867	14,517	**34,739**
2014	2,420	559,069	41,512	1,957	205,982	11,115	67	10,200	260	21,200	21,229	9,261	487,965	15,104	**34,905**
2015	2,440	553,851	41,253	1,951	214,552	11,341	83	11,250	280	21,300	22,345	8,815	520,650	15,453	**34,506**

Active pilots includes student pilots.
Gliders include motor gliders, towed gliders, and gliders launched by winch.

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

3.11 Germany—Number of Aircraft by Type (2008–2016)

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						
	2,000 kg and Below	2,000 kg–5,700 kg	2,000 kg and Below	2,000 kg–5,700 kg									
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**
2015	6,596	147	229	371	191	34	751	757	3,403	3	1,164	7,567	**21,213**
2016	6,553	160	221	381	211	35	777	733	3,456	3	1,124	7,450	**21,104**

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

3.12 Iceland—Number of Aircraft by Type (2015–2016)

Year	Aircraft Type						Total Aircraft
	Fixed-wing Aeroplanes		Rotorcraft		Amphibian	Gliders	
	5,700 kg and Below	Above 5,700 kg	Single-Engine	Multi-Engine			
2015	242	1	7	3	2	28	**283**
2016	247	3	9	3	2	28	**292**

Source: Iceland Transport Authority (Samgongustofa), http://www.icetra.is/aviation/aip-iceland/

3.13 Ireland—Number of Aircraft by Type (2012–2016)

Year	Aircraft Type															Total Aircraft
	Fixed-wing Aeroplanes						Rotorcraft		Micro-lights	Balloons	Home-built	Gyro-copters	Motor Gliders	Am-phibian	Gliders	
	Single-Engine		Multi-Engine				Single-Engine	Multi-Engine								
	2,000 kg and Below	2,000 kg–5,700 kg	2,000 kg and Below	2,000 kg–5,700 kg	5,701 kg–15,000 kg	Above 15,000 kg										
2012	181	5	7	6	5	14	31	16	128	10	39	11	3	1	n/a	**457**
2013	180	5	8	6	3	17	30	19	133	10	45	13	4	1	21	**495**
2014	179	3	6	8	1	8	25	14	132	10	56	14	5	1	20	**482**
2015	178	3	6	8	1	6	21	13	141	10	59	13	6	1	18	**484**
2016	180	2	5	9	1	8	22	15	146	10	60	15	5	1	18	**497**

Source: Irish Aviation Authority Data, www.iaa.ie and GAMA Analysis

3.14 Isle of Man—Number of Aircraft by Type (2014–2016)

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**
2015	71	68	244	2	26	**411**
2016	67	61	280	0	43	**451**

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

3.15 Italy—Number of Aircraft by Type (2015–2016)

Year	Aircraft Type									Total Aircraft
	Fixed-wing Aeroplanes			Rotorcraft		Gliders and Motor Gliders	Balloons	Airships	Ultralights	
	451 kg–2,000 kg	2,001 kg–5,700 kg	Above 5,700 kg	Single-Engine	Multi-Engine					
2015	706	67	83	335	157	143	57	0	12,392	**13,940**
2016	776	69	83	331	173	148	67	2	12,719	**14,368**

Source: Ente Nazionale per l'Aviazione Civile (ENAC), www.enac.gov.it

3.16 Latvia—Number of Aircraft by Type (2014–2016)

Year	Aircraft Type														Total Aircraft
	Fixed-wing Aeroplanes								Rotorcraft			Motor Gliders	Gliders	Gyrocop-ters	
	5,700 kg and Below						Above 5,700 kg		Piston	Turbine					
	Piston		Turboprop		Turbojet		Turbo-prop	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**
2015	130	6	10	1	2	2	0	1	9	4	12	10	21	2	**210**
2016	126	6	7	1	2	3	1	3	6	5	10	10	22	2	**204**

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

3.17 Lithuania—Number of Aircraft by Type (2014–2016)

Year	Aircraft Type												Total Aircraft
	Fixed-wing Aeroplanes		Rotorcraft		Ultralights	Microlights	Balloons and Airships	Gliders	Motor Gliders	Amphibian	Gyro-copters	Amateur-Built	
	5,700 kg and Below	Above 5,700 kg	Single-Engine	Multi-Engine									
2014	266		29		122	54	110	194	12	1	0	0	**788**
2015	265		24		125	56	112	157	11	1	0	0	**751**
2016	239	10	12	4	77	49	114	130	12	1	3	30	**681**

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

3.18 Luxembourg—Number of Aircraft by Type (2014–2016)

Year	Aircraft Type								Total Aircraft
	Fixed-wing Aeroplanes		Rotorcraft		Ultralights	Gliders	Balloons	Experimental	
	5,700 kg and Below	Above 5,700 kg	Single-Engine	Multi-Engine					
2014	183		11		21	11	54	12	**292**
2015	191		54		14	10	12	12	**293**
2016	89	96	2	10	13	7	56	11	**284**

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

3.19 Malta—Number of Aircraft by Type (2014–2016)

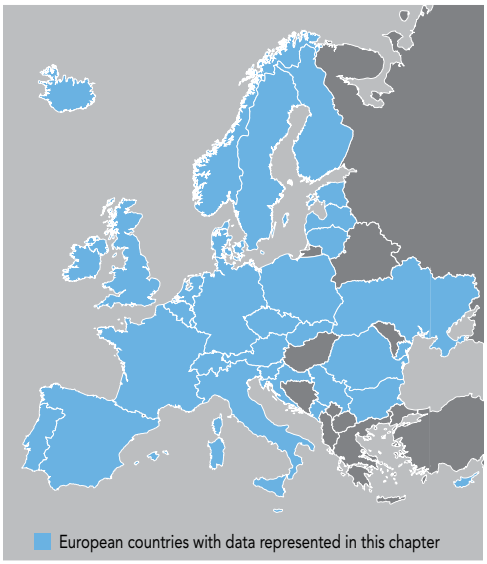
Year	Aircraft Type					Total Aircraft
	Fixed-wing Aeroplanes			Rotorcraft	Microlights	
	5,700 kg and Below	5,701 kg–12,000 kg	Above 12,000 kg			
2014	38	11	60	4	33	**146**
2015	35	13	97	4	32	**181**
2016	36	13	120	4	30	**203**

Source: Transport Malta, www.transport.gov.mt & GAMA Analysis

3.20 Montenegro—Number of Aircraft by Type (2014–2016)

Year	Aircraft Type						Total Aircraft
	Fixed-wing Aeroplanes		Rotorcraft	Balloons	Gliders	Amphibian	
	5,700 kg and Below	Above 5,700 kg					
2014	19	2	7	1	2	0	**31**
2015	9	4	4	0	1	1	**19**
2016	10	5	5	1	2	1	**24**

