

General Aviation Manufacturers Association



2017 ANNUAL REPORT

General Aviation:

- Includes over 446,000 general aviation aircraft flying worldwide today, ranging from two-seat training aircraft and utility helicopters to intercontinental business jets, of which over 211,000 aircraft are based in the United States and over 136,000 aircraft are based in Europe.
- Supports \$219 billion in total economic output and 1.1 million total jobs in the United States.
- Flies over 24.8 million flight hours, of which two-thirds are for business purposes, in the U.S.
- 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.



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



GAMA is an international trade association representing more than 100 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 website at www.GAMA.aero and look for us on Facebook, Twitter, Instagram, LinkedIn, and YouTube.

Welcome from GAMA's Chairman

Since its inception in 1970, GAMA has been the only trade association in the world to provide quarterly and annual updates on the health of the global business and general aviation industry. As GAMA's Chairman this year, I'm proud to present to you our annual report, which provides a look at how the industry performed in 2017, a review of the most exciting developments that took place in the legislative, regulatory and policy arenas last year as well as relevant industry data for the United States, Europe, and several other regions.

In the next few pages, you'll find highlights of GAMA's activities in 2017. It's clear from this review that GAMA works tirelessly every day to advance the priorities of its member companies, and ensure global leaders, the public and the press understand the importance and value of our industry. As you'll read, our work resulted in aviation agencies and policymakers around the world taking steps to streamline certification validations and safety recognitions, with more planned for next year. We also successfully fought efforts in the U.S. Congress to privatize the nation's air traffic control system, while continuing to push for meaningful certification and regulatory reform, and saw revisions to the EASA basic regulation adopted, providing a scalable framework for general aviation. Additionally, we added a dozen new members, including several more associate members, which represent the burgeoning segment of the general aviation market and its evolution towards simplified operations. These are just a few examples of the industry advancements GAMA's work contributed to in the past year.

Looking ahead, this year GAMA will continue to be the premier advocate for general aviation manufacturers, their suppliers, and those who maintain, repair and overhaul general aviation aircraft around the world. Guided by our organizational mission and vision,



listed below, we will also continue to be a global resource for industry data, utilizing our redesigned website that houses important statistics such as the information in this report, government resources, career information for the next generation of general aviation leaders and more.

As a leader in the general aviation manufacturing industry and a member of the aviation community for over 20 years, I see the value of my GAMA

membership every day, and this report reflects that. I'm so proud of GAMA's accomplishments in 2017 and enthusiastic about what lies ahead in 2018. Thank you for your support.

Best,

A handwritten signature in black ink that reads "Phil Straub".

Phil Straub

Executive Vice President and Managing Director, Garmin Aviation

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



GAMA Celebrates Long-Awaited Acceptance of Single-Engine Commercial Aeroplane Operations in Europe

In March, GAMA welcomed the European Union (EU)'s adopted rules for Commercial Air Transport (CAT) operations using Single-Engine Turbine aeroplanes at night or in Instrument Meteorological Conditions (SET-IMC) in Europe.

Marking the end of a 20-year effort by industry and regulators, the publication of these rules opens new markets and stands to improve connectivity across the continent. Europe is now aligned with the International Civil Aviation Organization's (ICAO) standards for CAT operations.

Work on the regulatory framework for single-engine commercial operations began in the early 1990s. Common around the world, such operations are based on ICAO standards issued in 2005. GAMA, and several of the association's members, participated in a rulemaking group created by EASA in 2012 to help develop the agency's regulatory framework.

"The EU's acceptance of CAT operations has been a long-awaited moment for general aviation," GAMA President and CEO Pete Bunce said. "We are very pleased to see Europe joining other regions in permitting this important form of transport."

The new regulation is based on rigorous safety analysis, and contains all the necessary safeguards to facilitate this form of passenger transport. It will greatly facilitate overnight cargo delivery and help provide connectivity to Europe's most remote regions.

"We applaud the leadership shown by the European Aviation Safety Agency (EASA) in guiding this important safety framework forward, along with many dedicated individuals who helped forge this rule over many years," continued Bunce. "It will be a welcome development for those underserved by commercial routes to date."

ICAO's final approval today of aviation's first CO2 emission standard for airplanes is a milestone that enshrines aviation manufacturers' commitment to mitigate our industry's impact on climate change.

GAMA Welcomes New ICAO Standard to Reduce Carbon Emissions from Aircraft

GAMA also welcomed in the spring of 2017 the Council of the International Civil Aviation Organization's (ICAO) approval of the first international carbon dioxide (CO2) emission standard for aircraft. This step means that ICAO's 191-member states can now adopt and implement the new standard in their national regulations.

"ICAO's final approval today of aviation's first CO2 emission standard for airplanes is a milestone that enshrines aviation manufacturers' commitment to mitigate our industry's impact on climate change," said GAMA President and CEO Pete Bunce. "We are proud of the important leadership role that general aviation manufacturers played in developing the new standard over the past six years through collaboration with global authorities and civil society stakeholders."

The standard applies to new-design large airplanes starting in 2020, and to smaller new-design airplanes, including business jets, from 2023 onward. All covered in-production airplanes must meet the standard by 2028, marking the first time an international environmental standard in aviation will apply to in-production airplanes. Small turbine-powered airplanes under 5,700 kilograms (12,500 pounds) maximum take-off mass (MTOM) are exempted, as are piston-engine airplanes and turboprops below 8,618 kg (19,000 pounds) MTOM.

The ICAO Council's decision follows a February 2016 recommendation by ICAO's Committee on Aviation Environmental Protection (CAEP) regarding the technical aspects of the new standard.

GAMA member companies contributed significant resources to the technical discussions that resulted in the development of the new standard.

Along with alternative fuels, the CO₂ standard forms part of the technology pillar of climate action by the global aviation industry. The other pillars are infrastructure improvements (air traffic control modernization), operational efficiencies, and market-based measures.

GAMA Announces FAA and Industry Update to Product Certification Guide

In May, GAMA, along with the Aircraft Electronics Association (AEA), Aerospace Industries Association (AIA) and the United States (U.S.) Federal Aviation Administration (FAA), announced an updated third edition of *The FAA and Industry Guide to Product Certification*. The last version of the guide was published in 2004.

A group comprised of representatives from 12 organizations worked over 18 months to improve the guide and produce the third edition. The organizations are: AEA, AIA, ALOFT AeroArchitects, Bell Helicopter, FAA, GAMA, Garmin, GE Aviation, Gulfstream Aerospace, Honeywell Aerospace, Textron Aviation and The Boeing Company. AEA, AIA, GAMA and FAA sponsor the guide.

The updated guide will help institutionalize best practices and a new operating norm for FAA, companies



In May, GAMA joined the industry and FAA in announcing an updated third edition of The FAA and Industry Guide to Product Certification. The last version of the guide was published in 2004.

and applicants that will prove to be foundational in reaching the next level of safety and certification process effectiveness and efficiency. It incorporates changes based on lessons learned and the most recently published FAA policy guidance. The guide also establishes principles and guidance for how an applicant and the FAA can transition to a state where there is progressively less direct involvement of the FAA in detailed compliance activities, increasing the efficiency of the process while maintaining the same high-level of safety.

There have been significant changes in type certification over the last 10-to-15

We're proud to work with the FAA and industry to update this guide, and help implement these improvements to ensure the certification process becomes more efficient and consistent, while keeping safety as the number one priority.

years that improve the efficiency and effectiveness of certification and design approval processes and enhance product safety. The revised guide addresses the impact of those changes and assists the stakeholders in taking full advantage of the benefits they offer.

"Clarifying the roles and responsibilities of industry and FAA oversight offices and facilitating a shift to a systems approach to product certification and safety oversight was a recommendation of the FAA Aircraft Certification Process Review and Reform report to Congress and the Part 21/Safety Management Systems Aviation Rulemaking Committee," said GAMA President and CEO Pete Bunce. "We're proud to work with the FAA and industry to update this guide, and help implement these improvements to ensure the certification process becomes more efficient and consistent, while keeping safety as the number one priority."

The revised guide introduces some significant changes to the Partnership For Safety Plan (PSP), a written agreement to define a working relationship between an applicant for a product certification or approval and the applicable organizations of the FAA. The PSP will now provide high-level agreements on how the FAA and applicant will conduct business, instead of providing specific details on how the parties will work together on specific issues, creating a more efficient, more consistent process.

GAMA's Membership Continues Growing

Throughout the course of the year, GAMA proudly added several new member companies and associate member companies. Full member companies include CAMP Systems International, CiES, FlightAware, Meiya Group Global, Pipistrel, Siemens AG, Tamarack Aerospace Group and Unitech Aerospace.

New associate member companies include Ascent Vision Technologies, Empirical Systems Aerospace, Inc., Piasecki Aircraft, SmartSky Networks, Lilium and Uber. GAMA created the associate member 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 hybrid and electric propulsion technology to benefit general aviation.

2017 IN REVIEW

GAMA Hosts the Fifth Annual Aviation Design Challenge

2017 marked the fifth annual GAMA Aviation Design Challenge, which helps promote U.S. high school students' knowledge of science, technology, engineering and mathematics (STEM) skills through aviation. Over the course of the winter and spring, students in 93 high schools spanning 31 states and Washington, DC, learned the basics of aerospace engineering and aviation flight using Fly to Learn curriculum and software powered by X-Plane. They then applied what they learned to modify a Cessna 172SP virtual airplane, using simulator software, and took part in a virtual fly-off.

In May, GAMA judges declared Olney High School, located in Olney, Texas, the winning team. Olney, Texas, is also home to GAMA member company Air Tractor. When Air Tractor President and GAMA Board Member Jim Hirsch heard that the winning team was based in his company's hometown, he went to the high school and personally delivered the good news to the team and their teacher. One month later, students Amber McCutcheon, Kodee Scott, Michael Gomez and Bryant Castro, along with their teacher Sabrina Laurent, made the trip to Arlington, Washington to claim the prize: experiencing general aviation manufacturing firsthand.

"Over the past five years, I've watched talented and enthusiastic young students



develop their skills and increase their confidence in just two weeks as they build an airplane," said GAMA President and CEO Pete Bunce. "Not only do they learn how to build a plane, but they also learn valuable life skills in public-speaking, teamwork, and critical thinking, as well as about general aviation manufacturing professions they may not have otherwise known they could pursue. This is all made possible by our tremendous sponsors, who I cannot thank enough for their support.

From June 20 to July 1, the students worked side-by-side with staff from Glasair Aviation and GAMA, along with the builder Ken Baur, and his son, Dennis, to help build a Glasair Sportsman. 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 gear and attaching the propeller. Before the students left, they saw the airplane taxi for the first time. The team was also fortunate enough during their two-week experience in Arlington to have two of the sponsoring GAMA member companies, Click Bond Inc., and Siemens, send members of their executive teams and staff to the build to see the

students in action and talk to them about aerospace manufacturing.

The Aviation Design Challenge has a great track record of inspiring young people to get involved in aviation or enter the aviation field—regardless of whether the team they were on won. The 2017 winning team was the first ever to include two girls on it, one of whom has gone on to study pre-engineering at South Plains College in Lubbock, Texas, with plans to transfer to Texas Tech University to study architecture and engineering. One of the students from a 2017 competing team based in Orange, Florida, is now attending Embry Riddle Aeronautical University. He plans to join the Army and become a helicopter pilot. Sophomores on the 2017 competing team from Dunlap High School in Illinois were so excited about aviation after competing in the Aviation Design Challenge that they started an aviation club at their school. The club now has over 35 members who have reached out to community groups and formed partnerships for activities and field trips to increase student awareness of opportunities in the aviation field.

GAMA thanks the following companies for their generous sponsorship in making the 2017 Aviation Design Challenge possible: BBA Aviation, Bose Corporation, Click Bond, Inc., Embraer, Garmin International, Glasair Aviation, Gulfstream Aerospace Corporation, Jeppesen, Jet Aviation, Jet Support Services International, Redbird Flight Simulations, Siemens, Textron Aviation and Wipaire, Inc.

ABOVE: Siemens Government Technologies President and CEO Barbara Humpton (center) with the students, their teacher (far right) and chaperone (far left) on day three of the build.

LEFT: Click Bond, Inc. sent a team of staff to visit the build.



Implementation of Global Rule Rewrites for Small Airplanes

One of the most significant rule rewrites the aviation regulatory agencies have ever performed was accomplished in the summer of 2017. The change will allow manufacturers and suppliers of products and technologies for small airplanes to develop and deliver innovative products to their customers more quickly and better leverage new technologies.

GAMA's efforts to reform the design criteria for general aviation airplanes recently came to fruition with the United States and Europe implementing foundational rule changes, in the Federal Aviation Administration (FAA) Part 23 and European Aviation Safety Agency (EASA) CS-23, respectively. Rather than having to comply with overly prescriptive design requirements, manufacturers can now more nimbly respond in a cost-effective manner through performance-based airworthiness safety rules and consensus standards for compliance. Because

these amended rules rely upon global certification standards, the overall result is the elimination of regulatory barriers and the acceptance of safe and modern airplanes and products worldwide.

Leading to the implementation date of the Part 23 rule rewrite, GAMA worked with the FAA to host a series of training sessions throughout the U.S., including one as part of the first-ever Uber Elevate Summit in April. The training sessions were widely attended, indicating the high-level of interest in what the amended rule means for the industry.

"GAMA is proud to continue championing this industry-changing rule through our training sessions," said GAMA President and CEO Pete Bunce. "They will help ensure the aviation community understands the full and immediate benefits of the new regulatory environment in August, and highlight the possibilities of what could be, if this same type of risk based international certification rulemaking approach is extended in the future to rotorcraft and transport category fixed wing aircraft."

Other leading aviation authorities are expected to follow suit and implement similar rules as Part 23 and CS-23, creating a truly global framework. GAMA also intends to support similar training sessions in Brazil, Canada, China and Europe in 2018.

ABOVE: EASA Certification Director Trevor Woods (right), joined Piper Aircraft's Simon Caldecott (left), Flight Design Germany's Matthias Betch (second from left) and Pipistrel's Ivo Boscarol (second from right) in announcing the CS-23 rule finalization. Caldecott is a former GAMA Chairman.

LEFT: 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 Part 23 rule finalization. Brown, Caldecott and Mottier are former GAMA Chairmen.



The Dawn of Hybrid and Electric Propulsion and Automation

2017 was a remarkable year for electric propulsion and increased automation in aviation. From the world's first all-electric airshow in Aero Friedrichshafen, Germany, to the birth of the electric vertical takeoff and landing industry, the emergence of this exciting revolution is brought about by the convergence of technology, regulatory flexibility and evolving public attitudes.

Rapid advances in microelectronics, software, battery capabilities and electric motors have awakened a new era of aircraft design. With the added degrees of freedom these technologies bring to aerospace design, these are truly exciting days to be in aerospace manufacturing!

Global regulatory reforms are allowing designers to begin certifying innovations which would have been mired in paperwork and process just a year ago. The U.S. Small Airplane Revitalization Act of 2013 and the implementation of the global aviation regulatory reforms like FAA Part 23 and EASA CS-23 now allow for electric propulsion, increased automation and a range of important new safety and technological innovations.

GAMA is proud to help lead the way in this growing area of the industry through the work of its Electric Propulsion and Innovation Committee (EPIC), assuring the hybrid and electric propulsion sector can shepherd innovation into

Continued on next page





GAMA Vice President of Global Innovation and Policy Greg Bowles discusses the progress electric propulsion has made with aviation authorities around the globe at an EPIC meeting in Germany.

the traditional regulatory regimes governing the design and operation of aircraft. GAMA created the EPIC and an associate member category of the association in late 2015 to facilitate and represent the general aviation industry's hybrid and electric propulsion efforts as well as focus its ongoing safety improvement initiatives toward simplified aircraft operation. Committee membership has quickly grown, with over 50 companies now represented on it, which is collaboratively working toward establishing global standards for the industry. In 2017, the EPIC produced "GAMA Publication No. 16," a standard developed to aid manufacturers and operators in the common determination of hybrid and electric aircraft performance measurements.

As pilot numbers reach historic lows, public acceptance of increased automation on the road is expected to enable an entirely new generation of pilots who interface with aircraft that are more highly integrated and automated. In 2018, GAMA will continue working closely with the emerging industry and the global authorities to define new and exciting operational concepts that will increasingly democratize aviation.

Bilateral Aviation Safety Cooperation Makes Global Progress

Manufacturers around the globe seek ways to work with regulators to facilitate the introduction of new general aviation products and technologies to market. Notable efforts in 2017 include two new bilateral agreement implementation procedures among leading aviation regulators to increase safety, certification and validation cooperation, as well as the signing of an expanded bilateral safety agreement between transatlantic regulators.

GAMA Applauds Landmark Bilateral Aviation Safety Procedure Agreements

In September, the European Aviation Safety Agency (EASA) and its partner regulators, the U.S. Federal Aviation Administration (FAA) and Transport Canada Civil Aviation (TCCA), signed two new implementation procedure agreements forming the first major steps in the implementation of the Certification Management Team (CMT) Collaboration Strategy. The strategy, published in 2016, seeks to increase the level of safety cooperation among aviation safety regulators from Brazil, Canada the European Union and the United States.

"These are landmark agreements that significantly improve the acceptance of aviation products and approvals among our industry's key safety regulators," said GAMA President and CEO Pete Bunce. "The global general aviation manufacturing industry will benefit from these new provisions, which will reduce costs and delivery lead-times for aircraft exports in both directions across the Atlantic, while maintaining the highest levels of safety."

Revision 6 of the EASA-FAA Technical Implementation Procedures (TIP) for airworthiness and environmental certification is a significant milestone toward a risk-based approach to

reduce and further eliminate redundant authority involvement. It establishes a three-tiered approach for all projects based on mutual confidence and safety risk: reciprocal acceptance, including all Technical Standard Orders for equipment, maintenance repair data and alterations on import aircraft; streamlined validation for basic design approvals, including all piston engine and propeller type certificates; and introduction of a new validation work plan approach to manage projects that focus Validating Authority technical involvement only in appropriate areas defined up front, based on risk.

Revision 3 of the EASA-TCCA Technical Implementation Procedures for airworthiness and environmental certification was also signed during the September CMT meeting. This agreement increases cooperation during certification and validation projects, and increases data sharing for in-service aircraft operations.

These are landmark agreements that significantly improve the acceptance of aviation products and approvals among our industry's key safety regulators.

"GAMA looks forward to working with regulators to ensure a smooth and effective transition to the new processes during the six-month implementation period," said Bunce. "We also look forward to seeing these provisions enacted with other bilateral partners, such as Brazil's National Civil Aviation Agency."

GAMA Praises Progress in EU-US Bilateral Aviation Cooperation

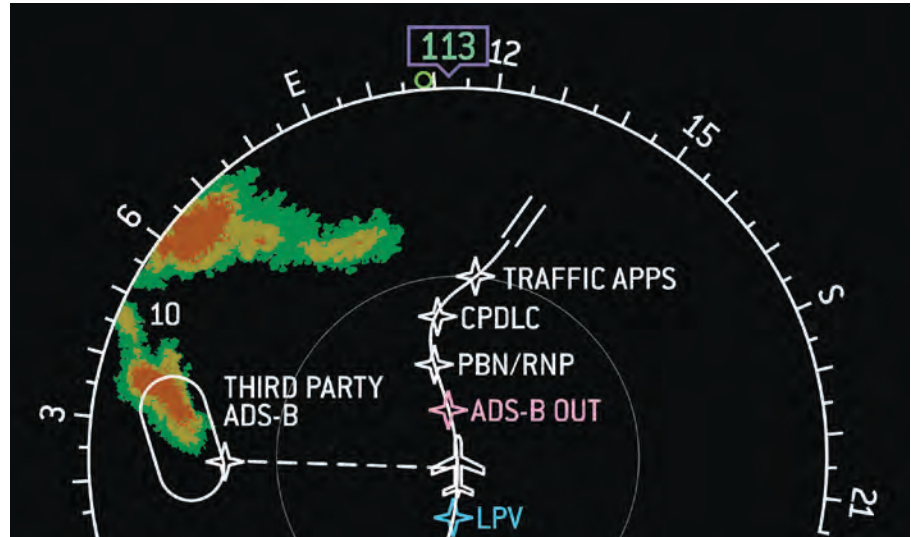
At the end of the year, the top regulators from the European Union (EU) and the United States (U.S.) approved an update to their Bilateral Aviation Safety Agreement (BASA) to further promote and expand transatlantic cooperation and efficiency.

U.S. Federal Aviation Administration (FAA) Administrator Michael Huerta signed an amendment to the existing agreement, alongside Permanent Representative of Estonia to the EU Ambassador Kaja Tael, representing EU Member States, and European Commission Directorate General for Mobility and Transport (DG MOVE) Director General Henrik Hololei.

The amendment paves the way to expand cooperation to cover pilot licensing and Flight Simulator Training Devices in the future—two key areas where reciprocal acceptance will deliver pragmatic, safety-enhancing improvements for pilots and the industry. The next step in the process is to conclude negotiations on both the technical annexes, which have already been prepared.

“We welcome this long-awaited broadening of the EU-US partnership to enable collaboration on simulators and pilot licensing,” said GAMA President and CEO Pete Bunce. “Both sides must now reach agreement and begin implementing these two annexes in the very near future so that the tangible benefits can be realized without delay.”

“In particular, there is an urgent need to allow private pilots to easily transfer their existing skills between authorities without undue burden,” Bunce continued. “Similarly, improving the availability of simulators to facilitate their expanded use will directly contribute to general aviation safety.”



General Aviation Fleet Makes Strides Towards ADS-B Equipage

With air traffic control system modernization activities accelerating worldwide, it is vital that aircraft owners begin to make informed decisions about how to comply with emerging and existing regulatory mandates immediately by selecting the right equipment for their aircrafts' typical missions.

Automatic Dependent Surveillance-Broadcast (ADS-B) equipment, a linchpin of the FAA's NextGen air traffic modernization program, will allow pilots to communicate their aircraft's position using satellite-based technology, providing pilots more information about what's going on the airspace around them. Since the FAA announced in 2010 the ADS-B mandate deadline of Jan. 1, 2020, general aviation manufacturers have worked to design, develop, certify, and make available ADS-B products that enhance safety for operators at reasonable costs.

In September, GAMA marked the news that as of the first of the month, over 40,000 aircraft flying in the U.S. had been equipped with rule-compliant ADS-B equipment, a milestone in the progress of fleet equipage.

“By choosing to equip now, operators are investing in their safety and ensuring

they meet the 2020 deadline before installation lines grow long,” said Bunce. “We are very pleased with the continuous growth in equipage, and manufacturers will continue working with the FAA and operators to facilitate equipage as the deadline approaches.”

As 2017 came to a close, the FAA reported that nearly 50,000 U.S.-registered aircraft were equipped with rule-compliant ADS-B. The FAA also reported that 12,482 aircraft owners took advantage of the \$500 ADS-B rebate the agency offered to single-engine piston airplane operators who equipped by September 2017. The object of the incentive program was to entice operators to equip earlier to avoid the risk of constrained maintenance and manufacturer capacity in 2018 and 2019.

Around the world, other operators face similar ADS-B equipage mandates. Australia's mandate went into effect in February 2017, whereas Europe's mandate, which extends to broader surveillance, involves a transponder mandate for certain aircraft to be compliant with Mode S Elementary or Mode S Enhanced by June 7, 2020. Canada is also considering establishing a requirement for ADS-B equipage.

GAMA and General Aviation Industry Oppose Air Traffic Control Privatization Attempts in the U.S.

GAMA, and the broader general aviation industry, strongly engaged in the fight against efforts to privatize the U.S. air traffic control system in 2017.

In March, the Trump Administration published its Fiscal Year 2018 Budget, which formally proposed shifting the air traffic control function of the U.S. Federal Aviation Administration (FAA) to an independent, non-governmental organization. In response, GAMA issued a press release citing concerns about this shift.

“Removing the U.S. air traffic control system from the FAA could create negative impacts for aviation safety, rural and small communities, national security, and air traffic control modernization as well as for other important regulatory reform efforts,” the statement said. The FAA air traffic control system is the safest, most efficient, largest, and most complex in the world. To a degree not found in other countries, the economic health and vitality of numerous businesses and communities, small and large, depend on the U.S. aviation system. We must not weaken this strong foundation.”

Many of the challenges associated with this type of change were thoughtfully outlined by Members of Congress on



a bipartisan basis throughout the year, including one letter by U.S. Senators Jerry Moran (R-KS) and Amy Klobuchar (D-MN). Specifically, in January of 2017, the two suggested a dialogue with the new Administration among all stakeholders, including civil and defense users of the National Airspace System, to achieve national consensus on any potential changes to the U.S. air traffic control system.

In May, GAMA Hill Day attendees devoted a strong focus to sharing individual board members' perspective on the ramifications these reforms would have on general aviation manufacturers and the broader aviation marketplace. At the same time, Hill Day participants articulated how such a transition could impede air traffic modernization under the FAA's NextGen program and shared how this debate has delayed other important reforms sought by the broader aviation sector.

On the heels of GAMA's Hill Day, former GAMA Chairman and Hartzell Propeller President and Tailwind Technologies Chief Operating Officer Joe Brown testified before the U.S.