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



3.21 Netherlands—Number of Aircraft by Type (2008–2016)

Year	Aircraft Type																	Total Aircraft
	Fixed-wing Aeroplanes						Rotorcraft			Gliders	Motor Gliders	Home-built	Balloons	Am-phibian	Micro-lights	Ultra-lights	Remote Piloted Aircraft	
	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												
2008	567	27	25	35	44	210	56	30	7	554	151	132	461	2	403	n/a	-	**2,704**
2009	571	30	29	35	42	235	51	38	5	550	153	143	469	2	413	n/a	-	**2,766**
2010	550	31	29	35	33	233	50	41	5	547	151	149	463	2	438	n/a	-	**2,757**
2011	545	32	28	30	20	239	49	37	5	533	145	153	462	1	469	n/a	-	**2,748**
2012	523	30	26	29	22	237	48	37	6	519	151	163	466	1	494	n/a	-	**2,752**
2013	508	19	23	26	20	236	45	39	6	507	145	175	447	1	507	n/a	-	**2,704**
2014	482	16	24	25	18	237	38	35	5	493	151	177	432	1	515	n/a	-	**2,649**
2015	429	24	23	21	17	251	41	34	4	483	151	189	416	1	529	30	-	**2,643**
	Piston	Turbine	Piston	Turbine	Piston	Turbine	Piston	Turbine	Auto-gyros	Gliders	Motor Gliders	Home-built	Balloons	Am-phibian	Micro-lights	Other	RPA	
2016	634	4	25	16	4	269	23	50	5	492	-	-	427	-	538	24	488	**2,999**

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

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

3.22 Norway—Number of Aircraft by Type (2015–2016)

Year	Aircraft Type							Total Aircraft
	Fixed-wing Aeroplanes			Rotorcraft		Gliders and Motor Gliders	Balloons and Airships	
	5,700 kg and Below	Above 5,700 kg	Above 60,000 kg	5,700 kg and Below	Above 5,700 kg			
2015	799			266		149	20	**1,234**
2016	454	208	131	192	75	151	20	**1,231**

Source: Norway Civil Aviation Authority, http://www.luftfartstilsynet.no/

3.23 Poland—Number of Aircraft by Type (2014–2016)

Year	Aircraft Type											Total Aircraft
	Fixed-wing Aeroplanes				Rotorcraft		Gliders and Motor Gliders	Balloons	Ultralights	Gyrocopters	Remote Piloted Aircraft	
	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**
2015	275	1,034	79	117	104	90	885	196	226	26	-	**2,757**
2016	263	1,041	82	123	103	99	907	203	239	32	32	**2,829**

Annex II aircraft are also included in the total count of single-engine aeroplanes.

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

3.24 **Portugal—Number of Aircraft by Type (2014–2015)**

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**
2015	512		647	284	116	42	590	49	59	15	**2,314**

The number of single-engine versus multi-engine small aeroplanes is not available. The number shown is the combined number of small aeroplanes.

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

3.25 **Romania—Number of Aircraft by Type (2015)**

Year	Aircraft Type				Total Aircraft
	Fixed-wing Aeroplanes		Rotorcraft		
	5,700 kg and Below	Above 5,700 kg	Single-Engine	Multi-Engine	
2015	97	5	17	25	**144**

Source: Romania Civil Aeronautical Authory (Autoritatea Aeronautica Civila Romana), www.caa.ro

3.26 **Serbia—Number of Aircraft by Type (2014–2016)**

Year	Aircraft Type												Total Aircraft
	Fixed-wing Aeroplanes		Rotorcraft		Ultralights	Balloons	Motor Gliders	Gliders	Amphibian	Gyrocop-ters	Other Aeroplanes	Remote Piloted Aircraft	
	5,700 kg and Below	Above 5,700 kg	3,175 kg and Below	Above 3,175 kg									
2014	188	10	4	33	34	7	33	50	1	2	18	-	**380**
2015	193	11	34	4	36	6	36	51	1	3	19	-	**394**
2016	207	21	34	4	37	6	40	53	1	3	17	130	**553**

Source: Civil Aviation Directorate of the Republic of Serbia (**Директорат цивилног ваздухопловства Републике Србије**), www.cad.gov.rs and GAMA Analysis

3.27 **Slovakia—Number of Aircraft by Type (2014–2015)**

Year	Aircraft Type						Total Aircraft
	Aeroplanes	Rotorcraft	Ultralights	Balloons	Motor Gliders	Gliders	
2014	331	55	9	42	21	231	**689**
2015	272	68	69	41	n/a	269	**719**

Source: Transport Authority Slovakia (Dopravný úrad), www.nsat.sk

3.28 **Slovenia—Number of Aircraft by Type (2011–2016)**

Year	Aircraft Type							Total Aircraft
	Fixed-wing Aeroplanes	Rotorcraft	Ultralights	Balloons	Hang Gliders	Gyrocopters	Gliders	
2011	260	26	123	68	72	0	162	**711**
2012	246	26	128	78	72	1	174	**725**
2013	223	23	108	61	72	3	171	**661**
2014	221	22	112	61	72	3	172	**663**
2015	202	21	113	58	71	3	170	**638**
2016	192	22	108	58	71	3	165	**619**

Source: Civil Aviation Agency, Slovenia (agencija za civilno letalstvo Republike Slovenije), www.caa.si

3.29 **Spain—Number of Aircraft by Type (2014–2015)**

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**
2015	1,557	350	66	80	92	306	257	1,586	1,582	572	254	36		**6,738**

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

3.30 Sweden—Number of Aircraft by Type (2008–2015)

Year	Motorpowered Aircraft by Weight							Gliders, Motor 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**
2014	2,090	186	31	24	82	45	2	340	**2,800**
	Aeroplanes	Rotorcraft	Gliders	Motor Gliders	Balloons	Ultralights	Gyrocopters		
2015	1,650	261	330	155	107	475	68	n/a	**3,046**

The number of gliders, powered gliders, and balloons is based on the number of valid airworthiness certificates on December 31 of the year.
Sweden changed how aircraft registry data is published in 2015.

Source: Swedish Transport Ministry (Transportstyrelsen), www.transportstyrelsen.se

3.31 Switzerland—Number of Aircraft by Type (2010–2015)

Year	Aircraft Type									Total Aircraft
	Fixed-wing Aeroplanes				Rotorcraft	Motor Gliders	Gliders	Free Balloons	Airships	
	2,250 kg and Below	2,250 kg–5,700 kg	Above 5,700 kg	Total Aeroplanes						
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**
2013	1,458	176	290	1,924	312	255	745	373	11	**3,620**
2014	1,425	171	284	1,880	321	258	720	366	11	**3,556**
2015	1,397	169	284	1,850	326	253	696	358	11	**3,494**

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

3.32 Ukraine—Number of Aircraft by Type (2015)

Year	Aircraft Type						Total Aircraft
	Fixed-wing Aeroplanes	Rotorcraft	Ultralights	Balloons	Gliders	Gyrocopters	
2015	462	193	55	19	52	7	**788**

Source: State Aviation Administration (Державна авіаційна служба України), www.avia.gov.ua/

3.33 United Kingdom—Number of Aircraft by Type (2010–2016)

Year	Number of Registered Aircraft by Type																	Total Aircraft
	Fixed-wing Aeroplanes										Micro-lights	Rotor-craft	Gliders	Hang Gliders	Balloons and Min. Lift	Air-ships	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	Over 50,000 kg	EASA	Non-EASA	SLMG	Sea-planes								
2010	20	3,217	5,764	253	306	742	71	4,456	287	2	4,071	1,364	2,295	8	1,720	18	312	**20,379**
2011	20	3,199	5,663	228	297	742	74	4,471	285	2	4,043	1,299	2,256	8	1,655	19	324	**20,040**
2012	21	3,245	5,564	219	293	755	74	4,487	296	2	4,045	1,260	2,248	9	1,639	21	322	**19,939**
2013	21	3,269	5,505	212	289	761	75	4,531	302	2	4,029	1,232	2,247	9	1,625	20	327	**19,850**
2014	20	3,300	5,484	200	272	791	74	4,565	314	3	3,998	1,231	2,267	9	1,607	21	329	**19,846**
2015	21	3,325	5,493	190	260	806	68	4,600	321	3	4,015	1,258	2,260	9	1,598	23	342	**19,924**
2016	22	3,346	5,503	179	274	833	65	4,639	328	3	4,028	1,290	2,265	9	1,591	20	336	**20,027**

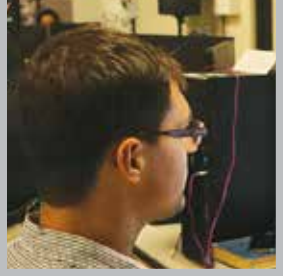
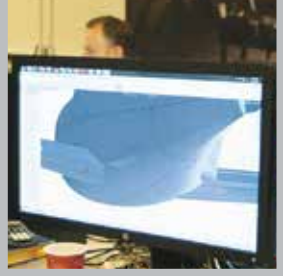
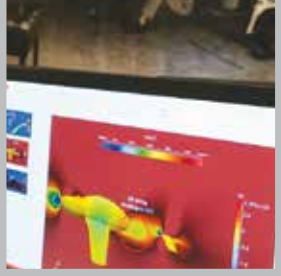
SLMG = Self-Launching Motor Glider
Does not differentiate if aeroplane is used for GA or commercial operations.

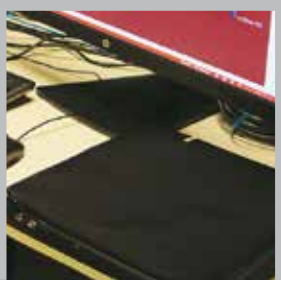
Source: UK Civil Aviation Authority, Civil Registry Statistics, G-INFO Database, www.caa.co.uk

Data from December 31 of specified year (published first day of the following year).
The category shown as EASA includes aircraft identified as EASA aircraft, but the individual category code has not yet been determined (usually because the aircraft does not have a current CofA).
The category shown as Non-EASA includes either an Annex II aircraft or an aircraft whose status has not yet been determined.

The registration data shows total by type and has not been adjusted for invalid registrations. The United Kingdom identifies the following number of invalid registrations:
- 2014: There were 6,265 invalid registrations and 13,581 valid registrations out of a total of 19,846.
- 2015: There were 6,415 invalid registrations and 13,509 valid registrations out of a total of 19,924.
- 2016: There were 6,649 invalid registrations and 13,378 valid registrations out of a total of 20,027.

4



Asia-Pacific Fleet Data

4.1 Australia—Number of General Aviation and Regional Aircraft by Category (1995–2015)

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**
2011	1,176	7,410	1,930	1,855	354	**12,725**
2012	1,187	7,256	1,815	1,817	355	**12,430**
2013	1,278	7,798	2,053	2,077	379	**13,585**
2014	1,216	8,512	2,270	2,088	387	**14,473**
2015	n/a	10,381	2,372	2,139	398	**15,290**

Amateur-built aircraft registration data was not available in 2015 and is included in the single-engine and multi-engine aeroplane data.

Source: Dept. of Transportation and Regional Services, Bureau of Transport and Regional Economics, www.bitre.gov.au

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

Year	Airplanes				Rotorcraft	Balloons	Airships	Other	Total Aircraft
	Piston-Engine		Turbine-Engine						
	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 Adminstration of China (中国民用航空局), www.caac.gov.cn

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

Year	Airplanes					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 (航空局), www.mlit.go.jp

4.4 New Zealand—Number of Aircraft by Type (2000–2016)

Year	Aircraft Type						Total Aircraft
	Airplanes by Mass				Sport	Rotorcraft	
	Below 2,721 kg	2,721–5,670 kg	5,670–13,608 kg	13,608 kg & Above			
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 [1&2]**	**Amateur-Built [1]**	**Gliders [2]**	**Other [3]**	**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**
2015	1,970	1,082	292	430	335	869	**4,978**
2016	1,981	1,091	300	469	402	874	**5,117**

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, balloons, and jetpack.

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

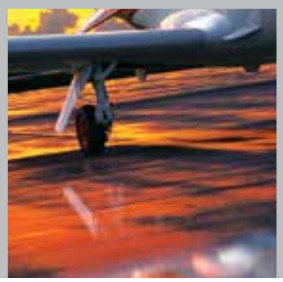
4.5 Singapore—Number of Aircraft by Type (2012–2016)

Year	Type of Aircraft				Total Aircraft
	General Aviation Airplanes		Rotorcraft	Airline	
	Piston	Turbine			
2012	23	0	2	178	**203**
2013	22	0	1	191	**214**
2014	20	0	4	200	**224**
2015	22	0	2	203	**227**
2016	15	0	1	203	**219**

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

5




Select Other GA Aircraft Registry Data for Large Fleets

5.1 Brazil—Number of Aircraft Registrations by Type (1999–2016)

Year	Aircraft Type									Total Aircraft
	Airplanes				Other Aircraft					
	Piston-Engine	Agricultural	Turboprop	Jet Turbine	Helicopters	Sailplanes	Balloons	Dirigibles	Experimental	
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	300	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**
2014	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**n/a**
2015	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	**n/a**
2016	16,503	n/a	820	2,445	1,582	592	n/a	n/a	n/a	**23,984**

The experimental category includes ultralights, balloons, gyrocopters, sailplanes, motorpowered sailplanes, dirigibles, and experimental airplanes starting in 2010.
ANAC began identification of agricultural aircraft in 2012. The data set for agricultural aircraft captures aircraft also identified in other columns.
Aircraft registration data for 2014 and 2015 was not available at time of publication.
The data for 2016 does not include aircraft that have not been classified by ANAC.

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

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	2893	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, and Aircraft Registry, www.avdex.co.za

6

U.S. Pilot and Airmen Certificate Statistics

6.1 Active FAA Certificated Pilots (1980–2016)

Year	Pilots		Students [7]	Rec. [5]	Sport [6]	Airplane [1]			Rotorcraft (Only)	Glider (Only) [2]	Lighter-Than-Air	Remote Pilot [9]	Flight Instructor [3]	Instrument Ratings [3,4]	
	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%
2015	**590,038**	6.66%	122,729	190	5,482	170,718	101,164	154,730	15,566	19,460	n/a	-	102,628	304,329	71.3%
2016	**584,362**	6.71%	128,501	175	5,889	162,313	96,081	157,894	15,518	17,991	n/a	20,362	104,224	302,241	67.2%

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.
9. The FAA created the Remote Pilot operator certificate in 2016. The Remote Pilot operator data is not part of the total number of pilots.