During GAMA's 2017 Hill Day, participants met with members of Congress to discuss key issues, like air traffic control privatization. From left to right: Mike Clayton of ULTRA-ICE, Doug May of Textron Aviation, Congressman Ron Estes (R-KS), Chuck Perkins of Aero-Mach Labs, Randy O'Boyle of ULTRA-ICE, Phil Straub of Garmin Aviation and current GAMA Chairman, and Steve Logue of Lycoming Engines.

House Transportation and Infrastructure Committee at a hearing focused on air traffic reform proposals. Brown provided the committee with a unique perspective as a private pilot, citizen and leader of a 100-year-old company with origins linked to the Wright Brothers.

In June, following its budget proposal, the Trump Administration released a set of principles for privatizing the U.S. air traffic control system. Rejecting these principles, GAMA issued a statement outlining concerns it had previously raised but also noted, “The U.S. Congress, working with stakeholders and FAA, has implemented equitable solutions to challenges like rural and small community service, fair access for all aviation users, environmental impacts of noise and traffic, infrastructure and funding mechanisms. The FAA has also managed the safe integration of new technologies into the National Airspace System because it is chartered to serve a broader public purpose. There is no guarantee that this new entity could run the safest, busiest and most complex airspace in the world, while simultaneously increasing the pace and impact of modernization and assuring the American people that it will, first and foremost, serve the public interest.”

Later that month, the House Transportation and Infrastructure Committee passed the “21st Century

Joe Brown testifies before the House T&I Committee in May.



During his testimony, Brown posed the question to the Committee: *“Are the public interests better served if Congress gives our wealth and skies to a small group of special interests, operating outside of democratic oversight, so that they can serve their own ends?”*

Aviation Innovation, Reform, and Reauthorization Act," which included a title that would shift oversight of air traffic control from the FAA to a private entity. The same week, the U.S. Senate Commerce, Science, and Transportation Committee considered the "Federal Aviation Administration Reauthorization of 2017" that contained significant reforms to the FAA and its policies, but omitted efforts to privatize air traffic control. Though both the House and Senate bills passed out of committee, neither was debated on the floor of its respective body during 2017.

GAMA maintained its advocacy against air traffic control privatization during the summer and fall, utilizing public outreach and education, and grassroots advocacy. A significant moment in GAMA's public outreach came in July, when GAMA President and CEO Pete Bunce joined the leaders of the Aircraft Owners and Pilots Association (AOPA), Experimental Aviation Association (EAA), and the National Business Aviation Association (NBAA) at a town hall at EAA AirVenture Oshkosh, organized to educate the airshow attendees about the risks of privatizing the nation's air traffic control system.

During the event, Bunce stated, "We can work with Congress and the FAA to make improvements to our system and leverage the new air traffic control technology that has recently been deployed, but we do not support handing the system over to a small

board of private interests that will reduce access and harm investment in general aviation, and rural and small communities."

Throughout the year, these general aviation associations and others repeatedly raised concerns about air traffic privatization with Congress, sending 10 letters to Congress in total, with the number of groups signing on to the letters starting at 16 on the first, and over 200 signing on to the last sent in 2017.

When September arrived, GAMA, along with AOPA, EAA, the Helicopter Association International (HAI), the National Air Transport Association (NATA) and NBAA, sent congressional transportation leaders a letter, urging them to focus on a consensus driven, bipartisan FAA bill given authorization authority for the agency was slated to lapse at the end of the month.

"There is a lack of consensus in the aviation community for Title II of H.R. 2997, the 21st Century AIRR Act, which seeks to effectively hand over control of our nation's air traffic system to the airlines and special interests," the letters stated. "Removing Title II would ensure consensus and allow for our aviation system to continue to serve the traveling public and the aviation industry."

Thirteen days later, with the broader FAA bills unable to pass due in large part to issues surrounding air traffic control

privatization, Congress passed a six-month extension, until March 2018, for FAA's programs and policies.

As discussions addressing various critical aviation and transportation policies advance in the 115th Congress, GAMA will continue to push for a long-term FAA reauthorization bill and oppose attempts to privatize the U.S. air traffic control system.

As part of GAMA's public education and advocacy efforts, Garmin International President and CEO **Cliff Pemble** authored an opinion piece, "The Case Against Air Traffic Control Privatization" that was published in *The Hill* in October.



"Aviation was born in the United States and rapidly developed into the amazing system of transportation it is today because of fair access to the nation's airspace. Dismantling our current air traffic control system and placing it under the control of the airlines threatens jobs, the economy and fair access to the nation's airspace. Congress should be running away from H.R. 2997."

GAMA President and CEO Pete Bunce (right) discusses the pitfalls of air traffic control privatization during a town hall at EAA AirVenture, alongside EAA Board Chairman and CEO Jack Pelton (left), AOPA President and CEO Mark Baker (second in from left) and NBAA President and CEO Ed Bolen (second in from right).



Aircraft Certification Reform Continues to Make Progress in the U.S.

One of GAMA's top advocacy priorities is streamlining aircraft certification around the globe, including the U.S. Federal Aviation Administration's aircraft certification reform process. Making the process more efficient would address market and regulatory challenges the industry faces. In 2017, GAMA saw broad, bipartisan support for this reform.

In June, the U.S. Senate Commerce, Science, and Transportation Committee passed a bipartisan FAA reauthorization bill with language that would have reformed the process for certifying general aviation aircraft products in the U.S. and addressed other regulatory barriers for manufacturing and maintenance organizations.

"We applaud the Senate and thank Commerce Committee Chairman John Thune (R-SD), Ranking Member Bill Nelson (D-FL), Aviation Subcommittee Chairman Roy Blunt (R-MO) and Ranking Member Maria Cantwell (D-WA) for including provisions addressing the broader certification and regulatory changes needed to improve safety, provide more consistency in regulatory interpretation, and keep the U.S. aviation



"A good idea can be squandered if the implementation of that solution is not timely. As one solution is being certified, others may enter the market, and for many different reasons get to market faster if their certification program is completed more efficiently."

Greg Fedele, Former GAMA Board Member and Sabreliner Aviation President and Innova Aerospace Executive Vice President of Corporate Development, testified before the Senate Commerce, Science and Transportation Subcommittee on Aviation Operations in March about the FAA regulatory and certification processes and reforms to improve U.S. competitiveness in the global marketplace for aviation products and manufacturing.

industry competitive in the global economy," said GAMA President and CEO Pete Bunce, in a press release the association issued about the legislation. Bunce additionally praised the strong support of the 27 Senators, led by Senators Blunt, Cantwell, Moran (R-KS), Klobuchar (D-MN), Gardner (R-CO), and Peters (D-MI), who wrote Chairman Thune and Ranking Member Nelson asking for the inclusion of the provisions.

GAMA also saw broad support for certification in the U.S. House of Representatives. Shortly after GAMA's Hill Day in May, a Washington, DC, publication, *The Hill*, published an opinion piece by Representatives Sam Graves (R-MO) and Rick Nolan (D-MN) in which the two members of the House of Representatives Transportation and Infrastructure Subcommittee on Aviation made the case for congressional passage of aircraft certification reform. In June, the House Transportation and Infrastructure Committee included the certification title in its FAA Reauthorization bill, for which GAMA thanked Committee Chairman Bill Shuster (R-PA), Ranking Committee Member Peter DeFazio (D-OR), Aviation

Subcommittee Chair Frank LoBiondo (D-NJ), and Aviation Ranking Member Rick Larsen (D-WA).

GAMA saw further progress on certification in July, when the U.S. House of Representatives and the U.S. Senate Appropriations Committees each passed their fiscal year 2018 transportation bills. Each bill supported general aviation through the inclusion of language improving aircraft certification reform.

"We are extremely pleased to see the Committee put teeth into their direction to the FAA to better utilize the Organizational Designation Authority," said GAMA President and CEO Pete Bunce, upon passage of the House Appropriations Bill on July 18. "GAMA has advocated for this for some time, and we appreciate the Committee's support in making this a reality, which will benefit the U.S. economy, aircraft sales and create jobs."

"We thank members of the Committee, particularly Transportation Subcommittee Chairman Mario Diaz-Balart (R-FL) and Ranking Member David Price (D-NC), and Appropriations Chairman Rodney



GAMA Board Member and Textron Aviation executive **Michael Thacker** testified before the House Transportation and Infrastructure Committee in February about the state of American aviation manufacturing.

Frelinghuysen (R-NJ) and Ranking Member Nita Lowey (D-NY), for this critical funding measure,” continued Bunce.

GAMA also praised the Senate, particularly Transportation Subcommittee Chairman Susan Collins (R-ME) and Ranking Member Jack Reed (D-RI), as well as Appropriations Chairman Thad Cochran (R-MS) and Ranking Member Patrick Leahy (D-VT), for including language facilitating the flow and safety of aviation products globally, and rejecting the Trump Administration’s proposal to separate the U.S. air traffic control system from the federal government.

“The Senate Appropriations Committee showed strong support for our industry in its unanimous vote for this comprehensive and ambitious bill,” said GAMA President and CEO Pete Bunce, in a press release issued on July 28. “They addressed our key certification priorities and they clearly conveyed they do not support the Administration’s request to privatize America’s air traffic control system, which we firmly believe would harm general aviation and small and rural communities.”

As discussions addressing various critical aviation and transportation policies advance in the 115th Congress, GAMA will continue to push for meaningful certification and regulatory reform.



U.S. FAA Administrator Michael Huerta speaks to general aviation leaders at the General Aviation Safety Summit in October, which GAMA hosted at its headquarters in Washington, DC.

General Aviation Safety Continues Improving in 2017

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 in the United States.

The 2016 fatal accident rate was 0.89 per 100,000 flight hours and the preliminary data for 2017 shows further improvement, putting the year on track to be the safest year recorded in general aviation.

“This is a significant accomplishment,” FAA Administrator Michael Huerta said

about the accident rate, in his remarks to general aviation industry leaders in October 2017. “When we identify issues that need to be addressed, no one ever says, ‘That doesn’t concern my members,’ or ‘That’s someone else’s problem.’ Instead, each of you has been willing to roll up your sleeves and ask, ‘How can we fix this— together?’”

The completion of the Part 23 rule rewrite and the streamlining of the FAA’s approval process for non-required safety enhancing equipment, combined with collaborative government-industry, data-driven safety efforts of the General Aviation Joint Steering Committee and U.S. Helicopter Safety Team, have contributed significantly to improving the general aviation accident rate. The focus in 2018 remains on mitigating the risk of loss-of-control and power plant accidents while investigating the causes of controlled flight into terrain.

GAMA is encouraged by Europe establishing its own safety program for general aviation airplane and rotorcraft operations, which should help further improve safety.

FAA, GAMA and AIA Establish ODA Performance Scorecard

FAA, GAMA and AIA established an Organization Designation Authorization (ODA) Metrics Continuous Improvement Team (CIT) to establish reliable performance measures and a collaborative review process to enhance ODA effectiveness. An annual Scorecard process has been established for individual companies and local FAA certification offices to assess quantitative and qualitative data and develop improvement action plans. The CIT reviews a national roll-up of ODA and certification system performance to identify appropriate opportunities to further improve the utilization of ODA and FAA risk-based level of involvement. This is a collaborative initiative for ensuring continuing progress toward the effective and efficient certification processes that are needed to ensure the health of the general aviation manufacturing industry in the U.S.

How GAMA Members Gave Back in 2017

GAMA members worked hard to improve safety, innovate and bring new products to the market in 2017. But they also worked hard to give back to their communities, help those in need and invest in the industry's future workforce.

Astronautics Corporation of America employees volunteered to work with middle school STEM students from Junior Achievement of Wisconsin's JA Finance Park Golda Meir School; supported the first Aerospace Jam with the Milwaukee Bucks to help high school students learn about potential aerospace industry careers and college students to connect with aerospace industry employers; and demonstrated the company's RoadRunner™ electronic flight instrument at a Girls & STEM event at Discovery World Science + Technology Center in Milwaukee.

Bombardier Business Aircraft held its sixth Inspiring Future Aviators Program, an educational partnership with the New England Air Museum that encourages young people to pursue aviation careers through interactive tours of the museum and Bombardier Business Aircraft's Hartford Service Center. During the 2016-2017 school year, the program served over 180 local technical and vocational high school students at no cost to them or their schools. To date, the program has reached over 500 middle and high school students.

Mooney International hosted a blood drive for its employees at its South Texas factory to help hurricane victims, especially those in Texas. Employees donated a total of 24 pints of blood, equating to 72 lives saved. Nine employees were first-time donors.

As part of company-sponsored events and individual efforts, **Gulfstream Aerospace Corporation** employees logged over 25,000 hours of community service in 2017. Gulfstream also continued its workforce and educational outreach through its Savannah-based Student Leadership Program, established in 2008. The program is now a collaborative partnership between Gulfstream, the public-school system and the business community designed to expand learning beyond the classroom and provide opportunities to help high-school students develop leadership skills and prepare for careers after graduation.

Click Bond, Inc. sponsored the FIRST Young Robotics Engineers 5480 team with monetary and parts donations. The Reno, Nevada, area high school team participated in a six-week program that challenged them to conceptualize the design of a robot and build and program the robot to do various tasks. After two intense days of competition, fixing mechanical breakdowns and reprogramming robots, the team made it to the last round of the semifinals.

GE Aviation employees, through the company's volunteer arm 'GE Volunteers', donated 158,000 hours in more than 50 communities around the globe through 1,267 projects.

For over 15 years, the **Embraer Institute** has annually given 960 low-income students in Brazil a full scholarship to attend two exceptional high schools, which focus on academic excellence and professional development. The Embraer Institute also established in April 2017 a sister foundation, the Embraer Foundation, to consolidate the company's U.S. social investments. During its first year, the Foundation devoted over 880 hours to volunteering and community engagement activities, and its entrepreneurship program reached over 400 students. Additionally, the Embraer Foundation awarded 11 mini-grants to nonprofit organizations in nine communities around the U.S., where Embraer has operations.

True Blue Power hosted a drive for the Kansas Food Bank and Hope of the Valley Rescue Mission. Employees donated 9,119 pounds of food.

Williams International raised \$18,640 to help the victims of Hurricanes Harvey, Irma and Maria; two Williams employees volunteered their time, fuel and airplanes to help deliver over 19,000 gifts throughout Michigan in support of Operation Good Cheer, an annual, all-volunteer gift-giving program of Michigan Child and Family Services.

Additionally, the broader general and business aviation industry helped communities and those in need by:

- Bringing help by air when flooding and debris prevented ground transportation from assisting those affected by the devastating hurricanes in Texas, Florida and Caribbean Islands. Non-profit and volunteer organizations such as Aerobridge, Seaplane Crossings and the Eagles Wings Foundation took supplies to the Caribbean Islands destroyed by Hurricanes Irma and Maria and helped evacuate pets and people who were in desperate need of going to a place with available medical services.
- Organizing relief efforts overnight. Pilots from general aviation organizations, such as Angel Flight South Central, transported patients out of Hurricane Harvey devastated areas near Houston. A group called Operation Airdrop organized hundreds of pilots to get involved in relief efforts overnight, putting together a general aviation fleet consisting of everything from Cessna 152s to Pilatus PC-12s.
- Providing free air transportation to, primarily, post 9/11 combat wounded and their families through Veterans Airlift Command (VAC). In 2017, VAC flew 1,600 passengers through its generous network of 2,600 volunteer pilots and aircraft.
- Flying cancer patients, both children and adults, to treatment at no cost on private and corporate planes' empty seats through Corporate Angel Network (CAN). Thanks to the generous cooperation of 500 of America's top corporations, including half of the top 100 in the Fortune 500, CAN has, as of February 2018, flown 55,000 patient flights since its founding in 1981.



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GAMA's 2017 Annual Report, previously named the Statistical Databook and Industry Outlook, covers aircraft shipments from 39 aircraft manufacturers with details from the past decade in its first chapter.

This year the report also contains expanded fleet data about key general aviation markets in North America, Latin America, and the Asia Pacific region. Courtesy of Japan's Civil Aviation Bureau, this report includes an updated 10-year overview of the Japanese fleet.

Europe is one of the most diverse general aviation regions with an active community across all segments of the industry. This year the report includes standardized fleet data from 37 countries within Europe. At the end of 2017, over 136,000 aircraft comprised the European fleet.

Aircraft Shipment and Billings

General aviation manufacturers delivered over \$23.9 billion in new aircraft in 2017, a decline from \$24.8 billion in new aircraft in 2016.

The rotorcraft segment stabilized after several years of declining deliveries. Piston rotorcraft experienced the largest increase of all segments at 264 unit deliveries compared to 224 in 2016, a 17.9 percent increase. Preliminary rotorcraft(*) data also indicates an increase of 3.9 percent, to 662 aircraft delivered.

Business jet airplane deliveries grew slightly by 1.3 percent, rising from 667 to 676 units. Several new aircraft models entering into service in 2017 drove this growth.

Turboprop deliveries slowed to 563 airplanes, compared to 582 deliveries in 2016; a 3.3 percent decline.

Piston airplane shipments strengthened by 6.5 percent, to 1,085 units.



North America remains the largest market for piston airplanes, turboprops, and business jets. The second largest market for piston airplanes was the Asia Pacific region at 13.4 percent of shipments. The second largest market for turboprops was Latin America, at 15.5 percent of shipments. Europe remains the second largest market for business jets, with 17.0 percent of airplanes delivered.

Aircraft Fleet Continues Growing

The business airplane fleet continues expanding worldwide. According to JETNET, LLC., the business jet fleet reached 22,002 airplanes worldwide in 2017, an increase from 21,544 in 2016 and an increase of 5,762 airplanes from one decade ago. The worldwide turboprop fleet reached 15,280 airplanes at the end of the year.

The worldwide rotorcraft fleet expanded to 21,486 turbine helicopters and to 9,723 piston helicopters.

The fractional fleet grew slightly to 818 airplanes, but the number of fractional share owners declined slightly from 4,100 in 2016 to 3,894 at the end of 2017.

Pilot Population

The U.S. pilot population reached 609,306 active pilots. The year-end pilot population data is not directly comparable to prior years, because of a change in how the FAA identifies active certificates, but indications lean positive. The number of female pilots reached a new record, totaling 42,694 at the end of the year; 7.01 percent of the population. The number of active pilots includes 162,455 private pilots and 149,121 student pilots.

You may find additional data on GAMA's website, www.GAMA.aero. If you have questions about the data in this report, please contact GAMA staff by telephone, at +1-202-393-1500 or by 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 2018. GAMA will update the online 2017 report then. For the purpose of comparison, GAMA excluded 2016 Q4 data for Leonardo.*



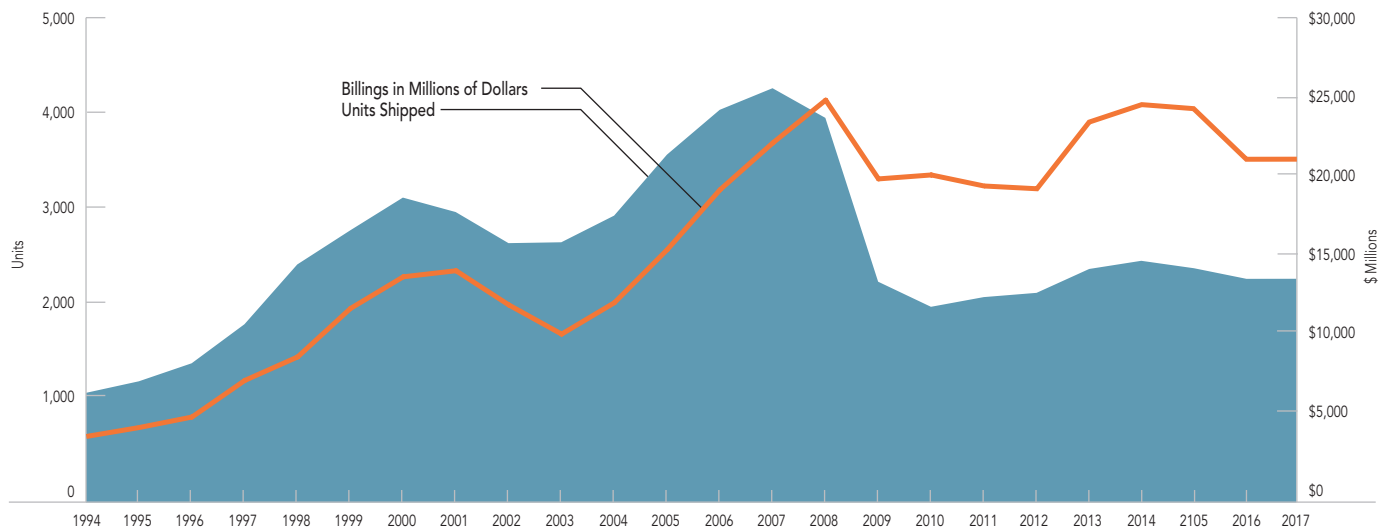
General Aviation Shipments and Billings

1.1 General Aviation Airplane Shipments by Type of Airplane Manufactured Worldwide (1995–2017)

| Year | Grand Total | Single-Engine Piston | Multi-Engine Piston | Total Piston | Turboprop | Business Jet | Total Turbine |
|------|-------------|----------------------|---------------------|--------------|-----------|--------------|---------------|
| 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 | 2,268 | 890 | 129 | 1,019 | 582 | 667 | 1,249 |
| 2017 | 2,324 | 936 | 149 | 1,085 | 563 | 676 | 1,239 |

Source: GAMA

FIGURE 1.1 General Aviation Airplane Shipments and Billings Worldwide (1994–2017)



Source: GAMA

1.2 Estimated Billings (in Millions) for General Aviation Airplane Shipments by Type of Airplane Manufactured Worldwide (1994–2017)

| 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 | 21,092 | n/a | n/a | 661 | 1,705 | 18,727 | 20,432 |
| 2017 | 20,197 | n/a | n/a | 718 | 1,490 | 17,990 | 19,479 |

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 (2007–2017)

| 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 |
| 2017 | 65.6 | 9.5 | 13.4 | 5.9 | 5.6 | 54.2 | 12.8 | 14.1 | 15.5 | 3.4 | 63.8 | 17.0 | 9.9 | 5.3 | 4.0 |

Source: GAMA



1.4a Worldwide Business Jet Shipments by Manufacturer (2004–2017)

| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Airbus | 0 | 9 | 11 | 13 | 11 | 13 | 15 | 10 | 9 | 6 | 5 | 4 | 1 | 0 |
| Airbus Corporate Jet (all models) | 0 | 9 | 10 | 12 | 9 | 11 | - | - | - | - | - | - | - | - |
| ACJ318 | - | - | - | - | - | - | 2 | 2 | 2 | 1 | 0 | 1 | 0 | 0 |
| ACJ319 | - | - | - | - | - | - | 8 | 6 | 6 | 4 | 1 | 1 | 0 | 0 |
| ACJ320 | - | - | - | - | - | - | 3 | 1 | 0 | 0 | 4 | 1 | 0 | 0 |
| ACJ321 | - | - | - | - | - | - | - | - | - | 1 | 0 | 0 | 0 | 0 |
| ACJ330 | - | - | - | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 |
| ACJ340 | - | - | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Avcraft (prev. Fairchild) | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Envoy 3 | 9 | 1 | - | - | - | - | - | - | - | - | - | - | - | - |
| Boeing Business Jets | 3 | 4 | 13 | 7 | 6 | 6 | 12 | 8 | 12 | 7 | 10 | 11 | 4 | 7 |
| Boeing Business Jet | 2 | 3 | 12 | 7 | 3 | 3 | 4 | 8 | 2 | 5 | 3 | 4 | 1 | 0 |
| Boeing Business Jet 2 | 1 | 1 | 1 | 0 | 1 | 0 | 2 | 0 | 2 | 1 | 2 | 1 | 0 | 0 |
| Boeing Business Jet 3 | - | - | - | - | 2 | 1 | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Boeing 737-800 | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 0 |
| Boeing Business Jet 747 | - | - | - | - | - | - | - | - | 8 | 0 | 0 | 0 | 0 | 1 |
| Boeing Business Jet 767 | - | - | - | - | - | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Boeing Business Jet 777 | - | - | - | - | - | 1 | 2 | 0 | 0 | 0 | 1 | 1 | 1 | 3 |
| Boeing Business Jet 787 | - | - | - | - | - | - | - | - | - | 1 | 4 | 4 | 0 | 3 |
| Bombardier Business Aircraft | 130 | 188 | 213 | 224 | 247 | 173 | 150 | 182 | 179 | 180 | 204 | 199 | 163 | 140 |
| Learjet 31A | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Learjet 40/XR | 17 | 21 | 26 | 57 | 48 | 33 | 16 | 24 | 24 | 1 | - | - | - | - |
| Learjet 45/XR | 22 | 28 | 30 | - | - | - | - | - | - | - | - | - | - | - |
| Learjet 60/XR | 9 | 18 | 15 | 23 | 26 | 13 | 12 | 19 | 15 | 10 | 1 | - | - | - |
| Learjet 70/75 | - | - | - | - | - | - | - | - | - | 18 | 33 | 32 | 24 | 14 |
| Challenger 300/350 | 28 | 50 | 55 | 51 | 60 | 33 | 29 | 37 | 48 | 55 | 54 | 68 | 62 | 56 |
| Challenger 604/605/650 | 29 | 36 | 29 | 35 | 44 | 36 | 38 | 43 | 34 | 32 | 36 | 25 | 26 | 23 |
| Global 5000 | 4 | 17 | 18 | 46 | 52 | 51 | 49 | 53 | 54 | 62 | 80 | 73 | 51 | 45 |
| Global 6000/Express | 20 | 13 | 22 | - | - | - | - | - | - | - | - | - | - | - |
| CL 850/870/890 | 1 | 5 | 18 | 12 | 17 | 7 | 6 | 6 | 4 | 2 | 0 | 1 | 0 | 2 |
| Cirrus Aircraft | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 22 |
| SF50 | - | - | - | - | - | - | - | - | - | - | - | - | 3 | 22 |
| Dassault Aviation | 63 | 51 | 61 | 70 | 72 | 77 | 95 | 63 | 66 | 77 | 66 | 55 | 49 | 49 |
| Falcon 50EX | 5 | 5 | 5 | 2 | 1 | - | - | - | - | - | - | - | - | - |
| Falcon 900C | 3 | 1 | - | - | - | - | - | - | - | - | - | - | - | - |
| Falcon 900EX | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Falcon 900DX | - | 2 | 4 | 10 | 4 | 1 | 3 | - | - | - | - | - | - | - |
| Falcon 900EX EASy | 14 | 16 | 16 | 18 | 19 | 17 | 17 | 1 | - | - | - | - | - | - |
| Falcon 900LX | - | - | - | - | - | - | 4 | 11 | 7 | 11 | 8 | - | - | - |
| Falcon 2000 | 11 | 6 | 6 | 1 | - | - | - | - | - | - | - | - | - | - |
| Falcon 2000DX | - | - | - | - | 3 | 1 | - | - | - | - | - | - | - | - |
| Falcon 2000EX | 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 | 49 |
| Embraer | 13 | 20 | 27 | 36 | 38 | 122 | 145 | 99 | 99 | 119 | 116 | 120 | 117 | 109 |
| Phenom 100/E | - | - | - | - | 2 | 97 | 100 | 41 | 29 | 30 | 19 | 12 | 10 | 18 |
| Phenom 300 | - | - | - | - | - | 1 | 26 | 42 | 48 | 60 | 73 | 70 | 63 | 54 |
| Legacy 450 | - | - | - | - | - | - | - | - | - | - | - | 3 | 12 | 14 |
| Legacy 500 | - | - | - | - | - | - | - | - | - | - | 3 | 20 | 21 | 15 |
| Legacy 600/650 | 13 | 20 | 27 | 36 | 36 | 18 | 11 | 13 | 17 | 21 | 18 | 12 | 9 | 7 |
| Lineage 1000/E190 Head of State | - | - | - | - | - | 5 | 5 | 3 | 2 | 4 | 3 | 3 | 2 | 1 |
| Shuttles (ERJs and E-Jets) | - | - | - | - | - | 1 | 3 | 0 | 3 | 4 | 0 | 0 | 0 | 0 |
| Emivest (prev. Sino Swearingen) | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SJ30-2 | - | - | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Gulfstream Aerospace Corporation | 78 | 89 | 113 | 138 | 156 | 94 | 99 | 99 | 94 | 144 | 150 | 154 | 115 | 120 |
| G100/G150 (prev. IAI Astra) | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| G200 (prev. IAI Galaxy) | 22 | 26 | 42 | 59 | 68 | 19 | 24 | 21 | 11 | 23 | 33 | 34 | 27 | 30 |
| G280 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| G300/350/400/450 (prev. GIV/GIVSP) | 56 | 63 | 71 | 79 | 88 | 75 | 75 | 78 | 83 | 121 | 117 | 120 | 94 | 90 |
| G500/G550 (prev. GV/GVSP), G650, G650ER | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Honda Aircraft Company | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 23 | 43 |
| HA-420 HondaJet | - | - | - | - | - | - | - | - | - | - | - | 2 | 23 | 43 |
| ONE Aviation Corp. (prev. Eclipse Aero) | 0 | 0 | 1 | 98 | 161 | 0 | 0 | 0 | 0 | 0 | 12 | 7 | 8 | 6 |
| Eclipse 500 | - | - | 1 | 98 | 161 | - | - | - | - | - | - | - | - | - |
| Eclipse 550 | - | - | - | - | - | - | - | - | - | - | 12 | 7 | 8 | 6 |
| Textron Aviation (Beechcraft) | 115 | 141 | 140 | 162 | 160 | 98 | 73 | 52 | 32 | 6 | 0 | 0 | 0 | 0 |
| Premier I/A | 37 | 30 | 23 | 54 | 31 | 16 | 11 | 11 | 3 | - | - | - | - | - |
| Hawker 400XP | 28 | 53 | 53 | 41 | 35 | 11 | 12 | 1 | - | - | - | - | - | - |
| Hawker 750 | - | - | - | - | 23 | 13 | 5 | 7 | - | - | - | - | - | - |
| Hawker 800XP | 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 (2004–2017) *Continued*

| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Textron Aviation (Cessna Aircraft) | 181 | 247 | 307 | 388 | 466 | 289 | 178 | 183 | 181 | 139 | 159 | 166 | 178 | 180 |
| CE-510 Citation Mustang | - | - | 1 | 45 | 101 | 125 | 73 | 43 | 38 | 20 | 8 | 8 | 10 | 7 |
| CE-525 Citation CJ1 | 20 | 14 | - | - | - | - | - | - | - | - | - | - | - | - |
| CE-525 Citation CJ1+ | - | 4 | 25 | 34 | 20 | 14 | 3 | 2 | - | - | - | - | - | - |
| CE-525 Citation M2 | - | - | - | - | - | - | - | - | - | 12 | 46 | 41 | 38 | 39 |
| CE-525A Citation CJ2 | 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 | 26 |
| CE-525C Citation CJ4 | - | - | - | - | - | - | 19 | 48 | 44 | 33 | 28 | 33 | 29 | 23 |
| CE-550 Citation Bravo | 25 | 21 | 18 | - | - | - | - | - | - | - | - | - | - | - |
| CE-560 Citation Encore | 24 | 13 | 12 | - | - | - | - | - | - | - | - | - | - | - |
| CE-560 Citation Encore+ | - | - | - | 23 | 28 | 5 | 5 | 4 | - | - | - | - | - | - |
| CE-560 Citation Excel | 23 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| CE-560 Citation XLS | 32 | 64 | 73 | 82 | 72 | 7 | - | - | - | - | - | - | - | - |
| CE-560 Citation XLS+ | - | - | - | - | 8 | 37 | 22 | 27 | 31 | 31 | 22 | 21 | 19 | 18 |
| CE-680 Citation Sovereign | 9 | 46 | 57 | 65 | 77 | 33 | 16 | 19 | 22 | 5 | - | - | - | - |
| CE-680 Citation Sovereign+ | - | - | - | - | - | - | - | - | - | 8 | 28 | 18 | 11 | 9 |
| CE-680A Citation Latitude | - | - | - | - | - | - | - | - | - | - | - | 16 | 42 | 54 |
| CE-750 Citation X | 15 | 14 | 12 | 17 | 16 | 7 | 3 | 3 | 6 | - | - | - | - | - |
| CE-750 Citation X+ | - | - | - | - | - | - | - | - | - | - | 9 | 6 | 4 | 4 |
| Total Number of Airplanes | 592 | 750 | 887 | 1,137 | 1,317 | 874 | 767 | 696 | 672 | 678 | 722 | 718 | 667 | 676 |
| % Change | 14.3% | 26.7% | 18.3% | 28.2% | 15.8% | -33.6% | -12.2% | -9.3% | -3.4% | 0.9% | 6.5% | -0.6% | -7.1% | 1.3% |
| Total Billings for Airplanes (\$M) | 10,404 | 13,161 | 16,555 | 19,347 | 21,948 | 17,443 | 18,000 | 17,235 | 17,108 | 21,058 | 22,015 | 21,877 | 18,727 | 17,990 |
| % Change | 20.7% | 26.5% | 25.8% | 16.9% | 13.4% | -20.5% | 3.2% | -4.2% | -0.7% | 23.1% | 4.5% | -0.6% | -14.4% | -3.9% |

Source: GAMA

1.4b Worldwide Turboprop Airplane Shipments by Manufacturer (2004–2017)

| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Air Tractor | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 130 | 168 | 174 | 145 | 113 | 112 | 133 |
| AT-402A | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 0 | 1 | 0 | 0 | 0 | 0 | 5 |
| AT-402B | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 9 | 21 | 33 | 20 | 11 | 10 | 15 |
| AT-502A | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 3 | 1 | 2 | 1 | 0 | 8 | 17 |
| AT-502B | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 57 | 81 | 70 | 61 | 36 | 22 | 32 |
| AT-504 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 4 | 6 | 2 | 3 | 3 | 1 | 5 |
| AT-602 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 10 | 10 | 18 | 14 | 14 | 16 | 7 |
| AT-802 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 26 | 18 | 9 | 10 | 8 | 5 | 6 |
| AT-802A | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 21 | 30 | 40 | 36 | 29 | 40 | 39 |
| AT-802AF | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 10 | 3 | 6 |
| AT-802F | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 2 | 3 | 1 |
| AVIC General | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 2 |
| 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 | 6 | 2 |
| Daher | 31 | 31 | 42 | 46 | 60 | 36 | 38 | 38 | 38 | 40 | 51 | 55 | 54 | 57 |
| TBM 700 | 31 | 31 | - | - | - | - | - | - | - | - | - | - | - | - |
| TBM 850 | - | - | 42 | 46 | 60 | 36 | 38 | 38 | 38 | 40 | - | - | - | - |
| TBM 900 | - | - | - | - | - | - | - | - | - | - | 51 | 55 | 8 | - |
| TBM 910 | - | - | - | - | - | - | - | - | - | - | - | - | - | 29 |
| TBM 930 | - | - | - | - | - | - | - | - | - | - | - | - | 46 | 28 |
| Extra Aircraft | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 0 | 0 | 0 |
| EA500 | - | - | - | - | - | - | - | - | 2 | 1 | 2 | - | - | - |
| Maule Air Incorporated | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| M-7-420AC | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MT-7-420 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pacific Aerospace Corporation | 8 | 10 | 5 | 10 | 15 | 12 | 11 | 10 | 10 | 6 | 4 | 5 | 8 | 7 |
| PAC 750XL | 8 | 10 | 5 | 10 | 15 | 12 | 11 | 10 | 10 | 6 | 4 | 5 | 8 | 7 |
| Piaggio Aerospace | 16 | 14 | 19 | 21 | 30 | 24 | 11 | 14 | 5 | 2 | 2 | 3 | 3 | 2 |
| P.180 Avanti | 16 | 13 | - | - | - | - | - | - | - | - | - | - | - | - |
| P.180 Avanti II | - | 1 | 19 | 21 | 30 | 24 | 11 | 14 | 5 | 2 | 2 | - | - | - |
| P.180 Avanti Evo | - | - | - | - | - | - | - | - | - | - | - | 3 | 3 | 2 |
| Pilatus | 70 | 80 | 90 | 98 | 100 | 105 | 84 | 69 | 67 | 69 | 76 | 74 | 100 | 86 |
| PC-6 Porter | n/a | n/a | n/a | 6 | 3 | 5 | 5 | 6 | 5 | 4 | 10 | 4 | 9 | 1 |
| PC-12 | 70 | 80 | 90 | 92 | 97 | 100 | 79 | 63 | 62 | 65 | 66 | 70 | 91 | 85 |
| Piper Aircraft, Inc. | 26 | 40 | 49 | 53 | 52 | 29 | 25 | 32 | 32 | 34 | 36 | 27 | 34 | 47 |
| PA-46-500 TP Meridian/M500 | 26 | 40 | 49 | 53 | 52 | 29 | 25 | 32 | 32 | 34 | 36 | 27 | 12 | 12 |
| PA-46-600 TP M600 | - | - | - | - | - | - | - | - | - | - | - | - | 22 | 35 |
| Quest Aircraft Company | 0 | 0 | 0 | 1 | 7 | 24 | 14 | 13 | 15 | 28 | 30 | 32 | 36 | 31 |
| Kodiak 100 | - | - | - | 1 | 7 | 24 | 14 | 13 | 15 | 28 | 30 | 32 | 36 | 31 |
| Textron Aviation (Beechcraft) | 102 | 114 | 140 | 157 | 172 | 119 | 90 | 92 | 89 | 135 | 127 | 117 | 106 | 86 |
| King Air C90 | 27 | 35 | 52 | 46 | 66 | 44 | 28 | 29 | 27 | 27 | 21 | 15 | 11 | 13 |
| King Air B200 / B250 | 39 | 37 | 42 | 58 | 54 | 37 | 24 | 25 | 22 | 36 | 35 | 28 | 32 | 28 |
| King Air 350 | 36 | 42 | 46 | 53 | 52 | 38 | 38 | 38 | 40 | 72 | 71 | 74 | 63 | 45 |
| Textron Aviation (Cessna Aircraft) | 64 | 86 | 67 | 79 | 101 | 97 | 95 | 93 | 107 | 105 | 94 | 102 | 84 | 69 |
| CE-208 Caravan 675 | 13 | 11 | 8 | 11 | 12 | 12 | 8 | 10 | 11 | 11 | 13 | 9 | 13 | 10 |
| CE-208B Grand Caravan | 51 | 75 | 59 | 68 | 89 | 85 | 87 | 83 | 96 | 94 | 81 | 93 | 71 | 59 |

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1.4b Worldwide Turboprop Airplane Shipments by Manufacturer (2004–2017) *Continued*

| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Thrush Aircraft, Inc. | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 35 | 51 | 51 | 36 | 29 | 39 | 43 |
| S2R-T34 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 30 | 39 | 20 | 10 | 8 | 10 | 15 |
| S2RHG-T65 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 1 | 0 | 1 | 0 | 0 | 2 | 1 |
| S2R-T660 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 1 | 0 | 1 | 1 | 7 | 17 | 6 |
| S2R-G10 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 3 | 3 | 2 | 1 | 0 | 0 | 0 |
| S2R-H80 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 0 | 9 | 27 | 24 | 14 | 10 | 21 |
| Total Number of Airplanes | 319 | 375 | 412 | 465 | 538 | 446 | 368 | 526 | 584 | 645 | 603 | 557 | 582 | 563 |
| % Change | 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% | -3.3% |
| Total Billings for Airplanes (\$M) | 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 | 1,490 |
| % Change | 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% | -12.6% |

Source: GAMA

1.4c Worldwide Piston-Engine Airplane Shipments by Manufacturer (2004–2017)

| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Adam Aircraft | 0 | 2 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| A500 | - | 2 | 4 | 3 | - | - | - | - | - | - | - | - | - | - |
| Air Tractor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| AT-401B | - | - | - | - | - | - | - | - | 1 | 0 | 1 | 1 | 0 | 1 |
| Alpha Aviation | 0 | 0 | 5 | 13 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 120T | - | - | - | 2 | - | - | - | - | - | - | - | - | - | - |
| 160A | - | - | 5 | 9 | 1 | - | - | - | - | - | - | - | - | - |
| 160Ai | - | - | - | 2 | 0 | - | - | - | - | - | - | - | - | - |
| American Champion | 94 | 89 | 60 | 70 | 54 | 26 | 37 | 29 | 18 | 26 | 30 | 19 | 19 | 15 |
| 7EC Champ | - | - | 1 | 21 | 7 | 1 | 0 | 3 | 0 | 3 | 1 | 1 | 2 | 0 |
| 7ECA Aurora | 2 | 3 | 2 | 4 | 3 | 2 | 2 | 1 | 0 | 0 | 2 | 1 | 0 | 0 |
| 7GCAA Adventurer | 12 | 12 | 6 | 6 | 2 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7GCBC Citabria Explorer | 24 | 26 | 16 | 8 | 8 | 4 | 4 | 6 | 3 | 1 | 3 | 0 | 1 | 2 |
| 8GCBC Scout | 18 | 9 | 14 | 8 | 10 | 8 | 15 | 13 | 7 | 6 | 7 | 6 | 10 | 8 |
| 8KCAB Super Decathlon | 38 | 39 | 21 | 23 | 24 | 10 | 14 | 6 | 8 | 10 | 14 | 6 | 6 | 5 |
| 8KCAB Xtreme Decathlon | - | - | - | - | - | - | - | - | - | 6 | 3 | 5 | 0 | 0 |
| Aviat Aircraft | 42 | 47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| A-1B Husky | 30 | 41 | n/a | 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 | 1 | n/a | 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 | 9 | 5 | n/a | 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 | 26 | 22 |
| Y5B | 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 | 5 |
| 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 | 11 | 5 |
| 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 | 11 | 12 |
| Columbia Aircraft (prev. Lancair) | 78 | 114 | 185 | 152 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Columbia 300 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Columbia 350 | 28 | 25 | 39 | 34 | - | - | - | - | - | - | - | - | - | - |
| Columbia 400 | 50 | 89 | 146 | 118 | - | - | - | - | - | - | - | - | - | - |
| Cirrus Aircraft | 553 | 600 | 721 | 710 | 549 | 266 | 264 | 255 | 253 | 276 | 308 | 301 | 317 | 355 |
| Cirrus SR20 | 91 | 116 | 150 | 112 | 115 | 28 | 42 | 48 | 84 | 32 | 31 | 31 | 35 | 46 |
| Cirrus SR22 | 459 | 475 | 565 | 588 | 427 | 238 | 165 | 105 | 81 | 112 | 117 | 128 | 133 | 135 |
| Cirrus SR22T | - | - | - | - | - | - | 57 | 102 | 88 | 132 | 160 | 142 | 149 | 174 |
| Cirrus SRV | 3 | 9 | 6 | 10 | 7 | - | - | - | - | - | - | - | - | - |
| CubCrafters | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 47 | 58 | 63 | 60 | 52 | 26 | 13 |
| CC11-100 Sport Cub S2 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 2 | 0 | 2 | 0 | 0 | 0 | 1 |
| CC11-160 Carbon Cub SS | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 38 | 57 | 52 | 53 | 47 | 24 | 6 |
| CC18-180 Top Cub | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 7 | 1 | 9 | 7 | 5 | 2 | 6 |
| CC19-180 XCub | - | - | - | - | - | - | - | - | - | - | - | - | 8 | 14 |
| Daher | 5 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TB-9 Tampico | 0 | 1 | - | - | - | - | - | - | - | - | - | - | - | - |
| TB-10 | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - |
| TB-20 | 0 | 1 | - | - | - | - | - | - | - | - | - | - | - | - |
| TB-21 | 2 | 3 | - | - | - | - | - | - | - | - | - | - | - | - |
| TB-200 | 0 | 0 | - | - | - | - | - | - | - | - | - | - | - | - |
| Diamond Aircraft | 261 | 329 | 438 | 471 | 308 | 163 | 130 | 185 | 156 | 139 | 202 | 144 | 132 | 137 |
| HK-36 | - | - | - | - | - | 13 | 10 | 3 | 3 | 1 | 0 | 1 | 0 | 0 |
| DA-20 | 58 | 54 | 55 | 58 | 69 | 14 | 31 | 40 | 32 | 14 | 16 | 22 | 20 | 8 |
| DA-40 | 203 | 207 | 220 | 232 | 154 | 98 | 57 | 72 | 93 | 102 | 136 | 75 | 48 | 60 |
| DA-42 | - | 68 | 163 | 181 | 85 | 38 | 32 | 70 | 28 | 22 | 50 | 44 | 34 | 36 |
| DA-62 | - | - | - | - | - | - | - | - | - | - | - | 2 | 30 | 33 |
| Discovery Aviation (prev. Liberty) | 0 | 2 | 29 | 38 | 33 | 13 | 14 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| XL2 | - | 2 | 29 | 38 | 33 | 13 | 14 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| Extra Aircraft | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 27 | 29 | 31 | 27 | 27 | 25 |
| EA300 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 27 | 29 | 31 | 27 | 27 | 25 |
| Flight Design GmbH | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 89 | 76 | 89 | 88 | 59 | 23 | 32 |
| ASTM CT Series | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 89 | 76 | 89 | 88 | 59 | 23 | 32 |
| ICON Aircraft | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 10 |
| A5 | - | - | - | - | - | - | - | - | - | - | - | - | 5 | 10 |

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1.4c Worldwide Piston-Engine Airplane Shipments by Manufacturer (2004–2017) *Continued*

| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|--------------|--------------|--------------|--------------|--------------|------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Mahindra Aerospace (prev. GippsAero) | 20 | 22 | 20 | 17 | 19 | 11 | 14 | 10 | 14 | 12 | 17 | 14 | 9 | 9 |
| Airvan 8 | 20 | 22 | 20 | 17 | 19 | 11 | 14 | 10 | 14 | 12 | 17 | 14 | 9 | 9 |
| Maule Air Incorporated | 25 | 27 | 38 | 36 | 27 | 7 | 4 | 4 | 9 | 6 | 2 | 13 | 3 | 0 |
| M-4-180A, V | - | 1 | 7 | 5 | - | - | - | - | - | - | 1 | - | - | - |
| M-7-235, A, B, C | 8 | 11 | 8 | 6 | 7 | 1 | 3 | - | 1 | - | - | - | 1 | n/a |
| M-7-260, C | 3 | 4 | 2 | 4 | 4 | 4 | - | 1 | 3 | 4 | - | - | 1 | n/a |
| MT-7-235 | 1 | 2 | 9 | 2 | 6 | 2 | - | - | 1 | - | - | - | - | - |
| MT-7-260 | - | 2 | 4 | - | - | - | - | - | - | - | - | - | - | - |
| MX-7-180, A, B, C, AC | 5 | 3 | 4 | 6 | 4 | - | 1 | 1 | 1 | 1 | - | 12 | 1 | n/a |
| MXT-7-160 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| MXT-7-180, A, AC | 8 | 4 | 4 | 12 | 6 | - | - | 2 | 3 | - | - | - | - | - |
| M-8-235 | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - |
| M-9-235 | - | - | - | - | - | - | - | - | - | 1 | - | 1 | - | n/a |
| Mooney International Corporation | 37 | 85 | 75 | 79 | 65 | 19 | 2 | 0 | 0 | 0 | 1 | 11 | 7 | 7 |
| M20M Bravo | 9 | 20 | 5 | 1 | - | - | - | - | - | - | - | - | - | - |
| M20R Ovation | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M20R Ovation 2 | 28 | 65 | 63 | 20 | 21 | 4 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 2 |
| M20R Ovation Ultra | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| M20S Eagle 2 | - | - | - | - | - | - | - | - | - | - | - | 8 | - | - |
| M20TN Acclaim | - | - | 7 | 58 | 44 | 15 | 2 | 0 | 0 | 0 | 1 | 0 | 6 | 1 |
| M20TN Acclaim Ultra | - | - | - | - | - | - | - | - | - | - | - | - | - | 3 |
| Pacific Aerospace Corporation | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CT/4E Airtrainer | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Piper Aircraft, Inc. | 163 | 193 | 189 | 168 | 216 | 61 | 135 | 104 | 126 | 154 | 136 | 111 | 93 | 108 |
| PA-28-161 Warrior III | 18 | 37 | 19 | 27 | 23 | 8 | 23 | 15 | 20 | 2 | 3 | 20 | 5 | 0 |
| PA-28-181 Archer III | 19 | 16 | 29 | 16 | 7 | 1 | 21 | 2 | 4 | 48 | 45 | 25 | 42 | 72 |
| PA-28R-201 Arrow IV | 12 | 9 | 5 | 8 | 1 | 0 | 4 | 0 | 2 | 1 | 8 | 5 | 7 | 9 |
| PA-32-301FT Piper 6X | 24 | 18 | 10 | 12 | 0 | - | - | - | - | - | - | - | - | - |
| PA-32-301XTC Piper 6XT | 14 | 16 | 11 | - | - | - | - | - | - | - | - | - | - | - |
| PA-32R-301 Saratoga II HP | 9 | 8 | 10 | - | - | - | - | - | - | - | - | - | - | - |
| PA-32-301T Saratoga II TC | 31 | 37 | 37 | 39 | 12 | - | - | - | - | - | - | - | - | - |
| PA-34-220T Seneca V | 10 | 12 | 26 | 22 | 27 | 7 | 22 | 21 | 17 | 22 | 10 | 8 | 3 | 1 |
| PA-44-180 Seminole | 11 | 29 | 11 | 14 | 24 | 5 | 16 | 16 | 22 | 23 | 22 | 17 | 10 | 17 |
| PA-46-350P Malibu Mirage/M350 | 15 | 11 | 31 | 30 | 21 | 7 | 26 | 33 | 49 | 42 | 37 | 34 | 26 | 9 |
| PA-46R-350T Matrix | - | - | - | - | 101 | 33 | 23 | 17 | 12 | 16 | 11 | 2 | 0 | 0 |
| Quartz Mountain Aerospace | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| QMA 11E | - | - | - | - | 11 | - | - | - | - | - | - | - | - | - |
| Symphony Aircraft (prev. OMF) | 1 | 10 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Symphony 160 | 1 | 10 | 5 | - | - | - | - | - | - | - | - | - | - | - |
| TECNAM Aircraft | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 197 | 190 | 191 | 191 | 171 |
| ASTM - LSA | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 108 | 108 | 102 | 73 | 72 |
| P2002JF | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 33 | 18 | 20 | 33 | 20 |
| P92JS | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 15 | 7 | 4 | 7 | 3 |
| P2002JR | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 2 | 0 | 0 | 0 | 0 |
| P2008JC | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 19 | 36 | 24 | 24 | 19 |
| P2006T | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 20 | 21 | 21 | 32 | 39 |
| P2010P Twenty Ten | - | - | - | - | - | - | - | - | - | - | - | 20 | 22 | 18 |
| Textron Aviation (Beechcraft) | 93 | 99 | 118 | 111 | 103 | 56 | 51 | 54 | 36 | 70 | 72 | 41 | 45 | 36 |
| Beechcraft Bonanza A/G36 | 62 | 71 | 80 | 73 | 63 | 36 | 22 | 24 | 12 | 35 | 32 | 23 | 25 | 13 |
| Beechcraft Baron B/G58 | 31 | 28 | 38 | 38 | 40 | 20 | 29 | 30 | 24 | 35 | 40 | 18 | 20 | 23 |
| Textron Aviation (Cessna Aircraft) | 654 | 822 | 865 | 807 | 733 | 355 | 261 | 413 | 283 | 206 | 220 | 271 | 217 | 238 |
| CE-162 SkyCatcher | - | - | - | - | - | 1 | 22 | 168 | 19 | - | - | - | - | - |
| CE-172R Skyhawk | 32 | 37 | 87 | 133 | 55 | 16 | 8 | 26 | 27 | 0 | 0 | - | - | - |
| CE-172S Skyhawk | 204 | 314 | 322 | 240 | 228 | 110 | 77 | 77 | 113 | 106 | 155 | 143 | 100 | 129 |
| CE-182T Skylane | 196 | 241 | 140 | 161 | 109 | 58 | 64 | 40 | 48 | 13 | 0 | 33 | 50 | 46 |
| CE-T182T Turbo Skylane | 133 | 118 | 187 | 140 | 105 | 75 | 36 | 37 | 19 | 26 | 0 | - | - | - |
| CE-206H Stationair | 22 | 29 | 25 | 20 | 17 | 3 | 4 | 11 | 16 | 3 | 0 | - | - | - |
| CE-T206H Turbo Stationair | 67 | 83 | 104 | 111 | 95 | 46 | 42 | 53 | 40 | 37 | 43 | 51 | 36 | 40 |
| 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 | 23 |
| Tiger Aircraft | 19 | 15 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AG-5B Tiger | 19 | 15 | 3 | - | - | - | - | - | - | - | - | - | - | - |
| WACO Classic Aircraft | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 5 | 6 | 7 | 11 | 10 | 7 | 6 |
| 2T-1A-2 | n/a | - | - | - | - | - | - | - | - | 1 | 6 | 6 | 3 | 1 |
| YMF-5D | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 5 | 6 | 6 | 5 | 4 | 4 | 5 |
| XtremeAir GmbH | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 9 | 9 | 8 | 9 | 0 | 0 | 0 |
| XA41 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 4 | 2 | 2 | 0 | n/a | n/a | n/a |
| XA42 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 5 | 7 | 6 | 9 | n/a | n/a | n/a |
| Total Number of Airplanes | 2,051 | 2,465 | 2,755 | 2,675 | 2,119 | 977 | 912 | 1,207 | 1,072 | 1,282 | 1,378 | 1,265 | 1,147 | 1,185 |
| % Change | 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% | 3.3% |
| Total Billings for Airplanes (\$M) | 692 | 805 | 857 | 897 | 945 | 442 | 415 | 441 | 428 | 571 | 635 | 601 | 661 | 718 |
| % Change | 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% | 8.6% |