Source: FAA

6.2 **Active FAA Certificated Pilots and Flight Instructors by State and Region (as of December 31, 2016)**

FAA Region and State	Total Pilots	Students	Recreational	Sport	Airplane			Rotor, Glider, & Balloon	Remote Pilot	Flight Instructor[1]
					Private	Commercial	Airline Transport			
Total[2]	**584,361**	**128,501**	**178**	**5,889**	**174,517**	**112,056**	**163,220**	**80,142**	**20,362**	**104,382**
United States – Total[3]	**541,338**	**118,047**	**176**	**5,864**	**166,294**	**95,882**	**155,075**	**75,675**	**20,236**	**101,596**
Non-U.S. Total[5]	**43,023**	**10,454**	**2**	**25**	**8,223**	**16,174**	**8,145**	**4,467**	**126**	**2,786**
Alabama	6,992	1,506	4	71	2,067	1,880	1,464	1,767	324	1,571
Alaska	7,864	1,327	1	55	2,679	1,563	2,239	990	169	1,404
American Samoa	5	0	0	0	0	1	4	0	0	0
Arizona	18,278	4,059	1	156	4,753	3,623	5,686	3,405	511	3,965
Arkansas	4,924	1,172	1	84	1,663	1,029	975	438	156	757
California	58,008	13,392	6	482	20,834	10,775	12,519	8,876	2,308	9,696
Colorado	17,342	3,375	4	132	4,662	2,892	6,277	2,694	663	3,756
Connecticut	4,768	905	0	28	1,659	763	1,413	694	205	875
Delaware	1,297	308	0	12	345	201	431	182	73	269
District of Columbia	558	155	0	6	199	80	118	68	31	100
Federated States of Micronesia	3	0	0	0	0	2	1	1	0	1
Florida	55,692	13,844	6	544	13,090	9,959	18,249	7,167	1,783	10,183
Georgia	17,671	3,233	5	147	4,461	2,417	7,408	2,144	564	3,390
Guam	193	25	0	0	19	21	128	28	5	51
Hawaii	3,126	667	0	14	538	678	1,229	763	164	731
Idaho	4,858	962	2	81	1,779	1,007	1,027	879	170	894
Illinois	15,902	3,302	4	279	5,022	2,417	4,878	1,724	707	3,377
Indiana	9,384	2,027	8	200	3,252	1,565	2,332	940	302	1,693
Iowa	4,863	1,039	5	101	2,071	903	744	522	224	818
Kansas	6,736	1,388	1	81	2,597	1,270	1,399	760	263	1,455
Kentucky	5,647	1,187	8	57	1,477	831	2,087	715	233	1,060
Louisiana	5,441	1,251	1	66	1,684	1,201	1,238	1,018	208	936
Maine	2,385	504	1	49	849	436	546	289	118	383
Marshall Islands	2	0	0	0	0	0	2	0	0	0
Maryland	7,636	2,208	0	86	2,258	1,252	1,832	1,067	366	1,360
Massachusetts	7,536	1,876	1	66	2,776	1,213	1,604	910	342	1,235
Michigan	13,142	2,694	9	211	4,711	2,206	3,311	1,436	529	2,493
Minnesota	11,972	2,033	1	107	3,965	1,943	3,923	992	381	2,627
Mississippi	3,967	1,036	1	30	1,134	761	1,005	442	135	646
Missouri	8,825	1,932	6	150	3,002	1,528	2,207	1,142	354	1,604
Montana	3,697	769	2	30	1,373	861	662	618	112	694
Nebraska	3,459	830	0	35	1,330	630	634	271	156	504
Nevada	7,078	1,225	0	53	1,774	1,332	2,694	1,489	247	1,537
New Hampshire	3,568	540	1	49	1,011	560	1,407	574	131	732
New Jersey	8,432	1,922	5	40	2,699	1,377	2,389	1,242	393	1,624
New Mexico	4,210	969	3	72	1,443	1,011	712	1,277	142	625
New York	15,447	4,282	16	134	5,198	2,673	3,144	2,156	710	2,605
North Carolina	13,871	2,724	5	148	4,287	2,210	4,497	1,796	607	2,665
North Dakota	3,482	856	0	23	1,101	1,179	323	230	119	496
Northern Mariana Islands	17	4	0	0	1	5	7	1	0	6
Ohio	14,712	3,100	23	243	4,985	2,308	4,053	1,735	608	2,933
Oklahoma	7,679	2,047	2	50	2,499	1,486	1,595	697	282	1,307
Oregon	8,730	1,790	4	93	3,311	1,951	1,581	1,866	374	1,693
Palau	1	0	0	0	1	0	0	1	0	0
Pennsylvania	14,553	3,048	16	186	4,655	2,334	4,314	2,269	617	2,782
Puerto Rico	1,501	549	0	49	331	220	352	153	40	214
Rhode Island	917	211	0	6	307	148	245	101	36	153
South Carolina	6,400	1,181	0	71	1,956	1,123	2,069	868	221	1,152
South Dakota	2,197	453	0	54	784	468	438	275	61	435
Tennessee	11,485	2,206	2	103	3,069	1,830	4,275	1,593	405	2,203
Texas	49,538	10,362	3	386	13,525	8,192	17,070	6,588	1,652	9,130
Utah	8,064	1,815	0	67	2,167	1,496	2,519	1,254	250	1,710
Vermont	1,227	251	0	10	464	253	249	249	54	193
Virgin Islands	172	44	0	1	51	32	44	20	1	23
Virginia	13,775	2,878	8	152	3,842	2,522	4,373	2,217	604	2,781
Washington	19,097	3,786	3	200	5,739	3,170	6,199	2,690	644	3,730
West Virginia	1,640	404	0	40	588	307	301	234	89	278
Wisconsin	8,816	1,729	5	248	3,409	1,266	2,159	752	327	1,614
Wyoming	1,827	397	2	21	726	346	335	268	62	290
AA – Americas[4]	19	1	0	0	5	5	8	7	0	8
AE – Europe and Canada[4]	275	69	0	3	56	68	79	54	2	79
AP – Pacific[4]	435	198	0	2	61	102	72	77	2	70

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, 2016)

Age Group	Type of Pilot Certificate								
	Total Pilots	Student	Recreational	Sport Pilot	Private	Commercial	Airline Transport	Remote Pilot	CFI
Total	**584,361**	**128,501**	**178**	**5,889**	**174,517**	**112,056**	**163,220**	**20,362**	**104,382**
14–15	259	259	0	0	0	0	0	0	0
16–19	16,491	12,697	3	16	3,482	293	0	214	56
20–24	57,599	31,808	28	112	14,815	10,058	778	1,388	3,637
25–29	64,176	26,837	30	201	13,698	17,703	5,707	2,397	8,101
30–34	55,351	17,693	12	239	13,167	12,011	12,229	2,761	11,884
35–39	50,246	12,314	10	234	12,342	8,997	16,349	2,564	11,919
40–44	44,770	6,212	9	292	12,577	7,513	18,167	2,217	10,691
45–49	49,254	5,571	11	427	13,322	7,417	22,506	2,143	11,642
50–54	56,377	4,962	11	676	16,929	8,214	25,585	2,094	10,614
55–59	59,558	4,069	19	933	20,822	8,966	24,749	1,746	9,733
60–64	52,066	2,847	15	993	21,015	9,275	17,921	1,425	8,703
65–69	36,580	1,798	14	807	15,516	8,598	9,847	893	7,572
70–74	23,543	954	9	560	9,758	6,762	5,500	376	5,499
75–79	11,018	328	3	266	4,382	3,574	2,465	118	2,683
80 and over	7,073	152	4	133	2,692	2,675	1,417	26	1,648