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 (2004–2017) Civil-Commercial and Military-Government Combined

| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|------------|
| Airbus Helicopters | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 507 | 440 | 451 | 418 | 360 | 380 | 369 |
| HC120 (prev. EC120) | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 10 | 11 | 12 | 7 | 2 | 5 | 5 |
| AS350 B2 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 59 | 36 | 32 | 23 | 9 | 7 | 0 |
| H125/H125M (prev. EC125/AS350 B3e/AS550 C3e) | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 150 | 130 | 187 | 134 | 95 | 104 | 125 |
| H130 (prev. EC130) | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 42 | 43 | 35 | 58 | 69 | 54 | 35 |
| AS355 NP/AS555 AP | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 7 | 8 | 5 | 3 | 3 | 7 | 1 |
| H135/H135M (prev. EC135/EC635) | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 74 | 67 | 48 | 42 | 35 | 40 | 55 |
| H145/H145M (prev. EC145/EC645/UH-72A) | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 89 | 82 | 69 | 73 | 68 | 107 | 93 |
| AS365 N3/AS565 Mbe | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 14 | 11 | 8 | 4 | 7 | 11 | 16 |
| H155 (prev. EC155) | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 12 | 7 | 10 | 10 | 10 | 3 | 3 |
| H175 (prev. EC175) | - | - | - | - | - | - | - | - | - | - | 3 | 4 | 4 | 11 |
| H215/H215M (prev. AS332/AS532) | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 4 | 3 | 4 | 6 | 7 | 10 | 3 |
| H225/H225M (prev. EC225/EC725) | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 26 | 32 | 30 | 43 | 35 | 9 | 5 |
| TIGER | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 20 | 10 | 11 | 12 | 16 | 19 | 17 |
| Bell Helicopter | 111 | 123 | 159 | 181 | 175 | 165 | 139 | 188 | 247 | 279 | 239 | 223 | 171 | 192 |
| 505 | - | - | - | - | - | - | - | - | - | - | - | - | - | 27 |
| 206B | 7 | 16 | 20 | 28 | 18 | 22 | 5 | - | - | - | - | - | - | - |
| 206L/LT | 18 | 22 | 21 | 24 | 21 | 16 | 15 | 14 | 9 | 11 | 13 | 12 | 10 | 4 |
| 407/GX/GXP | 40 | 41 | 67 | 73 | 79 | 81 | 62 | 55 | 85 | 110 | 86 | 99 | 57 | 44 |
| 412/EP/EPI | 33 | 29 | 35 | 39 | 36 | 28 | 28 | 20 | 39 | 36 | 26 | 12 | 10 | 13 |
| 427 | 9 | 5 | 7 | 10 | 7 | 4 | 1 | 4 | 4 | - | - | - | - | - |
| 429/WLG | - | - | - | - | - | 2 | 21 | 28 | 43 | 56 | 53 | 52 | 28 | 36 |
| 430 | 4 | 10 | 9 | 7 | 3 | - | - | - | - | - | - | - | - | - |
| Huey II | - | - | - | - | 11 | 12 | 7 | 4 | 8 | - | - | - | 9 | 8 |
| H-1 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 28 | 21 | 25 | 24 | 24 | 35 | 38 |
| V22 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 35 | 38 | 41 | 37 | 24 | 22 | 22 |
| Brantly | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B-2B | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Enstrom Helicopter Corp. | 23 | 29 | 23 | 19 | 10 | 6 | 4 | n/a | 16 | 27 | 26 | 20 | 12 | 5 |
| F-28/280 | 5 | 15 | 10 | 6 | 1 | 1 | 1 | n/a | 2 | 4 | 2 | 5 | 3 | 1 |
| 480 | 18 | 14 | 13 | 13 | 9 | 5 | 3 | n/a | 14 | 23 | 24 | 15 | 9 | 4 |
| Hélicoptères Guimbal | 0 | 0 | 0 | 0 | n/a | n/a | n/a | n/a | n/a | n/a | 27 | 44 | 50 | 35 |
| Cabri G2 | - | - | - | - | n/a | n/a | n/a | n/a | n/a | n/a | 27 | 44 | 50 | 35 |
| Leonardo Helicopters (prev. AgustaWestland) | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 214 | 180 | 160 | 172 | 0 |
| AW119Ke | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 22 | 17 | 16 | 22 | n/a |
| AW109Power | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 9 | 7 | 8 | 0 | n/a |
| GRANDNEW | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 35 | 14 | 14 | 17 | n/a |
| AW139 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 118 | 101 | 72 | 63 | n/a |
| AW169 | - | - | - | - | - | - | - | - | - | - | - | 1 | 22 | n/a |
| AW149 | - | - | - | - | - | - | - | - | - | - | - | - | - | n/a |
| AW189 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 0 | 10 | 16 | 7 | n/a |
| AW159 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 15 | 11 | 13 | 19 | n/a |
| SUPER LYNX | - | - | - | - | - | - | - | - | - | - | - | 4 | 1 | n/a |
| T129 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 0 | 5 | 4 | 10 | n/a |
| AW101 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 5 | 5 | 5 | 3 | n/a |
| CH47F | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 0 | 5 | 3 | 5 | n/a |
| SW4 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 0 | 0 | 0 | 3 | n/a |
| W3 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 10 | 5 | 4 | 0 | n/a |
| MD Helicopters | 10 | 3 | 13 | 18 | 52 | 40 | 12 | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| 500 | 1 | 0 | n/a | 3 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| 520N | 0 | 2 | n/a | 3 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| 530 | 1 | 0 | n/a | 2 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| 600 | 4 | 1 | n/a | 3 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| 900 | 4 | 0 | n/a | 7 | n/a | 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 | 33 | 35 | 43 | 53 | 35 | 38 | 40 |
| NH90 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 33 | 35 | 43 | 53 | 35 | 38 | 40 |
| Robinson Helicopter Company | 690 | 806 | 749 | 823 | 893 | 433 | 162 | 356 | 517 | 523 | 329 | 347 | 234 | 305 |
| R22 | 234 | 243 | 97 | 159 | 164 | 25 | 40 | 56 | 40 | 42 | 42 | 34 | 19 | 34 |
| R44 Cadet | - | - | - | - | - | - | - | - | - | - | - | - | - | 20 |
| R44 Raven I / II | 456 | 563 | 652 | 664 | 729 | 408 | 112 | 212 | 286 | 289 | 186 | 196 | 152 | 174 |
| R66 | - | - | - | - | - | - | 10 | 88 | 191 | 192 | 101 | 117 | 63 | 77 |
| Schweitzer Aircraft | 48 | 58 | 61 | 70 | 51 | 27 | 29 | 8 | 1 | 0 | 0 | 0 | 0 | 0 |
| 300C | 13 | 12 | 12 | 11 | 16 | 10 | 14 | n/a | n/a | - | - | - | - | - |
| 300CB/300CBi | 27 | 40 | 44 | 51 | 27 | 13 | 6 | n/a | n/a | - | - | - | - | - |
| 330/333 | 8 | 6 | 5 | 8 | 8 | 4 | 9 | n/a | n/a | - | - | - | - | - |
| Sikorsky Aircraft Corp. | 34 | 49 | 52 | 79 | 78 | 58 | 42 | 249 | 227 | 231 | 231 | 178 | 181 | 172 |
| S-70 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S-76 | 29 | 30 | 36 | 50 | 53 | 34 | 21 | 16 | 5 | 26 | 17 | 13 | 5 | 4 |
| S-92 | 4 | 19 | 16 | 29 | 25 | 24 | 21 | 20 | 30 | 37 | 42 | 16 | 7 | 3 |
| Blackhawk | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 125 | 123 | 106 | 133 | 134 | |
| Seahawk | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 213 | 192 | 43 | 49 | 43 | 36 | 31 |
| Total Number of Rotorcraft | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 1,768 | 1,503 | 1,367 | 1,238 | n/a |
| % Change | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | -15.1% | -8.9% | -9.4% | 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 2018 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 (1948–2017)

| Year | Grand Total | Single-Engine Piston | Multi-Engine Piston | Total Piston | Turboprop | Business Jet | Total Turbine | Companies Reporting | Factory Net Billings (\$ Millions) |
|------|-------------|----------------------|---------------------|--------------|-----------|--------------|---------------|---------------------|------------------------------------|
| 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 | 1,531 | 685 | 33 | 718 | 411 | 402 | 813 | 18 | \$11,560 |
| 2017 | 1,596 | 745 | 41 | 786 | 409 | 401 | 810 | 18 | \$10,573 |

Source: GAMA

1.6 U.S.-Manufactured General Aviation Airplane Billings (in Millions of Dollars) by Type (2000–2017)

| 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 | 11,560 | n/a | n/a | 511 | 1,180 | 9,869 | 11,049 |
| 2017 | 10,573 | n/a | n/a | 577 | 1,032 | 8,985 | 10,017 |

Source: GAMA

1.7 U.S.-Manufactured General Aviation Airplane Exports by Type and Billings (2000–2017)

| 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 | 29.6% | \$4,451.3 | 38.5% |
| 2017 | 193 | 11 | 210 | 127 | 541 | 33.9% | \$4,347.9 | 41.1% |

Source: GAMA

1.8 European-Manufactured General Aviation Airplane Shipments by Type (2008–2017)

| 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 |
| 2017 | 580 | 26 | 108 | 384 | 145 | 49 | 194 | 9 | \$3,234.3 |

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

Source: GAMA

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

2.1 Canada—Registered Aircraft by Type and Weight Group (1983–2017)

| Year | Number of Registered Aircraft by Type | | | | | | | | | By Weight Group | | Total Aircraft |
|------|---------------------------------------|-------------|---------------|-------------|---------|----------|------------|----------|--------------|-----------------|--------------|----------------|
| | Aeroplanes | Ultralights | Amateur-Built | 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 |
| 2017 | 32,279 | 7,459 | 4,248 | 2,830 | 723 | 523 | 232 | 0 | 1 | 34,473 | 2,115 | 36,588 |

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 (2016)

| Aircraft Type | Total Active (77.5% of 273,211) | General Aviation FAR Part 91 Use | | | | | | | | | | | | On-Demand FAR Part 135 Use | | |
|----------------------------|---------------------------------------|----------------------------------|---------------------------|----------------------------|--------------------|-----------------|----------------|-------------------------|------------------|---------------|------------------|----------------|--------------|-------------------------------|--------------|----------------|
| | | Personal/ Recreational | 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 | 211,793 | 142,105 | 16,177 | 9,770 | 15,826 | 3,206 | 6,101 | 819 | 304 | 1,331 | 1,126 | 411 | 6,086 | 5,828 | 585 | 2,119 |
| % Std. Error | 1.4% | 2.0% | 1.6% | 1.0% | 1.6% | 1.0% | 1.2% | 0.9% | 0.9% | 1.4% | 1.4% | 1.2% | 1.0% | 0.7% | 0.8% | 0.6% |
| Piston Total | 142,638 | 106,236 | 12,647 | 1,196 | 12,593 | 998 | 3,503 | 172 | - | 657 | 219 | 260 | 2,321 | 1,653 | 124 | 60 |
| One-Engine Piston | 129,652 | 99,178 | 10,181 | 604 | 11,327 | 952 | 3,247 | 99 | - | 600 | 210 | 184 | 1,986 | 927 | 107 | 51 |
| Two-Engine Piston | 12,986 | 7,058 | 2,466 | 592 | 1,266 | 46 | 256 | 73 | - | 58 | 9 | 76 | 335 | 726 | 18 | 9 |
| Turboprop Total | 9,779 | 1,489 | 1,356 | 1,977 | 84 | 1,580 | 500 | 249 | - | 235 | 2 | 26 | 370 | 1,549 | 10 | 351 |
| One-Engine Turboprop | 4,566 | 721 | 639 | 414 | 41 | 1,555 | 34 | 136 | - | 74 | 2 | 19 | 240 | 605 | 3 | 84 |
| Two-Engine Turboprop | 5,212 | 768 | 717 | 1,563 | 43 | 25 | 467 | 114 | - | 161 | - | 6 | 130 | 944 | 8 | 267 |
| Business Jet | 13,751 | 1,639 | 1,234 | 6,241 | 103 | 47 | 4 | 35 | - | 103 | - | 43 | 2,043 | 2,093 | - | 165 |
| Rotorcraft Total | 10,577 | 1,626 | 319 | 261 | 1,836 | 543 | 2,034 | 351 | 304 | 127 | 178 | 77 | 522 | 511 | 344 | 1,543 |
| Piston Total | 3,344 | 1,027 | 194 | 23 | 1,306 | 230 | 216 | 6 | 4 | 12 | 152 | - | 34 | 63 | 77 | - |
| Turbine Total | 7,232 | 599 | 125 | 238 | 530 | 312 | 1,818 | 345 | 300 | 115 | 27 | 77 | 488 | 448 | 267 | 1,543 |
| - One-Engine Turbine | 5,467 | 556 | 106 | 113 | 427 | 285 | 1,698 | 289 | 182 | 87 | 19 | 25 | 169 | 301 | 264 | 945 |
| - Two-Engine Turbine | 1,766 | 42 | 19 | 125 | 103 | 27 | 120 | 56 | 118 | 28 | 8 | 52 | 319 | 147 | 3 | 598 |
| Gliders | 1,789 | 1,431 | - | - | 311 | - | 2 | - | - | 2 | 28 | - | 14 | - | - | - |
| Lighter-Than-Air | 3,197 | 2,214 | 11 | - | 177 | - | - | - | - | 28 | 671 | - | - | - | 96 | - |
| Experimental Total | 27,585 | 25,473 | 571 | 91 | 376 | 36 | 43 | 12 | - | 177 | 27 | 5 | 750 | 20 | 5 | - |
| Amateur-Built | 20,490 | 19,387 | 472 | 79 | 214 | - | 11 | 2 | - | 79 | 2 | - | 243 | - | 3 | - |
| Exhibition | 2,015 | 1,664 | 19 | - | 32 | 7 | 7 | 3 | - | 27 | 4 | 5 | 248 | - | - | - |
| Exp. Light-Sport | 4,264 | 3,924 | 23 | 2 | 89 | - | 2 | - | - | 56 | 12 | - | 156 | - | - | - |
| Other Experimental | 816 | 497 | 57 | 10 | 42 | 29 | 24 | 7 | - | 15 | 10 | - | 103 | 2 | 2 | - |
| Special Light-Sport | 2,478 | 1,998 | 39 | 4 | 346 | 2 | 14 | - | - | 2 | - | - | 66 | 2 | 6 | - |

Source: FAA Survey

2.3 U.S. General Aviation and On-Demand Part 135 Total Hours Flown by Use and Aircraft Type (2016)

| Aircraft Type | Total Hours | General Aviation FAR Part 91 Use | | | | | | | | | | | | On-Demand FAR Part 135 Use | | |
|----------------------------|-------------------|----------------------------------|---------------------------|----------------------------|--------------------|-----------------|------------------|-------------------------|------------------|----------------|------------------|----------------|----------------|-------------------------------|----------------|----------------|
| | | Personal/ Recreational | 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 | 24,833,264 | 7,868,484 | 1,778,840 | 2,551,078 | 4,885,521 | 868,701 | 1,433,525 | 158,731 | 150,554 | 428,750 | 167,177 | 97,637 | 944,749 | 2,371,199 | 374,591 | 753,727 |
| % Std. Error | 1.0% | 1.2% | 2.4% | 3.3% | 3.1% | 6.8% | 5.4% | 10.8% | 15.8% | 14.0% | 9.0% | 15.6% | 3.7% | 4.3% | 13.4% | 6.5% |
| Piston Total | 13,548,135 | 5,988,191 | 1,258,855 | 214,113 | 4,064,459 | 142,636 | 738,424 | 22,800 | - | 132,162 | 60,571 | 42,530 | 310,232 | 508,860 | 57,031 | 7,147 |
| One-Engine Piston | 11,865,206 | 5,536,772 | 1,023,221 | 134,592 | 3,591,255 | 133,613 | 664,590 | 14,229 | - | 120,523 | 57,433 | 24,996 | 267,215 | 238,330 | 53,617 | - |
| Two-Engine Piston | 1,682,929 | 451,419 | 235,634 | 79,521 | 473,203 | 9,022 | 73,833 | 8,571 | - | 11,638 | 3,139 | 17,534 | 43,017 | 270,530 | 3,413 | 2,453 |
| Turboprop Total | 2,707,093 | 196,640 | 196,176 | 420,551 | 48,105 | 554,427 | 66,078 | 66,008 | - | 175,750 | - | 15,462 | 62,619 | 753,157 | 4,065 | 146,702 |
| One-Engine Turboprop | 1,375,821 | 95,806 | 95,865 | 107,231 | 15,067 | 550,663 | 9,322 | 38,528 | - | 34,787 | - | 12,142 | 28,665 | 346,451 | 2,128 | 37,903 |
| Two-Engine Turboprop | 1,331,271 | 100,834 | 100,311 | 313,320 | 33,038 | 3,764 | 56,756 | 27,480 | - | 140,962 | - | - | 33,953 | 406,705 | - | 108,799 |
| Business Jet | 3,846,721 | 332,660 | 224,096 | 1,834,277 | 24,732 | 30,386 | - | 7,744 | - | 37,800 | - | 17,225 | 402,992 | 866,398 | - | 67,473 |
| Rotorcraft Total | 3,128,069 | 105,376 | 33,937 | 74,753 | 619,458 | 129,127 | 619,721 | 61,505 | 150,366 | 55,281 | 64,657 | 22,294 | 119,896 | 234,048 | 305,276 | 532,374 |
| Piston Total | 780,205 | 71,847 | 16,053 | 4,498 | 444,715 | 38,011 | 56,005 | 3,462 | 3,195 | 2,190 | 52,377 | - | 14,059 | 28,152 | 45,613 | - |
| Turbine Total | 2,347,864 | 33,529 | 17,883 | 70,255 | 174,743 | 91,117 | 563,715 | 58,043 | 147,171 | 53,091 | 12,281 | 22,266 | 105,837 | 205,896 | 259,663 | 532,374 |
| - One-Engine Turbine | 1,809,769 | 29,600 | 14,089 | 40,874 | 143,744 | 77,908 | 501,857 | 49,900 | 108,735 | 44,423 | 11,361 | 8,699 | 68,554 | 144,770 | 257,955 | 307,299 |
| - Two-Engine Turbine | 538,095 | 3,929 | 3,794 | 29,381 | 30,999 | - | 61,858 | 8,143 | 38,436 | 8,668 | - | 13,567 | 37,283 | 61,126 | - | 225,075 |
| Gliders | 86,810 | 61,870 | - | - | 20,481 | - | - | - | - | - | 3,589 | - | - | - | - | - |
| Lighter-Than-Air | 106,170 | 56,837 | - | - | - | - | - | - | - | - | 33,789 | - | - | - | - | - |
| Experimental Total | 1,223,638 | 1,012,106 | 61,829 | - | 41,744 | - | - | - | - | - | - | - | 41,846 | - | - | - |
| Amateur-Built | 889,837 | 793,693 | 55,169 | - | 17,554 | - | - | - | - | - | - | - | 9,512 | - | - | - |
| Exhibition | 88,634 | 70,218 | - | - | 2,917 | - | - | - | - | - | - | - | 10,066 | - | - | - |
| Exp. Light-Sport | 152,443 | 126,753 | - | - | - | - | - | - | - | - | - | - | 13,761 | - | - | - |
| Other Experimental | 92,724 | 21,442 | 5,010 | - | 16,766 | 9,605 | 5,138 | - | - | - | - | - | 8,507 | - | - | - |
| Special Light-Sport | 186,627 | 114,803 | 3,445 | 468 | 59,360 | - | 1,356 | - | - | - | 328 | - | 5,663 | - | - | - |

Source: FAA Survey

2.4 Active U.S. General Aviation and On-Demand Part 135 Aircraft by Type (1996–2016) and Forecast (2017–2026)

| Year | Total Aircraft | Airplane | | | Rotorcraft | | Balloons, Dirigibles, Gliders | Experimental | Light-Sport 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 |
| 2011E | 220,453 | 152,597 | 9,523 | 11,650 | 3,411 | 6,671 | 5,681 | 24,275 | 6,645 | 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 |
| 2016 | 211,793 | 142,638 | 9,779 | 13,751 | 3,344 | 7,232 | 4,986 | 27,585 | - | 4,464 | 2,478 |
| Forecast | | | | | | | | | | | |
| 2017 | 209,800 | 138,915 | 9,285 | 14,100 | 3,380 | 7,510 | 4,955 | 28,970 | - | - | 2,685 |
| 2018 | 209,800 | 137,845 | 9,180 | 14,415 | 3,425 | 7,650 | 4,960 | 29,490 | - | - | 2,835 |
| 2019 | 209,780 | 136,785 | 9,110 | 14,760 | 3,470 | 7,785 | 4,960 | 29,910 | - | - | 3,000 |
| 2020 | 209,710 | 135,730 | 9,080 | 15,115 | 3,515 | 7,920 | 4,950 | 30,240 | - | - | 3,160 |
| 2021 | 209,725 | 134,650 | 9,075 | 15,480 | 3,560 | 8,055 | 4,950 | 30,640 | - | - | 3,315 |
| 2022 | 209,655 | 133,565 | 9,115 | 15,845 | 3,605 | 8,195 | 4,955 | 30,895 | - | - | 3,480 |
| 2023 | 209,605 | 132,455 | 9,185 | 16,210 | 3,650 | 8,335 | 4,955 | 31,175 | - | - | 3,640 |
| 2024 | 209,655 | 131,340 | 9,295 | 16,585 | 3,695 | 8,480 | 4,955 | 31,510 | - | - | 3,795 |
| 2025 | 209,735 | 130,230 | 9,420 | 16,965 | 3,740 | 8,625 | 4,955 | 31,835 | - | - | 3,965 |
| 2026 | 209,735 | 129,100 | 9,570 | 17,345 | 3,785 | 8,775 | 4,970 | 32,065 | - | - | 4,125 |
| Average Annual Growth | | | | | | | | | | | |
| 2017–26 | -0.1% | -1.0% | -0.2% | 2.3% | 1.2% | 2.0% | 0.0% | 1.5% | - | - | 5.2% |

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 estimated, because no data was published by the FAA.
- 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 (1980–2016) and Forecast (2017–2026)

| Year | Total Hours | Airplane | | | Rotorcraft | | Balloons, Dirigibles, Gliders | Experimental | Light-Sport Aircraft | | |
|-----------------------|-------------|----------|-----------|--------------|------------|---------|-------------------------------|--------------|----------------------|--------------|---------|
| | | Piston | Turboprop | Business Jet | Piston | Turbine | | | Total | Experimental | Special |
| 1980 | 41,016 | 34,747 | 2,240 | 1,332 | 736 | 1,603 | 359 | - | - | - | - |
| 1981 | 40,704 | 34,086 | 2,155 | 1,387 | 930 | 1,754 | 391 | - | - | - | - |
| 1982 | 36,457 | 29,950 | 2,168 | 1,611 | 579 | 1,771 | 379 | - | - | - | - |
| 1983 | 35,249 | 28,911 | 2,173 | 1,473 | 572 | 1,700 | 420 | - | - | - | - |
| 1984 | 36,119 | 29,194 | 2,506 | 1,566 | 592 | 1,903 | 358 | - | - | - | - |
| 1985 | 31,456 | 25,666 | 1,921 | 1,498 | 521 | 1,468 | 382 | - | - | - | - |
| 1986 | 31,782 | 24,805 | 2,661 | 1,527 | 742 | 1,682 | 364 | - | - | - | - |
| 1987 | 30,883 | 24,969 | 2,010 | 1,411 | 602 | 1,506 | 384 | - | - | - | - |
| 1988 | 31,114 | 24,291 | 2,195 | 1,554 | 533 | 1,974 | 568 | - | - | - | - |
| 1989 | 32,332 | 24,907 | 2,892 | 1,527 | 692 | 1,918 | 396 | - | - | - | - |
| 1990 | 32,096 | 25,832 | 2,319 | 1,396 | 716 | 1,493 | 341 | - | - | - | - |
| 1991 | 29,862 | 23,919 | 1,628 | 1,071 | 549 | 2,214 | 483 | - | - | - | - |
| 1992 | 26,747 | 21,417 | 1,582 | 1,076 | 423 | 1,842 | 407 | - | - | - | - |
| 1993 | 24,455 | 19,321 | 1,192 | 1,212 | 391 | 1,308 | 338 | 785 | - | - | - |
| 1994 | 24,092 | 18,823 | 1,142 | 1,238 | 369 | 1,408 | 388 | 724 | - | - | - |
| 1995 | 26,612 | 20,251 | 1,490 | 1,455 | 337 | 1,624 | 261 | 1,194 | - | - | - |
| 1996 | 26,909 | 20,091 | 1,768 | 1,543 | 591 | 1,531 | 227 | 1,158 | - | - | - |
| 1997 | 27,713 | 20,744 | 1,655 | 1,713 | 344 | 1,740 | 192 | 1,327 | - | - | - |
| 1998 | 28,100 | 20,402 | 1,765 | 2,226 | 430 | 1,912 | 295 | 1,071 | - | - | - |
| 1999 | 31,231 | 22,529 | 1,797 | 2,721 | 552 | 2,077 | 309 | 1,246 | - | - | - |
| 2000 | 29,960 | 21,493 | 1,986 | 2,648 | 530 | 1,661 | 362 | 1,280 | - | - | - |
| 2001 | 27,017 | 19,194 | 1,773 | 2,654 | 474 | 1,479 | 287 | 1,157 | - | - | - |
| 2002 | 27,040 | 18,891 | 1,850 | 2,745 | 454 | 1,422 | 333 | 1,345 | - | - | - |
| 2003 | 27,329 | 19,013 | 1,922 | 2,704 | 448 | 1,687 | 263 | 1,292 | - | - | - |
| 2004 | 28,126 | 18,142 | 2,161 | 3,718 | 514 | 2,020 | 249 | 1,322 | - | - | - |
| 2005 | 26,982 | 16,434 | 2,106 | 3,771 | 617 | 2,439 | 267 | 1,339 | 9 | - | - |
| 2006 | 27,705 | 16,525 | 2,162 | 4,077 | 918 | 2,528 | 211 | 1,218 | 66 | - | - |
| 2007 | 27,852 | 16,257 | 2,661 | 3,938 | 704 | 2,541 | 215 | 1,275 | 260 | - | - |
| 2008 | 26,009 | 15,074 | 2,457 | 3,600 | 751 | 2,470 | 209 | 1,155 | 293 | - | - |
| 2009 | 23,763 | 13,634 | 2,215 | 3,161 | 755 | 2,248 | 178 | 1,286 | 286 | 171 | 115 |
| 2010 | 24,802 | 13,979 | 2,325 | 3,375 | 794 | 2,611 | 181 | 1,226 | 311 | 173 | 138 |
| 2011E | 24,569 | 13,626 | 2,463 | 3,407 | 757 | 2,654 | 181 | 1,203 | 278 | 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 |
| 2016 | 24,833 | 13,548 | 2,707 | 3,847 | 780 | 2,348 | 193 | 1,224 | - | 152 | 187 |
| Forecast | | | | | | | | | | | |
| 2017 | 24,753 | 12,604 | 2,538 | 4,445 | 777 | 2,636 | 163 | 1,372 | - | - | 218 |
| 2018 | 24,847 | 12,350 | 2,539 | 4,655 | 793 | 2,705 | 163 | 1,411 | - | - | 232 |
| 2019 | 25,000 | 12,157 | 2,542 | 4,863 | 809 | 2,773 | 163 | 1,446 | - | - | 246 |
| 2020 | 25,174 | 11,992 | 2,545 | 5,064 | 828 | 2,843 | 163 | 1,479 | - | - | 260 |
| 2021 | 25,375 | 11,865 | 2,554 | 5,250 | 848 | 2,905 | 163 | 1,515 | - | - | 275 |
| 2022 | 25,589 | 11,746 | 2,570 | 5,437 | 869 | 2,971 | 163 | 1,544 | - | - | 290 |
| 2023 | 25,794 | 11,638 | 2,593 | 5,597 | 886 | 3,037 | 163 | 1,575 | - | - | 305 |
| 2024 | 26,025 | 11,551 | 2,626 | 5,750 | 902 | 3,105 | 164 | 1,608 | - | - | 320 |
| 2025 | 26,239 | 11,451 | 2,662 | 5,894 | 919 | 3,174 | 164 | 1,640 | - | - | 335 |
| 2026 | 26,451 | 11,354 | 2,706 | 6,039 | 934 | 3,235 | 164 | 1,669 | - | - | 351 |
| Average Annual Growth | | | | | | | | | | | |
| 2017-26 | 0.6% | -1.8% | 0.0% | 4.6% | 1.8% | 3.3% | -1.6% | 3.2% | - | - | 6.5% |

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 estimated, because no data was published by the FAA.
- 2012: The general aviation survey results includes "Experimental Light-Sport" data in the "Experimental" category.

Source: FAA Survey and Forecast

2.6 Active U.S. General Aviation and On-Demand FAR Part 135 Average Hours Flown Per Aircraft by Year (2000–2016)

| 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 |
| 2011E | 111 | 89 | 259 | 292 | 222 | 398 | 32 | 50 | 42 | 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 |
| 2016 | 117 | 95 | 277 | 280 | 233 | 325 | 39 | 44 | - | 75 |

Data for 2011 was estimated, because no survey data is available from the FAA.

Source: FAA Survey

2.7 U.S. Experimental Aircraft Fleet and Flight Hours (in Thousands) (2000–2016)

| 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% |
| 2016 | 20,490 | 2,015 | 4,264 | 816 | 27,585 | 13.0% | 890 | 89 | 152 | 93 | 1,224 | 4.9% |

Source: FAA Survey

2.8 Total Fuel Consumed and Average Fuel Consumption Rate by Aircraft Type (2016)

| Fuel Type | Fixed-Wing | | | Rotorcraft | | Other Aircraft | Experimental | Special Light-Sport | Total All Aircraft |
|---------------------------------------|------------|-----------|-------------|------------|-----------|----------------|--------------|---------------------|--------------------|
| | Piston | Turboprop | Turbojet | Piston | Turbine | | | | |
| Jet Fuel | | | | | | | | | |
| Avg. Rate (GPH) | 32.2 | 76.7 | 290.7 | 11.9 | 48.3 | 15.0 | 44.3 | - | 152.3 |
| Estimated Fuel Use (Thousand Gallons) | 2,569.4 | 205,475.4 | 1,116,520.7 | 6,016.8 | 113,359.6 | 0.5 | 1,710.7 | - | 1,445,655.3 |
| % Standard Error | 10.5 | 1.5 | 1.3 | 3.0 | 1.4 | 0.0 | 14.2 | - | 1.1 |
| 100 Low-Lead | | | | | | | | | |
| Avg. Rate (GPH) | 13.2 | 34.9 | - | 13.6 | - | - | 12.2 | 5.4 | 13.1 |
| Estimated Fuel Use (Thousand Gallons) | 172,664.7 | 970.0 | - | 3,749.1 | - | - | 9,785.1 | 411.4 | 187,836.2 |
| % Standard Error | 1.7 | 11.9 | - | 4.5 | - | - | 15.8 | 3.5 | 1.8 |
| Automotive Gasoline | | | | | | | | | |
| Avg. Rate (GPH) | 9.1 | 9.2 | - | 6.0 | - | 1.7 | 4.9 | 5.3 | 6.8 |
| Estimated Fuel Use (Thousand Gallons) | 3,003.3 | 3.7 | - | 3.1 | - | 9.5 | 1,522.6 | 575.2 | 5,123.3 |
| % Standard Error | 11.3 | 9.5 | - | 6.8 | - | 28.1 | 4.4 | 4.9 | 4.7 |
| Total Fuel Use | | | | | | | | | |
| Avg. Rate (GPH) | 13.2 | 76.3 | 290.3 | 12.5 | 48.3 | 18.0 | 11.2 | 5.3 | 66.4 |
| Estimated Fuel Use (Thousand Gallons) | 178,237.4 | 206,459.1 | 1,116,639.5 | 9,769.0 | 113,364.3 | 2,527.1 | 13,172.1 | 988.8 | 1,641,157.3 |
| % Standard Error | 1.7 | 1.5 | 1.3 | 2.7 | 1.4 | 9.6 | 11.8 | 3.2 | 2.2 |

Some data points are suppressed or contain no reports of a type of aircraft using that fuel
The FAA no longer publishes data for 100 Octane and Other Fuel.

Source: FAA Survey

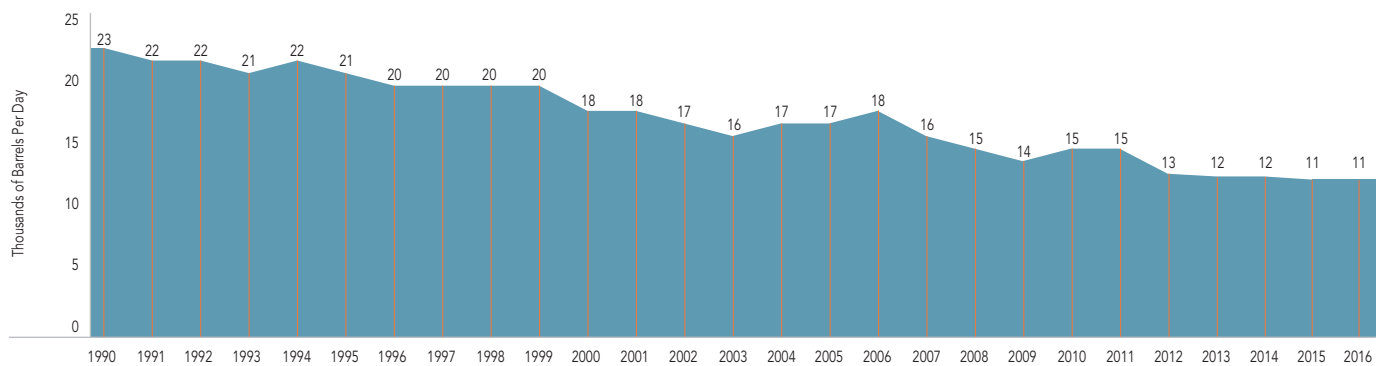
2.9 U.S. General Aviation Fuel Consumption (2000–2016)

| 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 | 129.9 | 52.9 | 195.3 | 1,124.6 | 10.3 | 136.4 | 21.5 | 1.4 | 216.0 | 1,456.3 | 1,672.3 |
| 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 | 128.4 | 40.4 | 191.4 | 1,062.9 | 10.2 | 128.3 | 15.4 | 1.2 | 195.6 | 1,382.6 | 1,578.2 |
| 2016 | 128.9 | 42.9 | 189.5 | 1,150.2 | 10.0 | 131.2 | 25.6 | 1.3 | 208.6 | 1,470.9 | 1,679.5 |

E = Estimated

Source: FAA Survey and Forecast

FIGURE 2.1 Refinery and Blender Net Production of Aviation Gasoline (1990–2016)



Source: U.S. Energy Information Administration

2.10 U.S. Refinery and Blender Net Production of Aviation Gasoline (1990–2016) (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 | 11 | - | - | - |

Source: U.S. Energy Information Administration

2.11 Average Age of Registered U.S. General Aviation Fleet (2009–2016)

| Aircraft Type | Engine Type | 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 | Average Age in 2016 in Years |
|---------------|----------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| Single-Engine | Piston | - | - | - | - | - | - | - | 45.7 |
| | Turboprop | 16.1 | 15.2 | n/a | 14.9 | 12.5 | 13.5 | 13.5 | 13.2 |
| | Jet | 44.0 | 44.1 | n/a | n/a | n/a | n/a | n/a | n/a |
| | Helicopter – Piston | - | n/a | n/a | 20.8 | 17.1 | 21.4 | 21.4 | 21.0 |
| | Helicopter – Turbine | - | - | n/a | 22.9 | 22.3 | 22.1 | 22.1 | 22.4 |
| Multi-Engine | Piston | - | - | - | - | - | - | - | 43.2 |
| | Turboprop | 28.0 | 27.0 | n/a | 26.1 | 25.2 | 27.6 | 27.6 | 28.4 |
| | Jet | 17.0 | 16.2 | n/a | 15.3 | 14.7 | 15.8 | 15.8 | 15.3 |
| | Helicopter – Turbine | - | - | - | 17.5 | 14.7 | 17.6 | 17.6 | 18.9 |
| All Aircraft | | 39.5 | 37.3 | n/a | 35.1 | 33.2 | 36.7 | 36.7 | 37.2 |

Source: GAMA



2.12 U.S. General Aviation Operations (in Thousands) at FAA and Contract Towers (1992–2017)

| 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 |
| 2016 | 15,554 | 9,380 | 6,174 | 264 | 11,990 | 6,535 | 5,455 | 252 | 27,544 |
| 2017E | 15,564 | 9,280 | 6,284 | 264 | 12,112 | 6,560 | 5,552 | 254 | 27,675 |

E = Estimated
 Location operations at FAA Control Towers captures all civil local operations.
 Facilities includes Control Towers, TRACONs, CERAPs and RAPCONs.
 Traffic Count for GA Operation Data are provided by OPSNET.
 Source: FAA Air Traffic Activity

2.13 Summary of U.S. General Aviation Operations and Contacts (in Thousands) at FAA Facilities (2001–2017)

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016E | 2017F |
|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| GA IFR Aircraft Handled at FAA Air Route Traffic Control Centers | 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 | 7,300.6 | 7,428.0 |
| GA Instrument Operations at FAA & Contract Facilities | 19,705.5 | 19,655.8 | 18,629.8 | 18,619.5 | 17,985.9 | - | - | - | - | - | - | - | - | - | - | - | - |
| GA Total TRACON Operations | 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 | 13,075.7 | 13,089.7 | 13,092.8 |
| Total Aircraft Contacts at FSS | 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 (2000–2017)

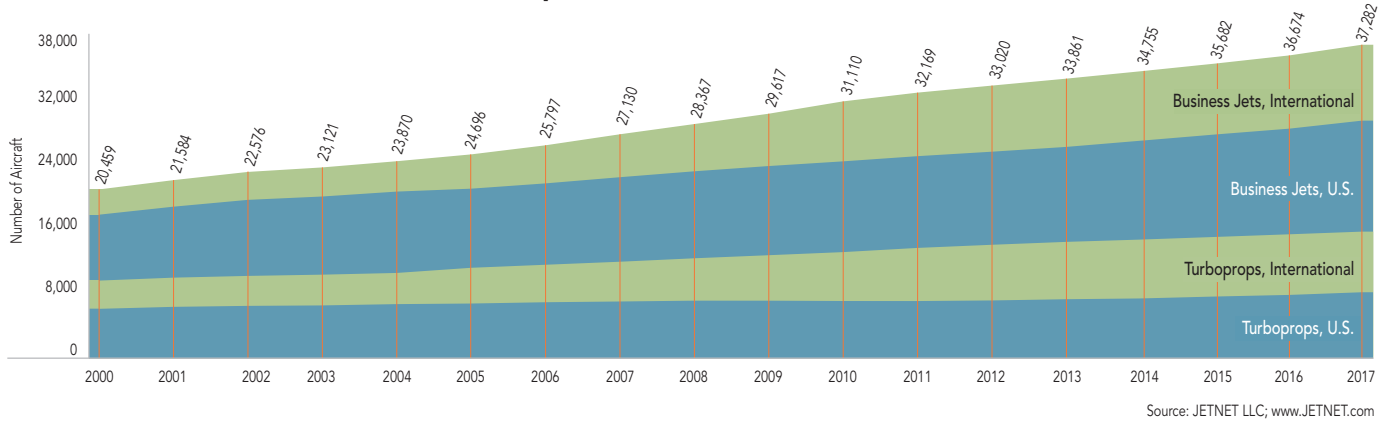


FIGURE 2.3 Worldwide Turbine and Piston Helicopter Fleet (2007–2017)

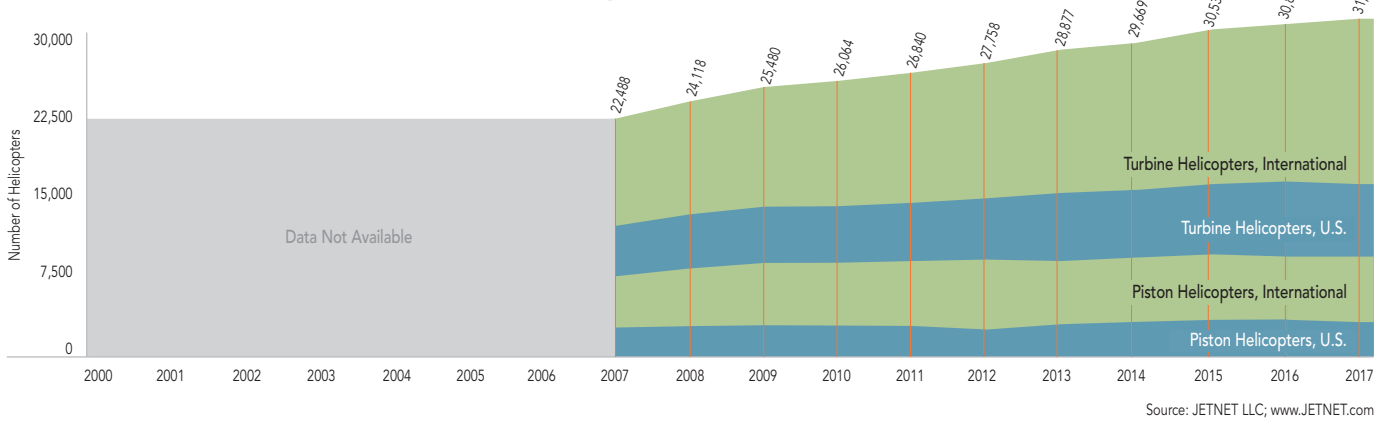


FIGURE 2.4 Worldwide Business Aircraft Operators (2000–2017)

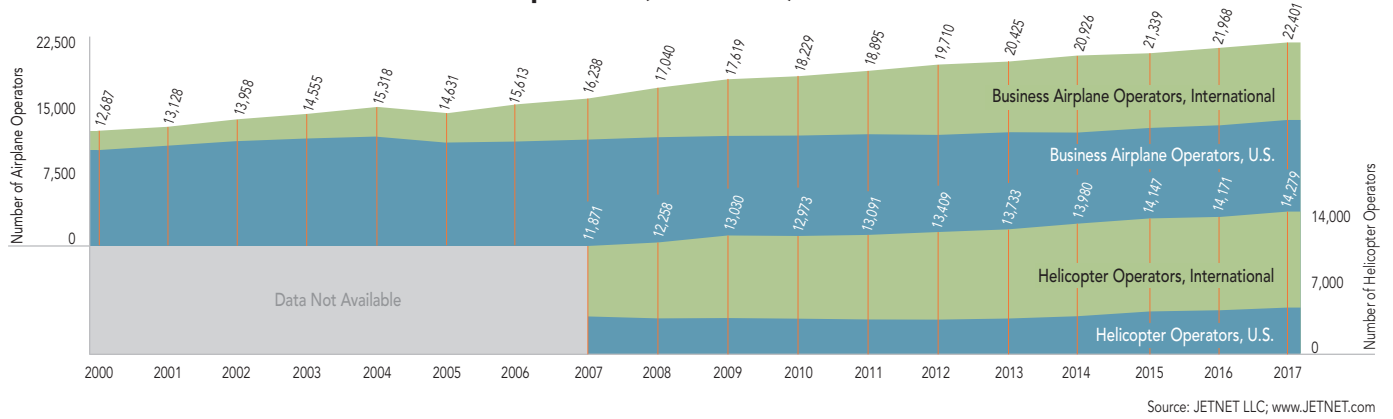
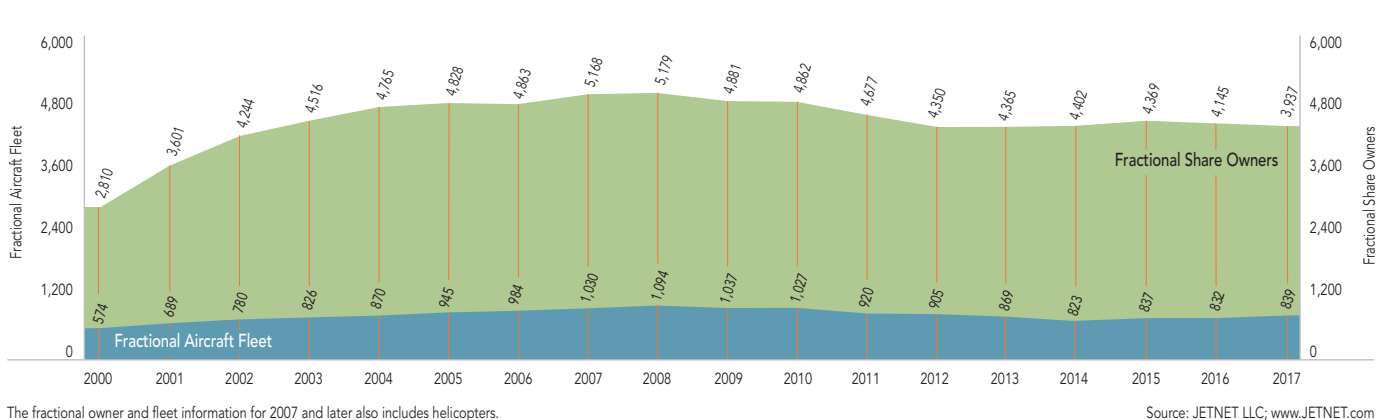


FIGURE 2.5 Fractional Aircraft and Share Owners (2000–2017)



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

European Fleet Data



3.1 Austria—Number of Aircraft by Type (2015–2017)

| Year | Fixed-wing Aeroplanes | | | | Rotorcraft | | Balloons and Airships | Gliders and Motor Gliders | Gyrocopters | UAS | Total Aircraft | |
|------|----------------------------------|-----------------|----------------|----------------|---------------|---------------|-----------------------|---------------------------|---------------------------|-------------|----------------|----------------|
| | 5,700 kg and Below | | Above 5,700 kg | | Single-Engine | Multi-Engine | | | | | | |
| 2015 | 805 | | 292 | | 100 | 54 | n/a | 176 | 7 | - | 1,434 | |
| 2016 | 792 | | 303 | | 104 | 64 | n/a | 174 | 7 | 2 | 1,446 | |
| 2017 | Annex II (including Ultralights) | 450 kg–5,700 kg | | Above 5,700 kg | | Single-Engine | Multi-Engine | Balloons and Airships | Gliders and Motor Gliders | Gyrocopters | UAS | Total Aircraft |
| | | Single-Engine | Multi-Engine | Turboprops | Business Jets | | | | | | | |
| | 11 | 680 | 111 | 2 | 155 | 107 | 92 | n/a | 170 | 7 | - | 1,335 |

The 2017 data does not include aircraft used by airlines.