Source: FAA

6.4 Average Age of Active FAA Pilots by Category (1993–2016)

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
2015	**44.8**	31.4	44.6	56.2	48.5	45.6	49.9
2016	**44.9**	31.7	44.0	56.4	48.4	46.0	50.2

Source: FAA

6.5 **FAA Pilot Certificates Issued by Category (1978–2015)**

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
2014	49,261	698	17,795	11,396	9,803	8,840	7,749	19,481	3,754	1,072	195	5
2015	49,062	590	16,473	11,067	9,211	8,348	6,544	19,823	2,999	957	188	3

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 (2000–2016)

Year	Mechanic	Repairman	Parachute Rigger	Ground Instructor	Dispatcher	Flight Navigator	Flight Engineer	Flight Attendant [3]
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
2015	342,528	39,363	8,846	70,957	23,754	102	42,460	200,319
2016	279,435	34,411	5,851	65,053	19,758	67	35,761	212,607

1. Number of non-pilot certificates represents all certificates on record since no medical examination is required.
2. Airmen without a plastic certificate are no longer considered active by the FAA starting with the 2016 data.
3. 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.

7





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**
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**
Georgia	**18**	1	7	3	5	2	**4**	-	-	1	2	1	**-**
Germany	**322**	14	48	60	70	130	**219**	-	-	2	32	185	**2**
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
								Other			
		Total	Part 139	Total	Airports	Heliports	Seaplane Bases	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	-	-	-	-	-

Source: FAA Airport Engineering Division

7.3 U.S. Airports Ranked by Number of General Aviation Operations at Tower (2016)

Rank 2016	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	7,258	826	116,759	6,682	241,742	370,034	373,267	98.7%	378,061
2	APA	Centennial Airport, CO	42,325	40	103,482	6,392	153,848	332,111	306,087	90.0%	340,249
3	TMB	Kendall-Tamiami Executive Airport, FL	33,739	216	125,243	3,589	116,211	278,027	278,998	98.9%	282,066
4	LGB	Long Beach, CA	25,044	378	81,437	17,585	154,046	294,886	278,490	88.9%	313,421
5	PRC	Ernest A. Love Field, AZ	2,586	34	68,413	763	178,125	253,211	249,921	98.3%	254,342
6	SEE	Gillespie Field, CA	15,007	249	69,028	5,567	141,797	226,876	231,648	99.3%	233,257
7	CHD	Chandler Municipal Airport, AZ	4,482	135	73,378	2,282	141,586	221,473	221,863	98.5%	225,244
8	GFK	Grand Forks Int'l, ND	6,688	8	6,222	505	204,564	318,506	217,987	68.3%	319,178
9	VNY	Van Nuys, CA	37,376	1139	92,486	20,215	66,130	213,566	217,346	91.7%	237,102
10	FFZ	Falcon Field, AZ	3,407	98	44,890	7,772	152,579	263,118	208,746	76.4%	273,395
11	IWA	Phoenix-Mesa Gateway Airport, AZ	15,190	177	42,032	5,280	142,389	250,778	205,068	79.3%	258,492
12	MYF	Montgomery Field Airport, CA	24,177	105	73,252	8,087	98,680	200,668	204,301	97.5%	209,453
13	FRG	Republic Airport, NY	14,259	162	84,176	5,065	100,569	209,978	204,231	91.6%	222,887
14	VRB	Vero Beach Municipal Airport, FL	20,841	164	76,603	2,717	102,807	204,611	203,132	97.9%	207,583
15	SNA	John Wayne-Orange County, CA	33,100	676	66,875	9,857	91,184	300,354	201,692	64.4%	313,085
16	DAB	Daytona Beach, FL	21,835	359	30,210	3,226	143,608	307,333	199,238	63.8%	312,292
17	HIO	Portland-Hillsboro Airport, OR	13,668	120	64,110	3,426	115,332	197,763	196,656	97.7%	201,382
18	HWO	North Perry Airport, FL	2,994	2594	59,188	10,132	113,985	176,306	188,893	98.9%	190,955
19	SFB	Sanford-Orlando, FL	9,595	25	15,565	945	159,684	289,312	185,814	64.0%	290,385
20	CNO	Chino, CA	15,343	803	54,070	8,422	106,947	177,577	185,585	99.2%	187,100
21	RVS	Richard Lloyd Jones, OK	14,529	46	54,719	953	110,251	182,050	180,498	98.0%	184,238
22	PMP	Pompano Beach Airpark, FL	5,428	10397	46,763	20,220	92,998	145,660	175,806	94.2%	186,534
23	FXE	Fort Lauderdale Executive Airport, FL	36,651	466	75,920	13,047	34,144	160,295	160,228	91.9%	174,391
24	RHV	Reid-Hillview, CA	2,008	3865	53,646	4,796	95,541	151,701	159,856	82.1%	194,744
25	PAO	Palo Alto Airport, CA	5,611	1839	51,040	4,782	95,702	153,238	158,974	95.5%	166,400
26	FPR	Saint Lucie County Int'l Airport, FL	21,833	287	52,009	2,365	79,286	155,028	155,780	98.6%	157,988
27	SDL	Scottsdale Airport, AZ	32,070	182	51,880	7,587	58,270	158,295	149,989	89.9%	166,776
28	CRQ	McClellan-Palomar Airport, CA	38,458	152	48,687	5,425	56,363	153,016	149,085	92.4%	161,266
29	PDK	DeKalb-Peachtree Airport, GA	47,282	514	50,827	11,284	38,913	158,525	148,820	85.1%	174,824
30	FTW	Fort Worth Meacham Interntional Airport, TX	24,953	1077	38,950	8,552	74,009	148,316	147,541	90.8%	162,536
31	FIN	Flagler County Airport, FL	4,722	0	34,831	363	105,357	146,830	145,273	98.6%	147,323
32	VGT	North Las Vegas Airport, NV	10,002	408	47,033	2,703	82,996	159,430	143,142	86.6%	165,236
33	BFI	Boeing Field, King County Airport, WA	28,112	1560	55,441	13,745	43,992	169,641	142,850	57.4%	249,075
34	CMA	Camarillo Airport, CA	13,605	5111	55,575	6,174	62,343	135,517	142,808	94.4%	151,281
35	DTO	Denton Municipal Airport, TX	9,644	10	51,870	2,282	73,279	136,656	137,085	98.6%	139,014
36	BJC	Rocky Mountain Metropolitan Airport, CO	13,841	470	51,048	3,738	67,619	141,716	136,716	93.4%	146,384
37	EVB	New Smyrna Beach Municipal, FL	7,569	137	39,731	3,060	82,808	132,000	133,305	98.5%	135,283
38	SGJ	North East Florida Regional Airport, FL	12,372	182	48,019	1,209	69,215	141,398	130,997	91.2%	143,610
39	TOA	Zamperini Field Airport, CA	7,099	171	52,990	11,935	54,366	115,188	126,561	98.9%	127,962
40	RNT	Renton Municipal Airport, WA	4,005	51	43,219	4,477	73,547	123,013	125,299	97.9%	127,998
41	HWD	Hayward Executive Airport, CA	8,199	7228	36,537	10,403	62,506	108,701	124,873	70.0%	178,337
42	OPF	Opa-Locka Executive Airport, FL	35,871	2	38,063	10,958	36,585	130,070	121,479	86.0%	141,195
43	MRI	Merrill Field Airport, AK	1,297	80	56,345	3,448	59,741	130,423	120,911	87.9%	137,613
44	TTD	Portland-Troutdale Airport, OR	1,370	12	31,288	2,190	86,047	119,110	120,907	98.9%	122,310
45	TKI	McKinney National Airport, TX	9,196	1	30,028	2,623	78,657	120,470	120,505	97.5%	123,533
46	LAL	Lakeland Linder Regional Airport, FL	15,158	1020	45,380	6,486	52,411	115,571	120,455	97.8%	123,155
47	CRG	Jacksonville Executive Airport at Craig, FL	21,549	228	32,508	1,786	63,288	130,822	119,359	83.2%	143,376
48	LVK	Livermore Municipal Airport, CA	7,718	22	45,400	3,386	62,798	118,099	119,324	98.2%	121,531
49	PTK	Oakland Country International Airport, MI	26,111	357	40,180	2,653	48,813	125,132	118,114	92.1%	128,282
50	CCR	Bucchanan Field Airport, CA	7,631	33	37,661	2,499	69,601	119,609	117,425	95.9%	122,435