Source: Austrocontrol, www.austrocontrol.at (Österreichisches Luftfahrzeugregister) and GAMA analysis

3.2 Belgium—Number of General Aviation Aircraft by Type (2017)

| Year | Fixed-wing Aeroplanes | | | | | Rotorcraft | | Balloons and Airships | Gliders and Motor Gliders | Gyrocopters | UAS | Total Aircraft |
|------|----------------------------------|-----------------|--------------|----------------|---------------|---------------|--------------|-----------------------|---------------------------|-------------|-------|----------------|
| | Annex II (including Ultralights) | 450 kg–5,700 kg | | Above 5,700 kg | | Single-Engine | Multi-Engine | | | | | |
| | | Single-Engine | Multi-Engine | Turboprops | Business Jets | | | | | | | |
| 2017 | 747 | 351 | 43 | 10 | 41 | 128 | 29 | 206 | 402 | - | 1,472 | 3,429 |

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

3.3 Bosnia-Herzegovina—Number of General Aviation Aircraft by Type (2016–2017)

| Year | Fixed-wing Aeroplanes | | | | | Rotorcraft | | Balloons and Airships | Gliders and Motor Gliders | Gyrocopters | UAS | Total Aircraft |
|------|----------------------------------|-----------------|--------------|----------------|---------------|---------------|--------------|-----------------------|---------------------------|-------------|-----|----------------|
| | Annex II (including Ultralights) | 450 kg–5,700 kg | | Above 5,700 kg | | Single-Engine | Multi-Engine | | | | | |
| | | Single-Engine | Multi-Engine | Turboprops | Business Jets | | | | | | | |
| 2016 | 5 | 31 | 4 | 0 | 2 | 4 | 0 | 0 | 32 | 2 | 0 | 80 |
| 2017 | 6 | 31 | 4 | 0 | 2 | 4 | 0 | 0 | 34 | 3 | 0 | 84 |

Source: Bosnia and Herzegovina Directorate of Civil Aviation (<http://www.bhdca.gov.ba>) and GAMA analysis

3.4 Bulgaria—Number of General Aviation Aircraft by Type (2017)

| Year | Fixed-wing Aeroplanes | | | | | Rotorcraft | | Balloons and Airships | Gliders and Motor Gliders | Gyrocopters | UAS | Total Aircraft |
|------|----------------------------------|-----------------|--------------|----------------|---------------|---------------|--------------|-----------------------|---------------------------|-------------|-----|----------------|
| | Annex II (including Ultralights) | 450 kg–5,700 kg | | Above 5,700 kg | | Single-Engine | Multi-Engine | | | | | |
| | | Single-Engine | Multi-Engine | Turboprops | Business Jets | | | | | | | |
| 2017 | 18 | 138 | 9 | 11 | 13 | 16 | 10 | 4 | 4 | 3 | n/a | 226 |

Source: Bulgarian Civil Aviation Administration (Гражданска въздухоплавателна администрация), <http://www.caa.bg/> and GAMA analysis

3.5 Croatia—Number of Aircraft by Type (2015–2017)

| Year | Fixed-wing Aeroplanes | | | | | Rotorcraft | | Balloons and Airships | Gliders and Motor Gliders | Gyrocopters | UAS | Total Aircraft |
|------|----------------------------------|-----------------|--------------|----------------|---------------|---------------|--------------|-----------------------|---------------------------|-------------|-----|----------------|
| | Annex II (including Ultralights) | 450 kg–5,700 kg | | Above 5,700 kg | | Single-Engine | Multi-Engine | | | | | |
| | | Single-Engine | Multi-Engine | Turboprops | Business Jets | | | | | | | |
| 2015 | 126 | 153 | | 1 | | 12 | 4 | 20 | 60 | 2 | n/a | 378 |
| 2016 | 116 | 157 | | 3 | | 19 | | 19 | 69 | 3 | n/a | 386 |
| 2017 | 122 | 85 | 19 | 6 | 12 | 11 | 6 | 10 | 58 | 2 | n/a | 331 |

Source: Croatia Civil Aviation Authority <http://www.ccaa.hr/> and GAMA analysis

3.6 Cyprus—Number of General Aviation Aircraft by Type (2014–2017)

| Year | Fixed-wing Aeroplanes | | | | | Rotorcraft | | Balloons and Airships | Glider and Motor Gliders | Gyrocopters | UAS | Total Aircraft |
|------|----------------------------------|-----------------|--------------|----------------|---------------|---------------|--------------|-----------------------|--------------------------|-------------|-----|----------------|
| | Annex II (including Ultralights) | 450 kg–5,700 kg | | Above 5,700 kg | | Single-Engine | Multi-Engine | | | | | |
| | | Single-Engine | Multi-Engine | Turboprops | Business Jets | | | | | | | |
| 2014 | 21 | 47 | 9 | 0 | 1 | 9 | 2 | n/a | 1 | n/a | 0 | 90 |
| 2015 | 23 | 53 | 12 | 0 | 1 | 11 | 2 | n/a | 1 | n/a | 1 | 104 |
| 2016 | 21 | 53 | 13 | 0 | 1 | 11 | 2 | n/a | 1 | n/a | 1 | 103 |
| 2017 | 27 | 55 | 13 | 0 | 1 | 11 | 3 | n/a | 1 | n/a | 1 | 112 |

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

3.7 Czech Republic—Number of Aircraft by Type (2010–2016)

| Year | Fixed-wing Aeroplanes | | | Rotorcraft | Motor Gliders | Glider | Balloons | Airships | Microlights | UAS | Total Aircraft |
|------|-----------------------|--------------|----------------|------------|---------------|--------|----------|----------|-------------|-----|----------------|
| | 5,700 kg and Below | | Above 5,700 kg | | | | | | | | |
| | Single-Engine | Multi-Engine | | | | | | | | | |
| 2010 | 867 | | 94 | 106 | 101 | 762 | 181 | 2 | 4,434 | - | 10,981 |
| 2011 | 915 | | 84 | 118 | 101 | 838 | 191 | 2 | 4,745 | - | 11,739 |
| 2012 | 943 | | 104 | 127 | 106 | 908 | 204 | 2 | 4,957 | - | 12,308 |
| 2013 | 940 | | 86 | 134 | 109 | 956 | 209 | 2 | 5,199 | - | 12,834 |
| 2014 | 977 | | 91 | 142 | 115 | 976 | 218 | 2 | 5,416 | - | 13,353 |
| 2015 | 964 | | 85 | 153 | 130 | 987 | 233 | 2 | 5,649 | - | 13,852 |
| 2016 | 918 | 101 | 89 | 161 | 133 | 1,013 | 243 | 2 | 5,843 | 620 | 14,966 |

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

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

3.8 Denmark—Number of Aircraft by Type (2012–2017)

| Year | Fixed-wing Aeroplanes | | | | Rotorcraft | Balloons | Motor Gliders | Glider | Total Aircraft |
|------|-----------------------|-------------------|--------------------|----------------------|------------|----------|---------------|--------|----------------|
| | 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 |
| 2017 | 647 | 39 | 125 | 46 | 111 | 76 | 133 | 298 | 1,475 |

The Danish aircraft registry does not distinguish between aeroplanes used in scheduled commercial and general aviation operations.

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

3.9 Estonia—Number of Aircraft by Type (2014–2017)

| Year | Fixed-wing Aeroplanes | | | | | Rotorcraft | | Balloons and Airships | Glider and Motor Gliders | Gyrocopters | UAS | Total Aircraft |
|------|----------------------------------|-----------------|--------------|----------------|---------------|---------------|--------------|-----------------------|--------------------------|-------------|-----|----------------|
| | Annex II (including Ultralights) | 450 kg–5,700 kg | | Above 5,700 kg | | Single-Engine | Multi-Engine | | | | | |
| | | Single-Engine | Multi-Engine | Turboprops | Business Jets | | | | | | | |
| 2014 | n/a | 71 | | 26 | | 8 | 3 | 8 | 39 | n/a | n/a | 155 |
| 2015 | n/a | 67 | | 27 | | 9 | 3 | 8 | 43 | n/a | n/a | 157 |
| 2016 | n/a | 62 | | 35 | | 10 | 3 | 8 | 42 | n/a | n/a | 160 |
| 2017 | n/a | 65 | 3 | 21 | 23 | 10 | 3 | 8 | 43 | 2 | n/a | 178 |

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

3.10 Finland—Number of Aircraft by Type (2014–2016)

| Year | Fixed-wing Aeroplanes | | Rotorcraft and Gyrocopters | Glider and Motor Gliders | Balloons and Airships | Microlights | Total Aircraft |
|------|-----------------------|-----------|----------------------------|--------------------------|-----------------------|-------------|----------------|
| | Aeroplanes | Airliners | | | | | |
| 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 |

TRAFFI uses the term airliner. Airliners are defined as aeroplanes with a maximum take-off weight (MTOW) of more than 8,618kg.

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

3.11 France—Number of General Aviation Aircraft by Type (2016–2017)

| Year | Fixed-wing Aeroplanes | | | | | | | Rotorcraft | | | Gliders | Balloons and Airships | Gyrocopters | Amphibian | Total Aircraft |
|------|--|-----------------|-------------|---------------|----------------|-------------|---------------|--------------|---------------|---------|---------|-----------------------|-------------|-----------|----------------|
| | Ultralights including Powered Parachutes | 450 kg–5,700 kg | | | Above 5,700 kg | | | Below 450 kg | Piston Engine | Turbine | | | | | |
| | | Piston Engine | Turbo-props | Business Jets | Piston Engine | Turbo-props | Business Jets | | | | | | | | |
| 2016 | 14,142 | 5,066 | 84 | 36 | 23 | 16 | 44 | 122 | 224 | 174 | 1,449 | 796 | 779 | 3 | 22,958 |
| 2017 | 14,462 | 5,104 | 104 | 40 | 13 | 17 | 64 | 123 | 252 | 188 | 1,579 | 793 | 789 | 3 | 23,531 |

The data was updated in April of each year.

Source: Direction de l'Aviation Civile, <https://www.ecologie-solidaire.gouv.fr/politiques/aviation-civile>

3.12 Georgia—Number of General Aviation Aircraft by Type (2017)

| Year | Fixed-wing Aeroplanes | | | | | Rotorcraft | | Balloons and Airships | Gliders and Motor Gliders | Gyrocopters | UAS | Total Aircraft |
|------|----------------------------------|-----------------|--------------|----------------|---------------|---------------|--------------|-----------------------|---------------------------|-------------|-----|----------------|
| | Annex II (including Ultralights) | 450 kg–5,700 kg | | Above 5,700 kg | | Single-Engine | Multi-Engine | | | | | |
| | | Single-Engine | Multi-Engine | Turbo-props | Business Jets | | | | | | | |
| 2017 | 9 | 7 | 2 | 2 | 1 | 3 | 9 | 6 | 0 | 0 | 0 | 39 |

Source: Georgia Civil Aviation Agency (<http://www.gcaa.ge>) and GAMA analysis

3.13 Germany—Number of Aircraft by Type (2010–2017)

| Year | Fixed-wing Aeroplanes | | | | | | | Rotorcraft | Motor Gliders | Airships | Balloons | Gliders | Total Aircraft |
|------|-----------------------|-------------------|--------------------|-------------------|--------------------|---------------------|-----------------|------------|---------------|----------|----------|---------|----------------|
| | 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 | | | | | | | | | |
| 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 |
| 2017 | 6,527 | 174 | 219 | 291 | 219 | 37 | 753 | 729 | 3,528 | 3 | 1,102 | 7,383 | 20,965 |

The data, especially Fixed-wing Aeroplanes above 20,000 kg, includes commercial airliners.

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

3.14 Guernsey—Number of General Aviation Aircraft by Type (2013–2017)

| Year | Fixed-wing Aeroplanes | | | | | Rotorcraft | | Balloons and Airships | Gliders and Motor Gliders | Gyrocopters | UAS | Total Aircraft |
|------|----------------------------------|-----------------|--------------|----------------|---------------|---------------|--------------|-----------------------|---------------------------|-------------|-----|----------------|
| | Annex II (including Ultralights) | 450 kg–5,700 kg | | Above 5,700 kg | | Single-Engine | Multi-Engine | | | | | |
| | | Single-Engine | Multi-Engine | Turbo-props | Business Jets | | | | | | | |
| 2013 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 2014 | 0 | 17 | 1 | 0 | 6 | 0 | 1 | 0 | 0 | 0 | 0 | 25 |
| 2015 | 0 | 23 | 4 | 0 | 18 | 1 | 3 | 0 | 0 | 0 | 0 | 49 |
| 2016 | 0 | 25 | 16 | 3 | 39 | 1 | 4 | 0 | 0 | 0 | 0 | 88 |
| 2017 | 0 | 30 | 23 | 14 | 47 | 7 | 8 | 0 | 0 | 0 | 0 | 129 |

The turboprop and business jet data include aircraft not operated by an AOC holder, including lessor-owned aircraft in between leases.

Source: Guernsey Aircraft Registry 2-REG, www.2-REG.com

3.15 Iceland—Number of General Aviation Aircraft by Type (2015–2017)

| Year | Fixed-wing Aeroplanes | | | | | Rotorcraft | | Balloons and Airships | Gliders and Motor Gliders | Gyrocopters | UAS | Total Aircraft |
|------|----------------------------------|-----------------|--------------|----------------|---------------|---------------|--------------|-----------------------|---------------------------|-------------|-----|----------------|
| | Annex II (including Ultralights) | 450 kg–5,700 kg | | Above 5,700 kg | | Single-Engine | Multi-Engine | | | | | |
| | | Single-Engine | Multi-Engine | Turbo-props | Business Jets | | | | | | | |
| 2015 | n/a | 242 | | 1 | | 7 | 3 | n/a | 28 | n/a | n/a | 281 |
| 2016 | n/a | 247 | | 3 | | 9 | 3 | n/a | 28 | n/a | n/a | 290 |
| 2017 | 187 | 132 | 25 | 13 | 0 | 9 | 4 | 0 | 28 | 2 | 27 | 427 |

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

3.16 Ireland—Number of General Aviation Aircraft by Type (2011–2017)

| Year | Fixed-wing Aeroplanes | | | | | | | Rotorcraft | | Balloons and Airships | Gliders and Motor Gliders | Gyrocopters | UAS | Total Aircraft |
|------|---|-----------------|--------------|-------------------|--------------|--------------------|-----------------|---------------|--------------|-----------------------|---------------------------|-------------|-----|----------------|
| | Microlights, Amateur-Built, and Amphibian | Below 2,000 kg | | 2,000 kg–5,700 kg | | 5,701 kg–15,000 kg | Above 15,000 kg | Single-Engine | Multi-Engine | | | | | |
| | | Single-Engine | Multi-Engine | Single-Engine | Multi-Engine | | | | | | | | | |
| 2011 | 187 | 228 | 11 | 2 | 12 | 7 | 14 | 45 | 20 | 12 | 22 | 18 | n/a | 578 |
| 2012 | 168 | 181 | 7 | 5 | 6 | 5 | 14 | 31 | 16 | 10 | n/a | 11 | n/a | 454 |
| 2013 | 179 | 180 | 8 | 5 | 6 | 3 | 17 | 30 | 19 | 10 | 25 | 13 | n/a | 495 |
| 2014 | 189 | 179 | 6 | 3 | 8 | 1 | 8 | 25 | 14 | 10 | 25 | 14 | n/a | 482 |
| 2015 | 201 | 178 | 6 | 3 | 8 | 1 | 6 | 21 | 13 | 10 | 24 | 13 | n/a | 484 |
| 2016 | 207 | 180 | 5 | 2 | 9 | 1 | 8 | 22 | 15 | 10 | 23 | 15 | n/a | 497 |
| 2017 | Annex II (including Ultralights) | 450 kg–5,700 kg | | | | Above 5,700 kg | | | | | | | | |
| | | Single-Engine | | Multi-Engine | | Turboprops | Business Jets | | | | | | | |
| 2017 | 224 | 178 | | 15 | | 0 | 10 | 21 | 17 | 10 | 23 | 15 | n/a | 513 |

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

3.17 Isle of Man—Number of Aircraft by Type (2014–2017)

| Year | Fixed-wing Aeroplanes | | | Rotorcraft | | Total Aircraft |
|------|-----------------------|--------------------|-----------------|---------------|--------------|----------------|
| | 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 |
| 2017 | 67 | 51 | 263 | 2 | 48 | 431 |

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

3.18 Italy—Number of General Aviation Aircraft by Type (2017)

| Year | Fixed-wing Aeroplanes | | | | | Rotorcraft | | Balloons and Airships | Gliders and Motor Gliders | Gyrocopters | UAS | Total Aircraft |
|------|----------------------------------|-----------------|--------------|----------------|---------------|---------------|--------------|-----------------------|---------------------------|-------------|-------|----------------|
| | Annex II (including Ultralights) | 450 kg–5,700 kg | | Above 5,700 kg | | Single-Engine | Multi-Engine | | | | | |
| | | Single-Engine | Multi-Engine | Turboprops | Business Jets | | | | | | | |
| 2017 | 13,181 | 668 | 99 | 21 | 56 | 335 | 168 | 76 | 157 | 0 | 6,334 | 21,095 |

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

3.19 Latvia—Number of General Aviation Aircraft by Type (2014–2017)

| Year | Fixed-wing Aeroplanes | | | | | | | Rotorcraft | | | Motor Gliders | Gliders | Gyrocopters | Total Aircraft | |
|------|-----------------------|--------------|---------------|--------------|---------------|--------------|----------------|------------|---------------|---------------|---------------|---------|-------------|----------------|--------------|
| | 5,700 kg and Below | | | | | | Above 5,700 kg | | Piston Engine | Turbine | | | | | |
| | Piston Engine | | Turboprops | | Business Jets | | Turboprops | Turbojets | | 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 |
| 2017 | 111 | 4 | 2 | 3 | 7 | 1 | 0 | 3 | 8 | 6 | 8 | 11 | 23 | 3 | 190 |

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

3.20 Lithuania—Number of General Aviation Aircraft by Type (2014–2017)

| Year | Fixed-wing Aeroplanes | | | | | Rotorcraft | | Balloons and Airships | Gliders and Motor Gliders | Gyrocopters | UAS | Total Aircraft |
|------|----------------------------------|-----------------|--------------|----------------|---------------|---------------|--------------|-----------------------|---------------------------|-------------|-----|----------------|
| | Annex II (including Ultralights) | 450 kg–5,700 kg | | Above 5,700 kg | | Single-Engine | Multi-Engine | | | | | |
| | | Single-Engine | Multi-Engine | Turboprops | Business Jets | | | | | | | |
| 2014 | 177 | 266 | | | | 29 | | 110 | 206 | 0 | n/a | 788 |
| 2015 | 182 | 265 | | | | 24 | | 112 | 168 | 0 | n/a | 751 |
| 2016 | 157 | 239 | | 10 | | 12 | 4 | 114 | 142 | 3 | n/a | 681 |
| 2017 | 273 | 121 | 1 | 9 | 40 | 10 | 4 | 119 | 146 | 3 | n/a | 726 |

Source: Lithuanian CAA (Civīlās Aviācijas Administracija), www.caa.lt

3.21 Luxembourg—Number of General Aviation Aircraft by Type (2014–2017)

| Year | Fixed-wing Aeroplanes | | | | | Rotorcraft | | Balloons and Airships | Gliders and Motor Gliders | Gyrocopters | UAS | Total Aircraft |
|------|----------------------------------|-----------------|--------------|----------------|---------------|---------------|--------------|-----------------------|---------------------------|-------------|-----|----------------|
| | Annex II (including Ultralights) | 450 kg–5,700 kg | | Above 5,700 kg | | Single-Engine | Multi-Engine | | | | | |
| | | Single-Engine | Multi-Engine | Turboprops | Business Jets | | | | | | | |
| 2014 | 33 | 183 | | | | 11 | | 54 | 11 | 0 | 0 | 292 |
| 2015 | 26 | 191 | | | | 54 | | 12 | 10 | 0 | 0 | 293 |
| 2016 | 24 | 89 | | 96 | | 2 | 10 | 56 | 7 | 0 | 0 | 284 |
| 2017 | 32 | 69 | 3 | 11 | 91 | 2 | 11 | 47 | 7 | 0 | 0 | 273 |

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

3.22 Macedonia—Number of General Aviation Aircraft by Type (2017)

| Year | Fixed-wing Aeroplanes | | | | | Rotorcraft | | Balloons and Airships | Gliders and Motor Gliders | Gyrocopters | UAS | Total Aircraft |
|------|----------------------------------|-----------------|--------------|----------------|---------------|---------------|--------------|-----------------------|---------------------------|-------------|-----|----------------|
| | Annex II (including Ultralights) | 450 kg–5,700 kg | | Above 5,700 kg | | Single-Engine | Multi-Engine | | | | | |
| | | Single-Engine | Multi-Engine | Turboprops | Business Jets | | | | | | | |
| 2017 | 23 | 1 | 3 | 1 | 0 | 0 | 1 | 14 | 0 | 0 | 0 | 43 |

Source: Republic of Macedonia Civil Aviation Agency, http://www.caa.gov.mk and GAMA analysis

3.23 Malta—Number of General Aviation Aircraft by Type (2011–2017)

| Year | Fixed-wing Aeroplanes | | | | | Rotorcraft | | Balloons and Airships | Gliders and Motor Gliders | Gyrocopters | UAS | Total Aircraft |
|------|----------------------------------|-----------------|--------------|----------------|---------------|---------------|--------------|-----------------------|---------------------------|-------------|-----|----------------|
| | Annex II (including Ultralights) | 450 kg–5,700 kg | | Above 5,700 kg | | Single-Engine | Multi-Engine | | | | | |
| | | Single-Engine | Multi-Engine | Turboprops | Business Jets | | | | | | | |
| 2011 | 30 | 17 | 9 | 10 | 34 | 2 | 0 | 0 | 0 | 0 | 0 | 102 |
| 2012 | 33 | 23 | 15 | 8 | 44 | 4 | 0 | 0 | 0 | 0 | 0 | 127 |
| 2013 | 33 | 24 | 18 | 9 | 66 | 4 | 0 | 0 | 0 | 0 | 0 | 154 |
| 2014 | 32 | 18 | 14 | 9 | 96 | 4 | 0 | 0 | 0 | 0 | 0 | 173 |
| 2015 | 32 | 18 | 11 | 8 | 139 | 4 | 0 | 0 | 0 | 0 | 0 | 212 |
| 2016 | 32 | 17 | 11 | 6 | 173 | 4 | 0 | 0 | 0 | 0 | 0 | 243 |
| 2017 | 32 | 17 | 13 | 6 | 194 | 3 | 0 | 0 | 0 | 0 | 0 | 265 |

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

3.24 Montenegro—Number of General Aviation Aircraft by Type (2014–2017)

| Year | Fixed-wing Aeroplanes | | | | | Rotorcraft | | Balloons and Airships | Gliders and Motor Gliders | Gyrocopters | UAS | Total Aircraft |
|------|----------------------------------|-----------------|--------------|----------------|---------------|---------------|--------------|-----------------------|---------------------------|-------------|-----|----------------|
| | Annex II (including Ultralights) | 450 kg–5,700 kg | | Above 5,700 kg | | Single-Engine | Multi-Engine | | | | | |
| | | Single-Engine | Multi-Engine | Turboprops | Business Jets | | | | | | | |
| 2014 | n/a | 19 | | 2 | | 7 | | 1 | 2 | n/a | n/a | 31 |
| 2015 | n/a | 9 | | 4 | | 4 | | 0 | 1 | n/a | n/a | 18 |
| 2016 | n/a | 10 | | 5 | | 5 | | 1 | 2 | n/a | n/a | 23 |
| 2017 | n/a | 16 | 0 | 0 | 2 | 3 | 3 | 2 | 2 | n/a | n/a | 28 |

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

3.25 Netherlands—Number of Aircraft by Type (2017)

| Year | Fixed-wing Aeroplanes | | | | | Rotorcraft | | Balloons and Airships | Gliders and Motor Gliders | Gyrocopters | UAS | Total Aircraft | |
|------|----------------------------------|-----------------|--------------|----------------|----------|---------------|--------------|-----------------------|---------------------------|-------------|-----|----------------|-------|
| | Annex II (including Ultralights) | 450 kg–5,700 kg | | Above 5,700 kg | | Single-Engine | Multi-Engine | | | | | | |
| | | Single-Engine | Multi-Engine | Turboprops | Turbofan | | | | | | | | |
| 2017 | 202 | 661 | | 49 | 15 | 249 | 41 | 36 | 415 | 628 | 10 | 1,205 | 3,511 |

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

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

| Year | Fixed-wing Aeroplanes | | | Rotorcraft | | Gliders and Motor Gliders | Balloons and Airships | Total Aircraft |
|------|-----------------------|----------------|-----------------|--------------------|----------------|---------------------------|-----------------------|----------------|
| | 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/

3.27 Poland—Number of General Aviation Aircraft by Type (2014–2017)

| Year | Fixed-wing Aeroplanes | | | | | Rotorcraft | | Balloons and Airships | Glider and Motor Gliders | Gyrocopters | UAS | Total Aircraft |
|------|----------------------------------|-----------------|--------------|----------------|---------------|---------------|--------------|-----------------------|--------------------------|-------------|-----|----------------|
| | Annex II (including Ultralights) | 450 kg–5,700 kg | | Above 5,700 kg | | Single-Engine | Multi-Engine | | | | | |
| | | Single-Engine | Multi-Engine | Turboprops | Business Jets | | | | | | | |
| 2014 | 469 | 753 | 84 | 9 | 12 | 97 | 83 | 178 | 837 | 21 | 0 | 2,543 |
| 2015 | 501 | 759 | 79 | 15 | 13 | 104 | 90 | 196 | 885 | 26 | 0 | 2,668 |
| 2016 | 502 | 778 | 82 | 13 | 15 | 103 | 99 | 203 | 907 | 32 | 32 | 2,766 |
| 2017 | 532 | 785 | 75 | 10 | 19 | 125 | 86 | 212 | 948 | 38 | 32 | 2,862 |

Annex II aircraft are also included in the total count of single-engine aeroplanes below 5,700 kg.