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 (1975–2016)**

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)
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
2015	957	n/a	22	517	4	n/a	n/a	13,844	230	634
2016	957	n/a	22	517	4	n/a	n/a	14,245	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 list 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 3,767 are LPV in the 2016 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
Total Civil Public Use Airports	**5,294**	**5,286**	**5,286**	**5,288**	**5,270**	**5,233**	**5,221**	**5,202**	**5,178**	**5,175**	**5,172**
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
Total Civil Private Use Airports	**14,062**	**14,286**	**14,295**	**14,532**	**14,584**	**14,757**	**14,839**	**14,451**	**14,298**	**14,353**	**14,339**
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
Total Airports by Type	**19,356**	**19,572**	**19,581**	**19,820**	**19,854**	**19,983**	**20,341**	**19,930**	**19,750**	**19,802**	**19,782**
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

8





Safety and Accident Statistics

8.1 U.S. General Aviation Accidents, Fatal Accidents, and Fatalities (1985–2016)

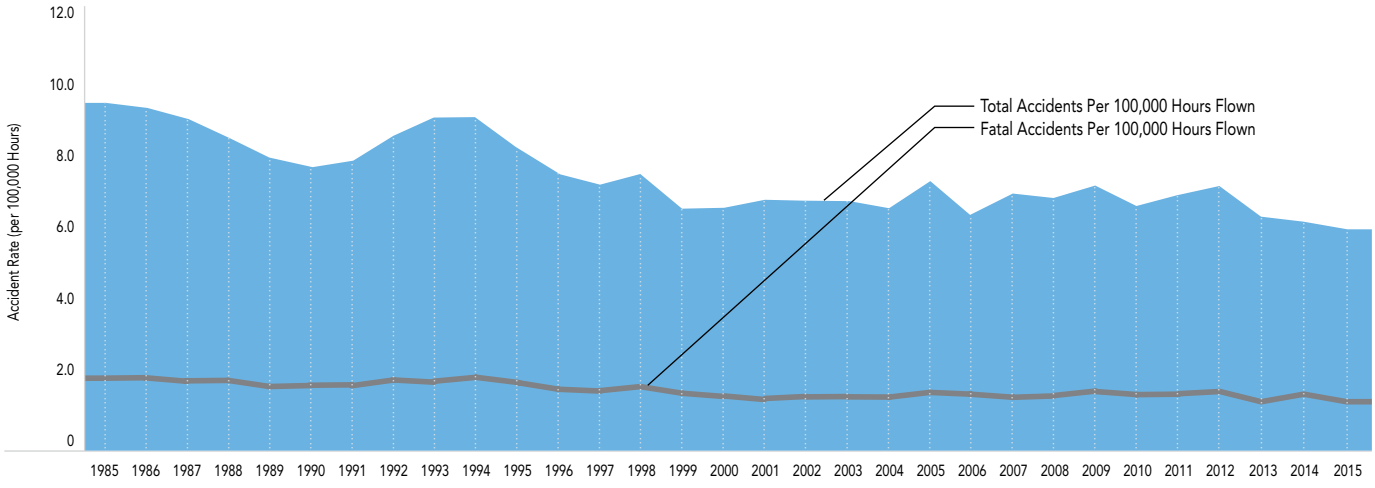
Year	Accidents		Accidents		Fatalities		Flight Hours	Rate	
	All	Excluded	Fatal	Excluded	Total	Aboard		All	Fatal
1985	2,739	11	498	6	956	945	28,322,000	9.63	1.73
1986	2,581	11	474	5	967	879	27,073,000	9.49	1.73
1987	2,495	18	446	7	837	822	26,972,000	9.18	1.62
1988	2,388	13	460	4	797	792	27,446,000	8.65	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	1,568	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	3	271	2	458	455	21,688,000	6.63	1.24
2011	1,471	2	270	1	458	447	21,488,000	6.84	1.24
2012	1,473	1	273	1	438	438	20,881,000	7.04	1.30
2013	1,224	3	222	3	391	386	19,492,000	6.26	1.12
2014	1,223	0	257	0	424	414	19,617,000	6.18	1.29
2015	1,209	5	229	4	376	373	20,576,000	5.85	1.09
2016P	1,123	n/a	191	n/a	n/a	n/a	n/a	n/a	n/a

P = Preliminary

Source: NTSB, FAA, and GAMA

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.