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

3.28 Portugal—Number of General Aviation Aircraft by Type (2017)

| Year | Fixed-wing Aeroplanes | | | | | Rotorcraft | | Balloons and Airships | Glider and Motor Gliders | Gyrocopters | UAS | Total Aircraft |
|------|----------------------------------|-----------------|--------------|----------------|---------------|---------------|--------------|-----------------------|--------------------------|-------------|-----|----------------|
| | Annex II (including Ultralights) | 450 kg–5,700 kg | | Above 5,700 kg | | Single-Engine | Multi-Engine | | | | | |
| | | Single-Engine | Multi-Engine | Turboprops | Business Jets | | | | | | | |
| 2017 | 309 | 420 | 47 | 7 | 133 | 22 | 61 | 50 | 20 | 1 | 0 | 1,227 |

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

3.29 Romania—Number of Aircraft by Type (2015)

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

Source: Romania Civil Aeronautical Authority (Autoritatea Aeronautică Civilă Română), www.caa.ro

3.30 Serbia—Number of General Aviation Aircraft by Type (2014–2017)

| Year | Fixed-wing Aeroplanes | | | | | Rotorcraft | | Balloons and Airships | Glider and Motor Gliders | Gyrocopters | UAS | Total Aircraft |
|------|----------------------------------|-----------------|--------------|----------------|---------------|---------------|--------------|-----------------------|--------------------------|-------------|-----|----------------|
| | Annex II (including Ultralights) | 450 kg–5,700 kg | | Above 5,700 kg | | Single-Engine | Multi-Engine | | | | | |
| | | Single-Engine | Multi-Engine | Turboprops | Business Jets | | | | | | | |
| 2014 | 53 | 188 | | 10 | | 37 | | 7 | 83 | 2 | 0 | 380 |
| 2015 | 56 | 193 | | 11 | | 38 | | 6 | 87 | 3 | 0 | 394 |
| 2016 | 55 | 207 | | 21 | | 38 | | 6 | 93 | 3 | 130 | 553 |
| 2017 | 146 | 127 | 16 | 8 | 36 | 35 | 4 | 6 | 54 | 0 | 211 | 643 |

Source: Civil Aviation Directorate of the Republic of Serbia (Direktorat Civilnog Vazduhoplovstva Republike Srbije), www.cad.gov.rs

3.31 Slovakia—Number of General Aviation Aircraft by Type (2014–2017)

| Year | Fixed-wing Aeroplanes | | | | | Rotorcraft | | Balloons and Airships | Glider and Motor Gliders | Gyrocopters | UAS | Total Aircraft |
|------|----------------------------------|-----------------|--------------|----------------|---------------|---------------|--------------|-----------------------|--------------------------|-------------|-----|----------------|
| | Annex II (including Ultralights) | 450 kg–5,700 kg | | Above 5,700 kg | | Single-Engine | Multi-Engine | | | | | |
| | | Single-Engine | Multi-Engine | Turboprops | Business Jets | | | | | | | |
| 2014 | 9 | 331 | | | | 55 | | 42 | 252 | 0 | 0 | 173 |
| 2015 | 69 | 272 | | | | 68 | | 41 | 269 | 0 | 0 | 212 |
| 2016 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| 2017 | 50 | 258 | 27 | 5 | 5 | 28 | 27 | 42 | 266 | 0 | 0 | 265 |

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

3.32 Slovenia—Number of Aircraft by Type (2014–2017)

| Year | Ultralights | Fixed-wing Aeroplanes | | | | Rotorcraft | | Balloons | Glider and Motor Gliders | Gyrocopters | UAS | Total Aircraft |
|------|-------------|-----------------------|--------------|------------|---------------|---------------|--------------|----------|--------------------------|-------------|-----|----------------|
| | | Single-Engine | Multi-Engine | Turboprops | Business Jets | Single-Engine | Multi-Engine | | | | | |
| 2014 | 112 | 221 | | | | 22 | | 61 | 244 | 3 | n/a | 663 |
| 2015 | 113 | 202 | | | | 21 | | 58 | 241 | 3 | n/a | 638 |
| 2016 | 108 | 192 | | | | 22 | | 58 | 236 | 3 | n/a | 619 |
| 2017 | 145 | 271 | 8 | 1 | 10 | 17 | 5 | 31 | 146 | 1 | n/a | 635 |

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

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

| Year | Fixed-wing Aeroplanes | | | | | Rotorcraft | | Balloons and Airships | Gliders and Motor Gliders | Gyrocopters | UAS | Total Aircraft |
|------|----------------------------------|-----------------|--------------|----------------|---------------|---------------|--------------|-----------------------|---------------------------|-------------|-----|----------------|
| | Annex II (including Ultralights) | 450 kg–5,700 kg | | Above 5,700 kg | | Single-Engine | Multi-Engine | | | | | |
| | | Single-Engine | Multi-Engine | Turboprops | Business Jets | | | | | | | |
| 2014 | 3,122 | 1,581 | 356 | 63 | 187 | 313 | 238 | 561 | 252 | n/a | n/a | 6,673 |
| 2015 | 3,168 | 1,557 | 350 | 66 | 172 | 306 | 257 | 572 | 290 | n/a | n/a | 6,738 |

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

3.34 Sweden—Number of Aircraft by Weight and Type (2008–2015)

| Year | Motorpowered Aircraft | | | | | | | 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

3.35 Switzerland—Number of General Aviation Aircraft by Type (2015–2017)

| Year | Fixed-wing Aeroplanes | | | | | Rotorcraft | | Balloons and Airships | Gliders and Motor Gliders | Gyrocopters | UAS | Total Aircraft |
|------|----------------------------------|-----------------|--------------|----------------|---------------|---------------|--------------|-----------------------|---------------------------|-------------|-----|----------------|
| | Annex II (including Ultralights) | 450 kg–5,700 kg | | Above 5,700 kg | | Single-Engine | Multi-Engine | | | | | |
| | | Single-Engine | Multi-Engine | Turboprops | Business Jets | | | | | | | |
| 2015 | 526 | 772 | 109 | 11 | 46 | 204 | 53 | 306 | 847 | 2 | n/a | 2,876 |
| 2016 | 540 | 797 | 112 | 11 | 58 | 227 | 59 | 318 | 849 | 3 | n/a | 2,974 |
| 2017 | 542 | 824 | 109 | 11 | 65 | 247 | 62 | 336 | 862 | 8 | n/a | 3,066 |

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

3.36 Ukraine—Number of Aircraft by Type (2015)

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

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

3.37 United Kingdom—Number of Aircraft by Type (2010–2017)

| Year | Fixed-wing Aeroplanes | | | | | | | | Micro-lights | Rotorcraft | Gliders | Hang Gliders | Balloons and Min. Lift | Airships | Gyrocopters | Total Aircraft |
|------|-----------------------|------------------|-----------------|--------------------|---------------------|-----------------|------|------------|--------------|------------|---------|--------------|------------------------|----------|-------------|----------------|
| | Amphibian | 750 kg and Below | 751 kg–5,700 kg | 5,701 kg–15,000 kg | 15,001 kg–50,000 kg | Above 50,000 kg | SLMG | Sea-planes | | | | | | | | |
| 2010 | 20 | 3,217 | 5,764 | 253 | 306 | 742 | 287 | 2 | 4,071 | 1,364 | 2,295 | 8 | 1,720 | 18 | 312 | 20,379 |
| 2011 | 20 | 3,199 | 5,663 | 228 | 297 | 742 | 285 | 2 | 4,043 | 1,299 | 2,256 | 8 | 1,655 | 19 | 324 | 20,040 |
| 2012 | 21 | 3,245 | 5,564 | 219 | 293 | 755 | 296 | 2 | 4,045 | 1,260 | 2,248 | 9 | 1,639 | 21 | 322 | 19,939 |
| 2013 | 21 | 3,269 | 5,505 | 212 | 289 | 761 | 302 | 2 | 4,029 | 1,232 | 2,247 | 9 | 1,625 | 20 | 327 | 19,850 |
| 2014 | 20 | 3,300 | 5,484 | 200 | 272 | 791 | 314 | 3 | 3,998 | 1,231 | 2,267 | 9 | 1,607 | 21 | 329 | 19,846 |
| 2015 | 21 | 3,325 | 5,493 | 190 | 260 | 806 | 321 | 3 | 4,015 | 1,258 | 2,260 | 9 | 1,598 | 23 | 342 | 19,924 |
| 2016 | 22 | 3,346 | 5,503 | 179 | 274 | 833 | 328 | 3 | 4,028 | 1,290 | 2,265 | 9 | 1,591 | 20 | 336 | 20,027 |
| 2017 | 21 | 3,395 | 5,497 | 174 | 261 | 844 | 322 | 3 | 3,993 | 1,283 | 2,257 | 9 | 1,608 | 20 | 341 | 20,028 |

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

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

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.
- 2017: There were 6,759 invalid registrations and 13,269 valid registrations out of a total of 20,028.

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

Asia-Pacific
Fleet Data

4.1 Australia—Number of General Aviation and Regional Aircraft by Category (1995–2017)

| Year | Amateur-Built | Fixed-wing Aeroplanes | | | | Rotorcraft | Balloons & Airships | Remote Piloted Aircraft | Total Aircraft |
|------|---------------|-----------------------|---------------|---------------|--------------|------------|---------------------|-------------------------|----------------|
| | | Gliders | Motor Gliders | 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 | 1,487 | 950 | 246 | 7,818 | 2,364 | 2,038 | 383 | - | 15,286 |
| 2015 | 1,516 | 953 | 250 | 7,789 | 2,361 | 2,038 | 382 | - | 15,289 |
| 2016 | 1,547 | 949 | 271 | 7,802 | 2,335 | 2,072 | 382 | - | 15,358 |
| 2017 | 1,570 | 944 | 280 | 7,805 | 2,320 | 2,107 | 397 | 1 | 15,424 |

Source: Dept. of Transportation and Regional Services, Bureau of Transport and Regional Economics, www.bitre.gov.au and Civil Aviation Safety Authority, www.casa.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 Administration of China (中国民用航空局), www.caac.gov.cn

4.3 Japan—Number of Aircraft by Type (2000–2016)

| Year | Airplanes | | | | | Rotorcraft | | Gliders | Airships | Total Aircraft |
|------|---------------|--------------|---------------|--------------|----------------------|---------------|----------------|---------|----------|----------------|
| | Piston | | Turboprop | | Turbojet or Turbofan | Piston-Engine | Turbine-Engine | | | |
| | Single-Engine | Multi-Engine | Single-Engine | Multi-Engine | | | | | | |
| 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 |
| 2007 | 542 | 45 | 23 | 111 | 509 | 169 | 604 | 666 | 3 | 2,672 |
| 2008 | 539 | 43 | 23 | 111 | 512 | 171 | 597 | 665 | 3 | 2,664 |
| 2009 | 545 | 46 | 23 | 109 | 523 | 177 | 600 | 670 | 2 | 2,695 |
| 2010 | 546 | 54 | 24 | 112 | 511 | 181 | 600 | 667 | 1 | 2,696 |
| 2011 | 511 | 54 | 23 | 101 | 498 | 184 | 593 | 668 | 1 | 2,633 |
| 2012 | 505 | 52 | 26 | 95 | 529 | 185 | 606 | 667 | 1 | 2,666 |
| 2013 | 504 | 53 | 28 | 100 | 563 | 180 | 623 | 663 | 1 | 2,715 |
| 2014 | 490 | 51 | 28 | 101 | 582 | 178 | 631 | 661 | 1 | 2,723 |
| 2015 | 489 | 55 | 30 | 102 | 602 | 173 | 628 | 654 | 1 | 2,734 |
| 2016 | 483 | 57 | 39 | 97 | 629 | 171 | 640 | 650 | 1 | 2,767 |

Source: Civil Aviation Bureau (航空局), www.mlit.go.jp

4.4 New Zealand—Number of Aircraft by Type (2006–2017)

| Year | Airplanes by Mass | | | | Sport | Rotorcraft | Total Aircraft |
|------|-------------------|-------------------------------|----------------------------|----------------------|--------------------|------------|----------------|
| | Agricultural | Small | Medium | Large | | | |
| 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 |
| | Aeroplanes | 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 |
| 2017 | 2,001 | 1,105 | 323 | 453 | 470 | 869 | 5,221 |

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 (2012–2017)

| Year | General Aviation Airplanes | | Rotorcraft | Airline | Total Aircraft |
|------|----------------------------|---------|------------|---------|----------------|
| | 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 |
| 2017 | 15 | 0 | 1 | 212 | 228 |

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

Select Other GA Aircraft Registry Data for Large Fleets



5.1 Brazil—Number of Aircraft Registrations by Type (2000–2017)

| Year | Airplanes | | | | Other Aircraft | | | | | Total Aircraft |
|------|---------------|--------------|-----------|-------------|----------------|------------|----------|------------|--------------|----------------|
| | Piston-Engine | Agricultural | Turboprop | Jet Turbine | Rotorcraft | Sailplanes | Balloons | Dirigibles | Experimental | |
| 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 | 1,798 | 2,445 | 2,579 | 592 | n/a | n/a | n/a | 23,984 |
| 2017 | 16,446 | n/a | 1,858 | 2,507 | 2,590 | 609 | n/a | n/a | n/a | 24,256 |

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 2016–2017 does not include aircraft that have not been classified by ANAC.

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

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

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

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

Source: South African Civil Aviation Authority, www.caa.co.za, and Aircraft Registry, www.avdex.co.za



U.S. Pilot and Airmen Certificate Statistics

6.1 Active FAA Certificated Pilots (1982–2017)

| 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 |
| 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 | 72.6% |
| 2017 | 609,306 | 7.01% | 149,121 | 153 | 6,097 | 162,455 | 98,161 | 159,825 | 15,355 | 18,139 | n/a | 69,166 | 106,692 | 306,652 | 72.9% |

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 issued 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, 2017)

| FAA Region and State | Total Pilots | Students | Recreational | Sport | Airplane | | | Rotor, Glider, & Balloon | Remote Pilot | Flight Instructor ¹ |
|--|----------------|----------------|--------------|--------------|----------------|----------------|----------------------|-----------------------------|-----------------|-----------------------------------|
| | | | | | Private | Commercial | Airline Transport | | | |
| Total² | 609,305 | 149,121 | 157 | 6,097 | 174,516 | 114,186 | 165,228 | 81,063 | 69,166 | 106,692 |
| United States – Total³ | 566,888 | 138,156 | 157 | 6,073 | 166,681 | 98,507 | 157,314 | 76,589 | 68,586 | 103,805 |
| Non-U.S. Total⁵ | 42,417 | 10,965 | 0 | 24 | 7,835 | 15,679 | 7,914 | 4,474 | 580 | 2,887 |
| Alabama | 7,430 | 1,787 | 4 | 77 | 2,082 | 1,970 | 1,510 | 1,850 | 1,025 | 1,642 |
| Alaska | 7,998 | 1,546 | 1 | 58 | 2,588 | 1,563 | 2,242 | 993 | 540 | 1,418 |
| American Samoa | 3 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 |
| Arizona | 19,543 | 4,602 | 0 | 169 | 4,982 | 4,037 | 5,753 | 3,377 | 1,713 | 4,103 |
| Arkansas | 5,228 | 1,401 | 1 | 85 | 1,691 | 1,084 | 966 | 458 | 534 | 789 |
| California | 59,929 | 15,528 | 8 | 505 | 20,517 | 10,720 | 12,651 | 8,953 | 7,434 | 9,750 |
| Colorado | 18,097 | 3,858 | 4 | 140 | 4,656 | 2,971 | 6,468 | 2,758 | 2,346 | 3,854 |
| Connecticut | 4,810 | 1,008 | 0 | 29 | 1,610 | 765 | 1,398 | 690 | 673 | 886 |
| Delaware | 1,345 | 320 | 0 | 12 | 368 | 216 | 429 | 187 | 247 | 268 |
| District of Columbia | 602 | 195 | 0 | 4 | 193 | 92 | 118 | 77 | 98 | 113 |
| Federated States of Micronesia | 3 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 1 |
| Florida | 59,568 | 16,184 | 3 | 567 | 13,445 | 10,507 | 18,862 | 7,260 | 5,667 | 10,556 |
| Georgia | 18,510 | 3,848 | 5 | 153 | 4,544 | 2,495 | 7,465 | 2,172 | 2,127 | 3,493 |
| Guam | 184 | 30 | 0 | 0 | 18 | 20 | 116 | 28 | 17 | 46 |
| Hawaii | 3,281 | 790 | 0 | 15 | 525 | 686 | 1,265 | 762 | 490 | 738 |
| Idaho | 5,095 | 1,143 | 2 | 81 | 1,727 | 1,031 | 1,111 | 884 | 672 | 931 |
| Illinois | 16,579 | 3,850 | 5 | 288 | 5,074 | 2,457 | 4,905 | 1,745 | 2,372 | 3,455 |
| Indiana | 9,878 | 2,435 | 5 | 202 | 3,296 | 1,583 | 2,357 | 974 | 1,193 | 1,728 |
| Iowa | 5,041 | 1,218 | 5 | 99 | 2,044 | 927 | 748 | 548 | 819 | 826 |
| Kansas | 6,961 | 1,626 | 3 | 85 | 2,595 | 1,268 | 1,384 | 768 | 865 | 1,417 |
| Kentucky | 6,019 | 1,407 | 7 | 58 | 1,597 | 834 | 2,116 | 759 | 802 | 1,087 |
| Louisiana | 5,475 | 1,401 | 0 | 66 | 1,622 | 1,163 | 1,223 | 958 | 758 | 913 |
| Maine | 2,451 | 543 | 1 | 52 | 860 | 452 | 543 | 290 | 397 | 382 |
| Marshall Islands | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| Maryland | 7,961 | 2,566 | 3 | 90 | 2,219 | 1,245 | 1,838 | 1,048 | 1,172 | 1,389 |
| Massachusetts | 7,820 | 2,158 | 1 | 63 | 2,737 | 1,221 | 1,640 | 920 | 1,096 | 1,206 |
| Michigan | 13,774 | 3,207 | 6 | 213 | 4,696 | 2,250 | 3,402 | 1,453 | 1,717 | 2,560 |
| Minnesota | 12,483 | 2,466 | 1 | 111 | 3,956 | 2,019 | 3,930 | 1,024 | 1,339 | 2,679 |
| Mississippi | 4,224 | 1,275 | 1 | 31 | 1,128 | 830 | 959 | 453 | 513 | 637 |
| Missouri | 9,271 | 2,301 | 4 | 158 | 3,032 | 1,580 | 2,196 | 1,164 | 1,208 | 1,631 |
| Montana | 3,817 | 886 | 2 | 33 | 1,360 | 860 | 676 | 615 | 438 | 693 |
| Nebraska | 3,566 | 932 | 0 | 37 | 1,313 | 626 | 658 | 272 | 535 | 537 |
| Nevada | 7,511 | 1,424 | 0 | 53 | 1,798 | 1,411 | 2,825 | 1,531 | 778 | 1,622 |
| New Hampshire | 3,654 | 644 | 2 | 46 | 986 | 545 | 1,431 | 578 | 391 | 762 |
| New Jersey | 8,723 | 2,275 | 2 | 43 | 2,620 | 1,357 | 2,426 | 1,228 | 1,275 | 1,632 |
| New Mexico | 4,294 | 1,076 | 2 | 71 | 1,461 | 1,001 | 683 | 1,299 | 469 | 617 |
| New York | 16,053 | 4,891 | 17 | 135 | 5,170 | 2,684 | 3,156 | 2,137 | 2,429 | 2,662 |
| North Carolina | 14,739 | 3,264 | 4 | 164 | 4,348 | 2,371 | 4,588 | 1,875 | 2,202 | 2,739 |
| North Dakota | 3,505 | 961 | 0 | 26 | 1,078 | 1,131 | 309 | 203 | 377 | 490 |
| Northern Mariana Islands | 17 | 6 | 0 | 0 | 1 | 4 | 6 | 1 | 3 | 4 |
| Ohio | 15,322 | 3,555 | 20 | 251 | 5,134 | 2,334 | 4,028 | 1,736 | 2,097 | 2,980 |
| Oklahoma | 8,143 | 2,363 | 2 | 52 | 2,557 | 1,551 | 1,618 | 710 | 861 | 1,352 |
| Oregon | 9,177 | 2,244 | 3 | 100 | 3,196 | 2,019 | 1,615 | 1,865 | 1,315 | 1,727 |
| Palau | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pennsylvania | 15,141 | 3,581 | 10 | 191 | 4,629 | 2,387 | 4,343 | 2,286 | 1,964 | 2,820 |
| Puerto Rico | 1,596 | 633 | 0 | 50 | 335 | 218 | 360 | 153 | 106 | 221 |
| Rhode Island | 957 | 258 | 1 | 8 | 298 | 150 | 242 | 102 | 131 | 152 |
| South Carolina | 6,810 | 1,416 | 0 | 76 | 2,041 | 1,138 | 2,139 | 883 | 896 | 1,187 |
| South Dakota | 2,333 | 526 | 1 | 55 | 777 | 522 | 452 | 284 | 220 | 435 |
| Tennessee | 12,125 | 2,630 | 3 | 106 | 3,132 | 1,878 | 4,376 | 1,639 | 1,281 | 2,305 |
| Texas | 52,014 | 12,344 | 4 | 395 | 13,563 | 8,561 | 17,147 | 6,724 | 6,060 | 9,293 |
| Utah | 8,570 | 2,188 | 0 | 73 | 2,174 | 1,547 | 2,588 | 1,244 | 894 | 1,787 |
| Vermont | 1,248 | 279 | 1 | 10 | 463 | 258 | 237 | 251 | 166 | 187 |
| Virgin Islands | 172 | 45 | 0 | 1 | 56 | 28 | 42 | 18 | 6 | 17 |
| Virginia | 14,284 | 3,312 | 6 | 153 | 3,802 | 2,573 | 4,438 | 2,270 | 2,146 | 2,799 |
| Washington | 20,080 | 4,459 | 2 | 211 | 5,793 | 3,245 | 6,370 | 2,754 | 1,978 | 3,902 |
| West Virginia | 1,720 | 487 | 0 | 41 | 566 | 316 | 310 | 227 | 290 | 283 |
| Wisconsin | 9,186 | 2,035 | 4 | 257 | 3,397 | 1,322 | 2,171 | 759 | 1,171 | 1,650 |
| Wyoming | 1,869 | 453 | 1 | 20 | 722 | 333 | 340 | 264 | 241 | 289 |
| AA – Americas ⁴ | 19 | 1 | 0 | 0 | 6 | 4 | 8 | 3 | 2 | 8 |
| AE – Europe and Canada ⁴ | 261 | 74 | 0 | 2 | 49 | 56 | 80 | 55 | 16 | 91 |
| AP – Pacific ⁴ | 417 | 221 | 0 | 2 | 54 | 89 | 51 | 69 | 14 | 64 |

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, 2017)

| Age Group | Type of Pilot Certificate | | | | | | | | |
|--------------|---------------------------|----------------|--------------|--------------|----------------|----------------|-------------------|---------------|----------------|
| | Total Pilots | Student | Recreational | Sport Pilot | Private | Commercial | Airline Transport | Remote Pilot | CFI |
| Total | 609,305 | 149,121 | 157 | 6,097 | 174,516 | 114,186 | 165,228 | 69,166 | 106,692 |
| 14-15 | 317 | 317 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16-19 | 17,350 | 13,448 | 1 | 17 | 3,602 | 282 | 0 | 990 | 63 |
| 20-24 | 61,034 | 34,107 | 12 | 116 | 15,035 | 10,862 | 902 | 5,087 | 4,144 |
| 25-29 | 67,901 | 31,366 | 22 | 175 | 13,250 | 17,597 | 5,491 | 8,591 | 8,037 |
| 30-34 | 57,885 | 20,867 | 12 | 265 | 12,980 | 12,078 | 11,683 | 9,743 | 11,755 |
| 35-39 | 53,294 | 14,666 | 7 | 258 | 12,282 | 9,397 | 16,684 | 8,964 | 12,480 |
| 40-44 | 46,771 | 8,664 | 11 | 283 | 12,062 | 7,570 | 18,181 | 7,598 | 10,841 |
| 45-49 | 49,362 | 6,797 | 12 | 418 | 12,747 | 7,445 | 21,943 | 7,309 | 11,695 |
| 50-54 | 55,746 | 6,082 | 12 | 655 | 15,780 | 7,956 | 25,261 | 6,437 | 10,756 |
| 55-59 | 59,930 | 5,068 | 11 | 878 | 19,938 | 8,799 | 25,236 | 5,603 | 9,823 |
| 60-64 | 54,309 | 3,564 | 20 | 1,064 | 21,246 | 9,239 | 19,176 | 4,474 | 8,936 |
| 65-69 | 37,879 | 2,255 | 18 | 829 | 16,442 | 8,317 | 10,018 | 2,614 | 7,362 |
| 70-74 | 26,444 | 1,256 | 11 | 639 | 10,899 | 7,508 | 6,131 | 1,308 | 6,026 |
| 75-79 | 12,967 | 457 | 6 | 337 | 5,226 | 4,118 | 2,823 | 347 | 2,952 |
| 80 and over | 8,116 | 207 | 2 | 163 | 3,027 | 3,018 | 1,699 | 101 | 1,822 |

Source: FAA

6.4 Average Age of Active FAA Pilots by Category (1993-2017)

| 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 |
| 2017 | 44.9 | 32.5 | 49.0 | 57.1 | 48.9 | 46.2 | 50.6 |

Source: FAA

6.5 FAA Pilot Certificates Issued by Category (1982–2016)

| Year | Student | | Private | | Commercial | | Airline Transport | | Helicopter (only) | | Glider (only) | |
|------|----------|------------|----------|------------|------------|------------|-------------------|------------|-------------------|------------|---------------|------------|
| | Original | Additional | Original | Additional | Original | Additional | Original | Additional | Original | Additional | Original | Additional |
| 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 |
| 2016 | 36,712 | 174 | 17,082 | 11,900 | 10,191 | 9,564 | 9,520 | 20,747 | 2,759 | 782 | 170 | 1 |

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

Student certificates issued are estimated. They include those with a medical certification, as well as those that do not require a medical examination. Until April 2016, data displayed combined FAA Medical Certificate and Student Pilot Certificates issued, nearly all obtained through the Medical Certification System. As such,

the numbers included both first time applications and renewals. Student medical certifications remained valid for 24 calendar months for pilots age 40 or older, and for 60 months for pilots under the age of 40. As of April 2016, combined medical certificate and pilot certificates are no longer issued, and there will be no expiration date on the new student pilot certificates. Designated examiners, FAA inspectors, and Certified Flight Instructors (CFIs) process student pilot certificates, and FAA issues the 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 (2000–2017)

| 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 |
| 2017 | 286,268 | 35,040 | 6,192 | 66,423 | 20,664 | 64 | 34,534 | 222,037 |

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.