FIGURE 8.1 **Accident Rates in U.S. General Aviation (1985–2015)**



Source: NTSB, FAA, and GAMA

8.2 U.S. On-Demand FAR Part 135 Accidents, Fatal Accidents, and Fatalities (1990–2016)

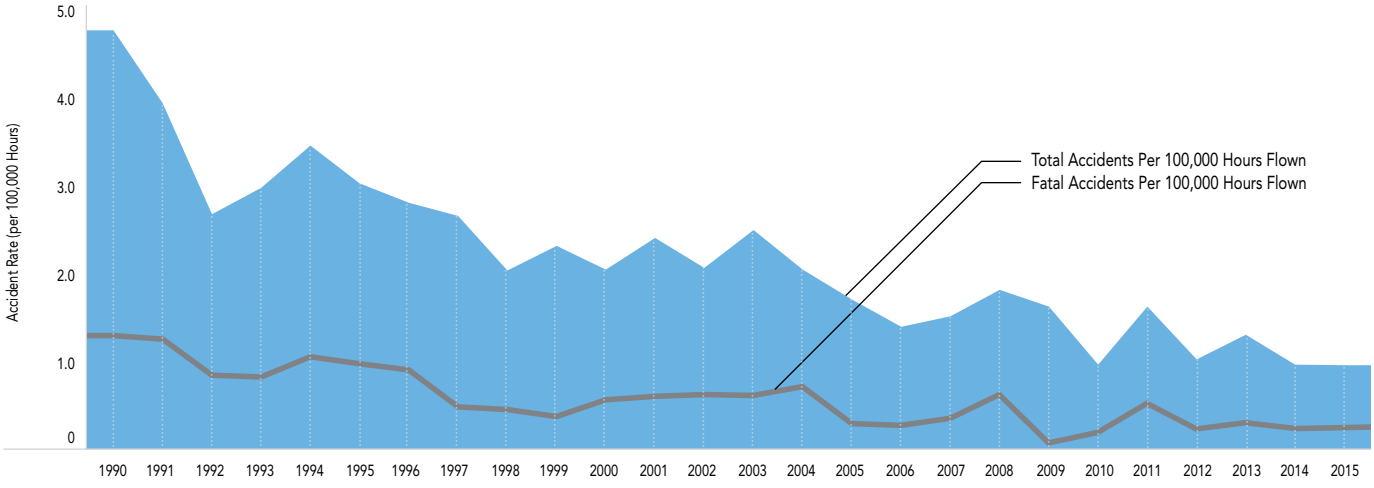
Year	Accidents		Accidents		Fatalities		Flight Hours	Rate	
	All	Excluded	Fatal	Excluded	Total	Aboard		All	Fatal
1990	107	0	29	0	51	49	2,249,000	4.76	1.29
1991	88	0	28	0	78	74	2,241,000	3.93	1.25
1992	76	0	24	0	68	65	2,844,000	2.67	0.84
1993	69	0	19	0	42	42	2,324,000	2.97	0.82
1994	85	0	26	0	63	62	2,465,000	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	3,205,000	1.81	0.62
2009	47	0	2	0	17	14	2,901,000	1.62	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	36	0	8	0	12	12	3,522,000	1.02	0.23
2013	44	0	10	0	25	25	3,384,000	1.30	0.30
2014	35	0	8	0	20	20	3,654,000	0.96	0.23
2015	38	0	7	0	27	27	3,566,000	1.07	0.20
2016P	22	n/a	5	n/a	n/a	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

FIGURE 8.2 **Accident Rates in U.S. On-Demand FAR Part 135 Operations (1990–2015)**



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.
General aviation accident data is not available for years after 2013 at this time.

Source: EASA Annual Safety Review

8.4 European Union General Aviation and Aerial Work Accidents (2014)

Year	General Aviation												Commercial								All Aircraft Accidents		
	Aeroplane		Rotorcraft		Glider		Microlight		Balloon		Business Aviation		Aerial Work				Commercial Air Transport						
											Aeroplane		Aeroplane		Rotorcraft		Aeroplane		Rotorcraft				
	Total	Fatal	Total	Fatal	Total	Fatal	Total	Fatal	Total	Fatal	Total	Fatal	Total	Fatal	Total	Fatal	Total	Fatal	Total	Fatal	Total	Fatal	Fatalities
2014	421	53	73	9	195	18	204	30	11	0	3	1	24	5	11	2	n/a	n/a	6	1	948	119	197

EASA has changed how the agency publishes safety statistics. Table 8.4 shows the new format for 2014 while Table 8.3 shows the historical data for 2006–2013. The Commercial Air Transport Aeroplane data provided by EASA does not differentiate between fixed-wing aeroplane operations using general aviation versus larger aircraft and shown as "n/a" in the table.

Source: EASA Annual Safety Review

2017 Executive Committee

Simon Caldecott
PIPER AIRCRAFT, INC.

GAMA Chairman

Phil Straub
GARMIN INTERNATIONAL

GAMA Vice Chairman

Mark Burns
GULFSTREAM AEROSPACE CORPORATION

Airworthiness & Maintenance Policy Committee Chairman

Nicolas Chabbert
DAHER

Safety & Accident Investigation Committee Chairman

David Coleal
BOMBARDIER BUSINESS AIRCRAFT

Environment Committee Chairman

Aaron Hilkemann
DUNCAN AVIATION

Immediate Past Chairman

David Paddock
JET AVIATION

Communications Committee Chairman

Simon Pryce
BBA AVIATION

Global Markets Committee Chairman

Rhett Ross
CONTINENTAL MOTORS, INC.

Policy & Legal Issues Committee Chairman

John Uczekaj
ASPEN AVIONICS

Flight Operations Policy Committee Chairman

Chuck Wiplinger
WIPAIRE, INC.

Technical Policy Committee Chairman

Jim Ziegler
GREENWICH AEROGROUP

Security Issues Committee Chairman

GAMA Staff

Pete Bunce
President & CEO

Jahan Ahmad
Director, Accounting

Jonathan Archer
Director, Engineering & Airworthiness

Gregory J. Bowles
Vice President, Global Innovation & Policy

Victoria Collins
Executive Assistant

Brian Davey
Director, European & International Affairs

Walter L. Desrosier
Vice President, Engineering & Maintenance

Paul H. Feldman
Vice President, Government Affairs

Bree Foran
Director, Meetings & Membership Services

Lauren L. Haertlein
Director, Safety and Regulatory Affairs

Jens C. Hennig
Vice President, Operations

Amanda Joyner
Director, Government Affairs

Kyle Martin
Director, European Regulatory Affairs

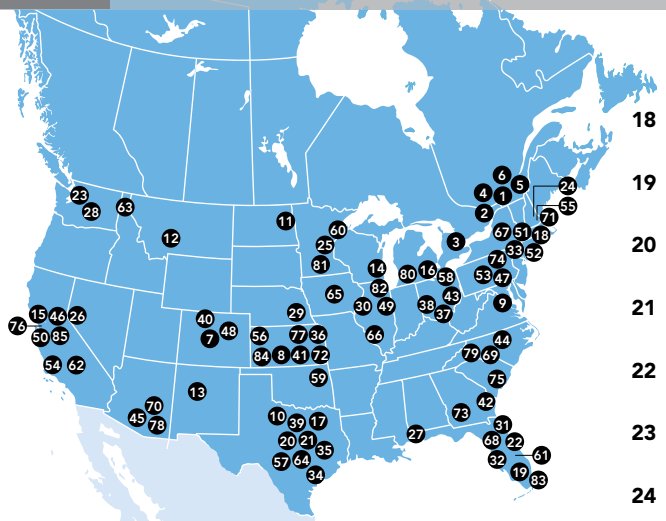
Mary Lynn J. Rynkiewicz
Director, Communications

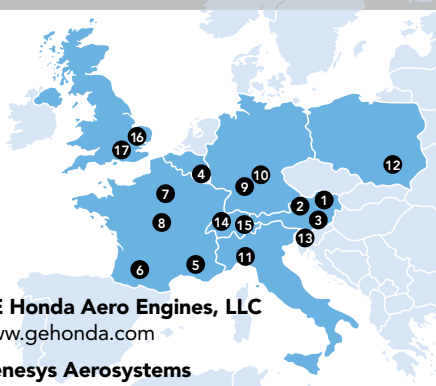
Joe Sambiase
Director, Maintenance & Airworthiness

Edward T. Smith
Senior Vice President, International & Environmental Affairs

Frank Taylor
Staff Assistant

GAMA Member Companies





NORTH AMERICA

Canada

1 **Bombardier Business Aircraft**
www.aerospace.bombardier.com

2 **CAE SimuFlite**
www.cae.com

3 **Celestica**
www.celestica.com

4 **Esterline CMC Electronics**
www.esterline.com

5 **Pratt & Whitney Canada**
www.pwc.ca

6 **Thales Canada, Inc.**
www.thalesgroup.com/canada

United States

7 **Aero Electric Aircraft Corp. (AEAC)**
www.sunflyer.com

8 **Aero-Mach Labs**
www.aeromach.com

9 **Airbus Group—E-Fan**
www.northamerica.airbus-group.com

10 **Air Tractor, Inc.**
www.airtractor.com

11 **Appareo**
www.appareo.com

12 **Ascent Vision Technologies, LLC**
www.ascentvision.com

13 **Aspen Avionics**
www.aspenavionics.com

14 **Astronautics Corp. of America**
www.astronautics.com

15 **ATP**
www.atp.com

16 **Avfuel Corporation**
www.avfuel.com

17 **Aviall, Inc.**
www.aviall.com

18 **Avidyne Corporation**
www.avidyne.com

19 **B/E Aerospace, Inc.**
www.beaerospace.com

20 **Bell Helicopter**
www.bellhelicopter.com

21 **Blackhawk Modifications, Inc.**
www.blackhawk.aero

22 **Bloomington Corporation**
www.bloomingtoncorp.com

23 **Boeing Business Jets**
www.boeing.com/commercial/bbj

24 **CAMP Systems International**
www.campsystems.com

25 **Cirrus Aircraft**
www.cirrusaircraft.com

26 **Click Bond, Inc.**
www.clickbond.com

27 **Continental Motors**
www.continentalmotors.aero

28 **CubCrafters, Inc.**
www.cubcrafters.com

29 **Duncan Aviation**
www.duncanaviation.com

30 **Elliott Aviation**
www.elliottaviation.com

31 **Embry-Riddle Aeronautical University**
www.erau.edu

32 **Extant Aerospace**
www.extantcomponentsgroup.com

33 **FlightSafety International, Inc.**
www.flightsafety.com

34 **ForeFlight, LLC**
www.foreflight.com

35 **FreeFlight Systems**
www.freeflightsystems.com

36 **Garmin International, Inc.**
www.garmin.com

37 **GE Aviation**
www.geaviation.com

38 **GE Honda Aero Engines, LLC**
www.gehonda.com

39 **Genesys Aerosystems**
www.genesys-aerosystems.com

40 **Gogo Business Aviation**
business.gogoair.com

41 **Greenwich AeroGroup**
www.greenwichaerogroup.com

42 **Gulfstream Aerospace Corporation**
www.gulfstream.com

43 **Hartzell Propeller Inc.**
www.hartzellprop.com

44 **Honda Aircraft Company**
www.hondajet.com

45 **Honeywell—Business & General Aviation**
www.honeywell.com

46 **ICON Aircraft, LLC**
www.iconaircraft.com

47 **Innovative Solutions & Support, Inc.**
www.innovative-ss.com

48 **Jeppesen**
www.jeppesen.com

49 **Jet Support Services, Inc.**
www.jetsupport.com

50 **Joby Aviation**
www.joby.aero

51 **Kaman Aerospace Group**
www.kaman.com

52 **L-3 Technologies, Inc.—Products Group**
www.L-3com.com

53 **Lycoming Engines**
www.lycoming.com

54 **Meggitt Safety Systems, Inc.**
www.meggitt.com

55 **Meggitt Sensing Systems**
www.meggittsensingsystems.com

56 **Mid-Continent Instruments and Avionics**
www.mcico.com

57 **Mooney International Corp.**
www.mooney.com

58 **Nextant Aerospace, LLC**
www.nextantaerospace.com

59 **NORDAM**
www.nordam.com

60 **ONE Aviation**
www.oneaviation.aero

61 **Piper Aircraft, Inc.**
www.piper.com

62 **PPG Aerospace**
www.ppg.com

63 **Quest Aircraft Company**
www.questaircraft.com

64 **Redbird Flight Simulations, Inc.**
www.redbirdflight.com

65 **Rockwell Collins, Inc.**
www.rockwellcollins.com

66 **Sabreliner Aviation**
www.sabreliner.com

67 **Safe Flight Instrument Corporation**
www.safeflight.com

68 **SimCom International**
www.simulator.com

69 **SmartSky Networks, LLC**
www.smartskynetworks.com

70 **StandardAero**
www.standardaero.com

71 **Terrafugia**
www.terrafugia.com

72 **Textron Aviation**
www.txtav.com

73 **Thrush Aircraft, Inc.**
www.thrushaircraft.com

74 **Triumph Group, Inc.**
www.triumphgroup.com

75 **TRU Simulation + Training**
www.trusimulation.com

76 **Uber Technologies**
www.uber.com/elevate

77 **Ultra-ICE Corporation**
www.ultra-ice.com

78 **Universal Avionics Systems Corp.**
www.uasc.com

79 **UTC Aerospace Systems**
www.utcaerospacesystems.com

80 **Williams International**
www.williams-int.com

81 **Wipaire, Inc.**
www.wipaire.com

82 **Woodward, Inc.**
www.woodward.com

83 **World Fuel Services**
www.wfscorp.com

84 **Yingling Aviation**
www.yinglingaviation.com

85 **Zee Aero**
www.zee.aero

SOUTH AMERICA

Brazil

1 **Embraer**
www.embraer.com

EUROPE

Austria

1 **Bosch General Aviation Technology GmbH**
www.bosch-aviation.com

2 **BRP Powertrain-Rotax**
www.rotax.com

3 **Diamond Aircraft Industries**
www.diamondair.com

Belgium

4 **Luxaviation Group**
www.luxaviation.com

France

5 **Airbus Helicopters, Inc.**
www.airbushelicoptersinc.com

6 **DAHER**
www.tbm.aero

7 **Dassault Falcon**
www.dassaultfalcon.com

8 **SMA**
www.smaengines.com

Germany

9 **Flight Design GmbH**
www.flightdesign.com

10 **Siemens AG**
www.siemens.com

Italy

11 **Piaggio Aerospace**
www.piaggioaerospace.it

Poland

12 **Aero AT**
www.at-3.com

Slovenia

13 **Pipistrel**
www.pipistrel.si

Switzerland

14 **Jet Aviation**
www.jetaviation.com

15 **Pilatus Aircraft, Ltd.**
www.pilatus-aircraft.com

United Kingdom

16 **BBA Aviation**
www.bbaaviation.com

17 **Rolls-Royce**
www.rolls-royce.com

ASIA

China

1 **AVIC General**
www.avic.com

Israel

2 **EViation Ltd.**
www.eviation.co

AUSTRALIA

1 **Mahindra Aerospace**
www.mahindraaerospace.com

General Aviation Manufacturers Association

U.S. HEADQUARTERS
1400 K Street NW,
Suite 801
Washington, DC 20005
+1 202-393-1500

EUROPEAN OFFICE
Rue de la Loi 67/3
Brussels 1040, Belgium
+32 2 550 3900

www.GAMA.aero