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

Source: FAA Airport Engineering Division

7.3 U.S. Airports Ranked by Number of General Aviation Operations at Tower (2017)

| Rank 2017 | 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 | 7,872 | 1016 | 123,950 | 5,768 | 242,139 | 378,777 | 380,745 | 98.6% | 386,190 |
| 2 | TMB | Kendall-Tamiami Executive Airport, FL | 34,943 | 278 | 133,931 | 4,172 | 125,455 | 297,403 | 298,779 | 98.9% | 302,075 |
| 3 | APA | Centennial Airport, CO | 42,665 | 79 | 98,864 | 3,642 | 151,920 | 326,023 | 297,170 | 89.7% | 331,405 |
| 4 | LGB | Long Beach, CA | 24,739 | 355 | 78,584 | 18,389 | 155,450 | 302,360 | 277,517 | 86.2% | 321,797 |
| 5 | HWO | North Perry Airport, FL | 4,225 | 4244 | 70,390 | 11,577 | 151,718 | 226,376 | 242,154 | 98.5% | 245,737 |
| 6 | IWA | Phoenix-Mesa Gateway Airport, AZ | 20,552 | 169 | 46,177 | 4,629 | 166,519 | 290,456 | 238,046 | 80.0% | 297,416 |
| 7 | FFZ | Falcon Field, AZ | 3,722 | 60 | 48,032 | 7,450 | 169,952 | 291,457 | 229,216 | 76.0% | 301,504 |
| 8 | PRC | Ernest A. Love Field, AZ | 7,201 | 101 | 67,205 | 281 | 153,944 | 232,730 | 228,732 | 98.0% | 233,443 |
| 9 | VNY | Van Nuys, CA | 37,661 | 1019 | 92,879 | 23,509 | 72,876 | 224,398 | 227,944 | 90.5% | 251,883 |
| 10 | GFK | Grand Forks Int'l, ND | 5,982 | 6 | 6,652 | 288 | 212,321 | 331,881 | 225,249 | 67.8% | 332,375 |
| 11 | SEE | Gillespie Field, CA | 15,665 | 248 | 64,386 | 4,712 | 140,167 | 221,139 | 225,178 | 99.4% | 226,539 |
| 12 | SNA | John Wayne-Orange County, CA | 33,158 | 776 | 69,624 | 9,343 | 99,541 | 310,606 | 212,442 | 65.9% | 322,564 |
| 13 | CNO | Chino, CA | 15,251 | 864 | 55,993 | 7,728 | 130,089 | 203,090 | 209,925 | 99.0% | 212,037 |
| 14 | HIO | Portland-Hillsboro Airport, OR | 14,342 | 91 | 63,632 | 3,255 | 128,189 | 210,821 | 209,509 | 97.8% | 214,243 |
| 15 | MYF | Montgomery Field Airport, CA | 26,752 | 89 | 72,992 | 8,459 | 100,683 | 207,103 | 208,975 | 96.5% | 216,482 |
| 16 | VRB | Vero Beach Municipal Airport, FL | 21,758 | 264 | 74,055 | 2,473 | 104,119 | 207,583 | 202,669 | 96.3% | 210,413 |
| 17 | FRG | Republic Airport, NY | 15,419 | 114 | 82,236 | 4,099 | 96,492 | 203,792 | 198,360 | 93.3% | 212,608 |
| 18 | SFB | Sanford-Orlando, FL | 9,991 | 22 | 13,573 | 895 | 172,511 | 306,248 | 196,992 | 64.1% | 307,286 |
| 19 | CHD | Chandler Municipal Airport, AZ | 5,234 | 53 | 66,206 | 1,582 | 119,204 | 194,224 | 192,279 | 97.5% | 197,142 |
| 20 | DAB | Daytona Beach, FL | 19,896 | 422 | 26,246 | 2,716 | 142,589 | 308,613 | 191,869 | 61.3% | 313,163 |
| 21 | RVS | Richard Lloyd Jones, OK | 14,341 | 78 | 59,371 | 612 | 103,634 | 180,118 | 178,036 | 97.7% | 182,261 |
| 22 | FXE | Fort Lauderdale Executive Airport, FL | 38,314 | 551 | 83,203 | 12,343 | 41,112 | 179,023 | 175,523 | 91.2% | 192,377 |
| 23 | PMP | Pompano Beach Airpark, FL | 5,549 | 13364 | 46,709 | 20,936 | 79,757 | 132,489 | 166,315 | 94.9% | 175,318 |
| 24 | RHV | Reid-Hillview, CA | 1,818 | 222 | 70,381 | 3,447 | 90,071 | 162,648 | 165,939 | 98.2% | 169,024 |
| 25 | EVB | New Smyrna Beach Municipal, FL | 8,373 | 314 | 43,567 | 3,144 | 110,358 | 164,667 | 165,756 | 98.5% | 168,243 |
| 26 | BFI | Boeing Field, King County Airport, WA | 28,997 | 2248 | 61,039 | 15,277 | 53,712 | 184,182 | 161,273 | 75.2% | 214,516 |
| 27 | BJC | Rocky Mountain Metropolitan Airport, CO | 15,122 | 608 | 50,920 | 3,513 | 90,411 | 165,767 | 160,574 | 94.1% | 170,553 |
| 28 | SDL | Scottsdale Airport, AZ | 35,365 | 322 | 57,759 | 7,223 | 59,368 | 168,131 | 160,037 | 90.9% | 176,025 |
| 29 | CRQ | McClellan-Palomar Airport, CA | 38,255 | 139 | 49,208 | 5,766 | 65,483 | 160,887 | 158,851 | 94.3% | 168,517 |
| 30 | FPR | Republic Airport, NY | 22,853 | 141 | 54,133 | 2,530 | 78,139 | 157,803 | 157,796 | 98.1% | 160,801 |
| 31 | FTW | Fort Worth Meacham Interntional Airport, TX | 26,731 | 961 | 42,280 | 6,775 | 81,008 | 163,066 | 157,755 | 89.6% | 175,971 |
| 32 | CMA | Camarillo Airport, CA | 15,462 | 5970 | 57,478 | 4,837 | 72,265 | 149,902 | 156,012 | 94.4% | 165,292 |
| 33 | PAO | Palo Alto Airport, CA | 5,282 | 1870 | 47,230 | 3,813 | 95,416 | 148,769 | 153,611 | 95.6% | 160,738 |
| 34 | VGT | North Las Vegas Airport, NV | 10,296 | 477 | 42,431 | 2,584 | 97,142 | 177,298 | 152,930 | 83.0% | 184,267 |
| 35 | PDK | DeKalb-Peachtree Airport, GA | 47,024 | 303 | 47,751 | 10,538 | 41,816 | 159,066 | 147,432 | 84.8% | 173,780 |
| 36 | RNT | Renton Municipal Airport, WA | 4,557 | 528 | 46,636 | 4,723 | 80,837 | 135,287 | 137,281 | 97.5% | 140,856 |
| 37 | TKI | McKinney National Airport, TX | 9,597 | 69 | 30,197 | 2,067 | 93,279 | 136,248 | 135,209 | 97.4% | 138,843 |
| 38 | LVK | Livermore Municipal Airport, CA | 7,604 | 11 | 46,211 | 2,340 | 75,012 | 130,656 | 131,178 | 98.6% | 133,044 |
| 39 | FIN | Flagler County Airport, FL | 3,893 | 54 | 31,150 | 507 | 93,667 | 131,271 | 129,271 | 97.8% | 132,120 |
| 40 | DTO | Denton Municipal Airport, TX | 9,600 | 190 | 50,904 | 3,253 | 62,949 | 125,608 | 126,896 | 98.3% | 129,127 |
| 41 | CRG | Jacksonville Executive Airport at Craig, FL | 20,392 | 273 | 35,076 | 1,882 | 66,823 | 133,905 | 124,446 | 85.8% | 145,028 |
| 42 | SGJ | North East Florida Regional Airport, FL | 12,270 | 69 | 45,538 | 880 | 65,034 | 133,296 | 123,791 | 91.8% | 134,858 |
| 43 | PTK | Oakland County International Airport, MI | 26,267 | 301 | 32,708 | 2,529 | 61,935 | 131,340 | 123,740 | 92.1% | 134,303 |
| 44 | LAL | Lakeland Linder Regional Airport, FL | 17,104 | 2216 | 45,807 | 7,165 | 49,858 | 116,653 | 122,150 | 96.8% | 126,135 |
| 45 | TTD | Portland-Troutdale Airport, OR | 1,204 | 9 | 30,110 | 2,522 | 86,320 | 117,824 | 120,165 | 99.3% | 121,049 |
| 46 | OPF | Opa-Locka Executive Airport, FL | 39,858 | 10 | 37,585 | 9,610 | 32,806 | 131,544 | 119,869 | 84.8% | 141,304 |
| 47 | CCR | Buchanan Field Airport, CA | 8,099 | 10 | 40,133 | 1,774 | 66,368 | 120,044 | 116,384 | 95.2% | 122,202 |
| 48 | TOA | Zamperini Field Airport, CA | 6,985 | 105 | 49,039 | 10,472 | 49,075 | 105,707 | 115,676 | 99.2% | 116,603 |
| 49 | HWD | Hayward Executive Airport, CA | 8,233 | 6908 | 34,194 | 8,198 | 57,830 | 102,059 | 115,363 | 67.4% | 171,196 |
| 50 | SAC | Sacramento Executive Airport, CA | 16,139 | 134 | 54,443 | 12,188 | 32,242 | 105,875 | 115,146 | 94.2% | 122,270 |

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 (1975–2017)

| 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 |
|------|------------|-------------------------|-----------------------------------|----------------------------------|-------------------------|---------------------------------------|----------------------------|-------------------------|----------------------------|--------------|
| 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 | 0 |
| 2007 | n/a | n/a | 21 | 499 | 76 | - | n/a | n/a | n/a | 0 |
| 2008 | n/a | n/a | 21 | 503 | 4 | - | n/a | n/a | n/a | n/a |
| 2009 | n/a | n/a | 21 | 508 | 4 | - | n/a | n/a | n/a | n/a |
| 2010 | n/a | n/a | 21 | 508 | 4 | - | n/a | n/a | n/a | 202 |
| 2011 | n/a | n/a | 21 | 512 | 4 | - | n/a | 11,828 | n/a | 339 |
| 2012 | n/a | n/a | 22 | 514 | 4 | - | n/a | 12,876 | n/a | 440 |
| 2013 | 967 | n/a | 22 | 516 | 4 | - | n/a | 13,102 | n/a | 556 |
| 2014 | 967 | n/a | 22 | 516 | 4 | - | n/a | 13,554 | 230 | 634 |
| 2015 | 957 | n/a | 22 | 517 | 4 | - | n/a | 13,844 | 230 | 634 |
| 2016 | 957 | n/a | 22 | 517 | 4 | - | n/a | 14,245 | 230 | 634 |
| 2017 | 937 | n/a | 22 | 518 | 4 | - | n/a | 14,580 | 230 | 649 |

The FAA stopped publishing the “Air Traffic Factbook” in 2008. GAMA is working to backfill missing data. Air traffic control tower 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 3,872 are LPV in the 2017 data.

Source: FAA Air Traffic Organization

7.5 Airports by Type (2004–2016)

| Year | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2014 | 2015 | 2016 |
|---|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Total Civil Public Use Airports | 5,288 | 5,270 | 5,233 | 5,221 | 5,202 | 5,178 | 5,175 | 5,172 | 5,145 | 5,136 | 5,119 |
| Civil Public Use Part 139 | 599 | 575 | 604 | 565 | 560 | 559 | 551 | 547 | 537 | 531 | 529 |
| Civil Public Use Non-Part 139 | n/a | n/a | n/a | 4,556 | 4,642 | 4,619 | 4,624 | 4,625 | 4,608 | 4,605 | 4,590 |
| Civil Public Use Abandoned | 10 | 14 | 27 | 18 | 16 | 18 | 14 | 20 | 15 | 14 | 20 |
| Newly Established Public Use | n/a | n/a | n/a | 9 | 3 | 5 | 16 | 6 | 10 | 8 | 4 |
| Total Civil Private Use Airports | 14,532 | 14,584 | 14,757 | 14,839 | 14,451 | 14,298 | 14,353 | 14,339 | 13,863 | 14,096 | 14,168 |
| Civil Private Use Airports Abandoned | 117 | 115 | 133 | 297 | 461 | 360 | 121 | 183 | 307 | 112 | 222 |
| Newly Established Private Use | n/a | n/a | n/a | 274 | 151 | 214 | 212 | 20 | 171 | 352 | 305 |
| Military Airports | 57 | n/a | n/a | 261 | 277 | 274 | 274 | 271 | 286 | 287 | 283 |
| Total Airports by Type | 19,820 | 19,854 | 19,983 | 20,341 | 19,930 | 19,750 | 19,802 | 19,782 | 19,299 | 19,524 | 19,576 |
| Airports | n/a | n/a | n/a | 13,822 | 13,589 | 13,494 | 13,473 | 13,450 | 13,089 | 13,156 | 13,154 |
| Heliports | n/a | n/a | n/a | 5,708 | 5,568 | 5,571 | 5,650 | 5,686 | 5,553 | 5,709 | 5,763 |
| Seaplane Bases | n/a | n/a | n/a | 527 | 503 | 497 | 496 | 497 | 488 | 493 | 497 |
| Gliderports | n/a | n/a | n/a | 35 | 35 | 35 | 35 | 35 | 36 | 35 | 35 |
| Stolports | n/a | n/a | n/a | 87 | 82 | n/a | n/a | n/a | n/a | n/a | n/a |
| Balloon Ports | n/a | n/a | n/a | 15 | 14 | 14 | 13 | 13 | 13 | 13 | 13 |
| Ultraflight Flightparks | n/a | n/a | n/a | 147 | 139 | 139 | 135 | 131 | 120 | 118 | 114 |

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

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

Source: FAA Administrator’s Factbook

Safety and Accident Statistics



8.1 U.S. General Aviation Accidents, Fatal Accidents, and Fatalities (2000–2017)

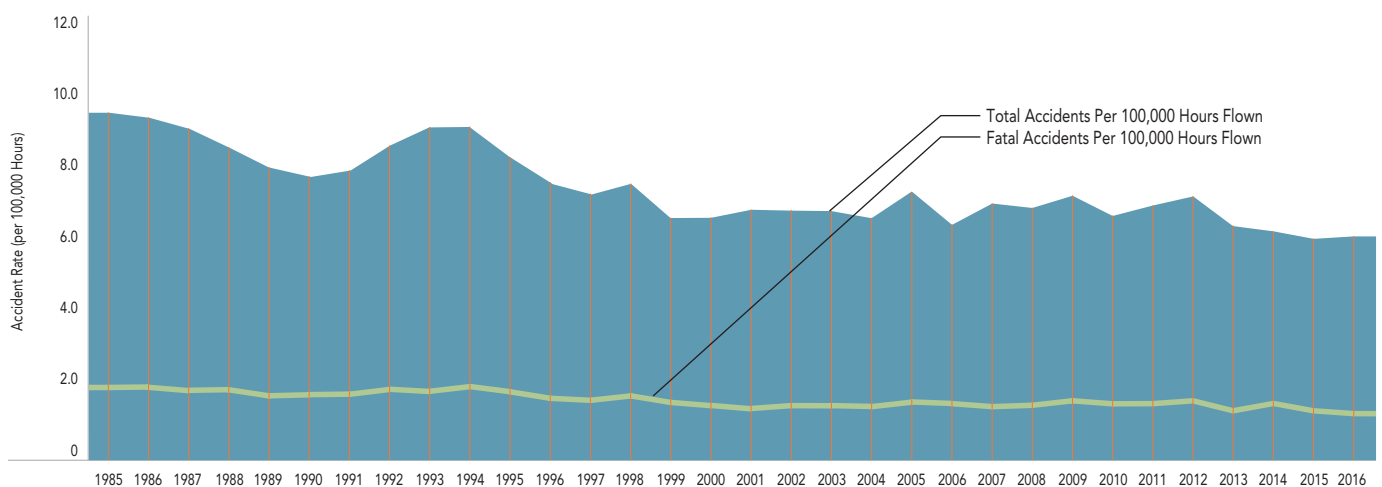
| Year | Accidents | | Accidents | | Fatalities | | Flight Hours | Rate | |
|-------|-----------|----------|-----------|----------|------------|--------|--------------|------|-------|
| | All | Excluded | Fatal | Excluded | Total | Aboard | | All | Fatal |
| 2000 | 1,837 | 7 | 345 | 7 | 596 | 585 | 27,838,000 | 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 | 4 | 275 | 1 | 479 | 470 | 20,862,000 | 7.08 | 1.32 |
| 2010 | 1,441 | 3 | 271 | 2 | 458 | 455 | 21,688,000 | 6.63 | 1.24 |
| 2011 | 1,471 | 3 | 270 | 1 | 458 | 447 | 21,488,000 | 6.84 | 1.24 |
| 2012 | 1,472 | 1 | 273 | 1 | 438 | 438 | 20,881,000 | 7.05 | 1.30 |
| 2013 | 1,224 | 3 | 222 | 3 | 391 | 386 | 19,492,000 | 6.26 | 1.12 |
| 2014 | 1,224 | 0 | 256 | 0 | 423 | 413 | 19,617,000 | 6.24 | 1.31 |
| 2015 | 1,210 | 7 | 230 | 4 | 378 | 375 | 20,576,000 | 5.85 | 1.10 |
| 2016 | 1,266 | 2 | 213 | 2 | 386 | 379 | 21,333,747 | 5.93 | 0.99 |
| 2017P | 1,223 | n/a | 198 | n/a | n/a | n/a | n/a | n/a | n/a |

P = Preliminary

General Aviation as defined by NTSB includes operations under Part 91, Part 91K, Part 125, Part 133, and Part 137 for the purpose of accident statistics. Excluded "Accidents" and "Fatalities" are suicide/sabotage and stolen/unauthorized events, which are not included in rates.

Source: NTSB, FAA, and GAMA

FIGURE 8.1 Accident Rates in U.S. General Aviation (1985–2016)



Source: NTSB, FAA, and GAMA

8.2 U.S. On-Demand FAR Part 135 Accidents, Fatal Accidents, and Fatalities (1990–2017)

| Year | Accidents | | Accidents | | Fatalities | | Flight Hours | Rate | |
|-------|-----------|----------|-----------|----------|------------|--------|--------------|------|-------|
| | All | Excluded | Fatal | Excluded | Total | Aboard | | All | Fatal |
| 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 | 38 | 0 | 8 | 0 | 12 | 12 | 3,522,000 | 1.02 | 0.23 |
| 2013 | 45 | 0 | 10 | 0 | 25 | 25 | 3,384,000 | 1.30 | 0.30 |
| 2014 | 35 | 0 | 8 | 0 | 20 | 20 | 3,654,000 | 0.96 | 0.22 |
| 2015 | 39 | 0 | 7 | 0 | 27 | 27 | 3,566,000 | 1.07 | 0.20 |
| 2016 | 31 | 0 | 7 | 0 | 19 | 19 | 3,499,517 | .89 | 0.20 |
| 2017P | 47 | n/a | 6 | 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

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 in this format. See Table 8.4 for EASA's new accident data structure.

Source: EASA Annual Safety Review

8.4 European Union General Aviation and Aerial Work Accidents (2014–2016)

| Year | General Aviation | | | | | | | | | | Commercial | | | | | | | | All Aircraft Accidents | | | | |
|------|------------------|-------|------------|-------|-----------|-------|------------|-------|-----------|-------|---------------|-------|-------------|-------|------------|-------|--------------------------|-------|------------------------|---|-----|-------|-------|
| | Aeroplane | | Rotorcraft | | Glider | | Microlight | | Balloon | | Bus. Aviation | | Aerial Work | | | | Commercial Air Transport | | | | | | |
| | Aeroplane | | Rotorcraft | | Aeroplane | | Rotorcraft | | Aeroplane | | Rotorcraft | | Aeroplane | | Rotorcraft | | | | | | | | |
| | Total | Fatal | Total | Fatal | Total | Fatal | Total | Fatal | Total | Fatal | Total | Fatal | Total | Fatal | Total | Fatal | Total | Fatal | | | | Total | Fatal |
| 2014 | 421 | 53 | 73 | 9 | 195 | 18 | 204 | 30 | 11 | 0 | 3 | 1 | 24 | 5 | 11 | 2 | 27 | 1 | 6 | 1 | 975 | 120 | 313 |
| 2015 | 320 | 41 | 40 | 6 | 180 | 24 | n/a | n/a | 9 | 2 | n/a | n/a | 29 | 7 | 9 | 2 | 25 | 1 | 10 | 1 | 622 | 84 | 283 |
| 2016 | 311 | 46 | 42 | 9 | 167 | 19 | n/a | n/a | 12 | 1 | n/a | n/a | 23 | 6 | 13 | 0 | 20 | 1 | 8 | 3 | 596 | 85 | 145 |

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.
 EASA did not provide separate accident data for Microlight and Business Aviation Aeroplane accidents for 2015 and 2016.

Source: EASA Annual Safety Review

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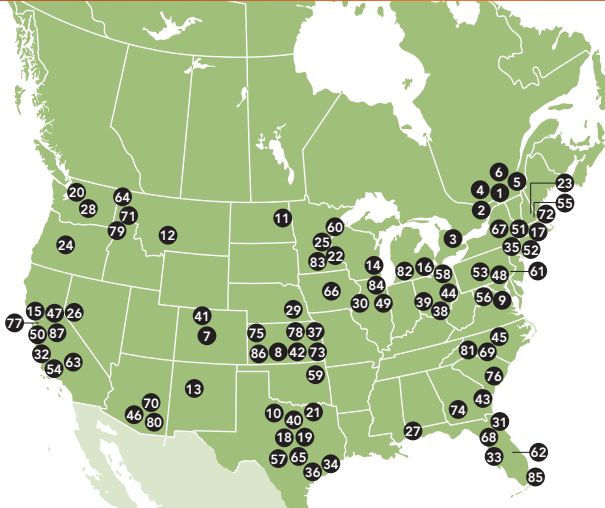


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