



2016 Top Markets Report **Aircraft Parts** Country Case Study

Singapore

Singapore ranks second in our list of top markets for U.S. aircraft parts exports due to the country's status as a major aircraft maintenance hub. Singapore's favorable customs regime and its location in a rapidly growing regional aviation market have attracted many firms from the United States and Europe to set up subsidiaries in Singapore. Singaporean maintenance firms such as ST Aerospace and SIA Engineering Company are major global players in their own right. While the growth of aircraft fleets in other Asian countries (like China) and the high cost of doing business in Singapore may challenge Singapore's dominance in the future, today it remains a solid means of entry to the Southeast Asia market.

Overall Rank

2

Unlike other top markets for aircraft parts, which have a large domestic manufacturing industry and/or a large domestic aviation market, Singapore's parts market is centered on the maintenance industry. Much of the maintenance work done in Singapore is performed on aircraft registered outside of Singapore.

Aircraft maintenance can be divided into several segments, most of which are conducted to some degree in Singapore. These segments include: airframe maintenance and overhaul, engine maintenance and overhaul, line maintenance (performed by airlines), component maintenance, cabin upgrades and design, and aircraft painting. In some cases, U.S. suppliers of spare parts may find themselves in competition with products available locally in Singapore.

Overview of the Aviation and Aerospace Manufacturing Market

Singapore is consistently a top market for U.S. aerospace parts exports, and parts exports averaged over \$5.7 billion between 2005 and 2014. Parts represented 81 percent of Singapore's aerospace

imports from the United States during that period and 65 percent of Singapore's parts imports were from the United States.

Singapore's MRO industry is robust. Singapore's economy is based on its status as a major port and regional hub. Its infrastructure and regulations are designed to facilitate the movement of goods, making it a convenient place to operate an MRO facility, where being able to quickly clear parts through customs is a plus.

In addition to the hometown facilities of ST Aerospace and SIA Engineering, many foreign OEMs have facilities in Singapore including Bell/Cessna, Airbus Helicopter, Bombardier, GE Aircraft Engines, and Pratt & Whitney. In 2012, Aviation Week listed ST Aerospace and SIA as the world's first and fourth largest airframe MRO firms by total-man hours; however, those figures represent those companies'

activities at a network of facilities spanning the globe. Singapore is also a center for regional parts distribution and warehousing.

Singapore only has six domestic airlines, but the country's Changi airport is served by over 100 airlines with routes to 300 cities in 70 countries and territories. The top 10 countries served by Changi airport were Indonesia, Australia, Malaysia, Thailand, China, Hong Kong, India, Philippines, Japan and Vietnam. It was the fifth largest airport by passenger traffic in 2013. This traffic helps drive the maintenance business and it also makes Singapore a convenient location from which to pursue regional opportunities.

Though MRO is the main focus, there is a limited amount of manufacturing in Singapore. Notably, the three major commercial engine manufacturers (GE, Pratt & Whitney and Rolls Royce) all have facilities in Singapore.

Singapore owns and operates U.S.-produced military aircraft, as well as aircraft from manufacturers in Europe and Israel. Its current fleet includes the F-15, the F-16, and the F-5; Apache, Chinook, Seahawk, Super Puma and Cougar helicopters; the C-135, the C-130, and the IAI Scout UAV; along with other UAVs, support aircraft and trainer aircraft. Singapore is also a probable customer of the F-35.

U.S. manufacturers interested in Singapore should consider using Singapore to access opportunities elsewhere in the region. Several other Asian countries also rank in the top 30 countries in this top markets report. These include Indonesia and Malaysia, which can be easily accessed from Singapore.

Asia is one of the world's fastest growing regions for aviation. In 2015, over 600 airport construction projects were underway, valued at \$125 billion. Boeing projects that regional airlines will require over 14,000 aircraft by 2034 to meet rising demand for air travel. Bombardier has forecasted another 1,500 business craft will be sold to Asian customers by 2025. U.S. firms exported approximately \$50 billion worth of aerospace equipment to customers in the Asia-Pacific region in 2014. As with Singapore, however, aircraft manufacturing in these countries is limited, and most opportunities for parts exports will be for the aftermarket and for the military.

Challenges and Barriers to Aircraft Parts Exports

According to the World Bank, Singapore is the world's top market in terms of ease of doing business. It also ranks first in two subcategories highly relevant to the MRO industry: trading across borders and enforcing contracts. In addition, under the Bilateral Aviation Safety Agreement (BASA) between the FAA and the Singaporean Civil Aviation Authority, Singapore accepts all FAA certificates for aircraft and parts. ITA is not aware of any systemic problems between the FAA and Singapore; the FAA's regional office for Asia-Pacific is based in Singapore. A free trade agreement between Singapore and the United States has been in place since 2004, further ensuring ease of exporting to Singapore. As a result, U.S. companies do not face many regulatory obstacles in Singapore. In fact, in February 2016, the FAA and the Civil Aviation Authority of Singapore (CAAS) signed a Maintenance Implementation Procedures agreement, which allows for reciprocal acceptance of each party's maintenance surveillance work.

On the U.S. end, exporters should conduct due diligence to ensure compliance with U.S. export control regulations. The Embassy reports that in some cases International Traffic in Arms Regulations (ITAR) discourages Singapore firms from doing business with U.S. companies. Nonetheless, some challenges exist, mostly related to Singapore's distance from the United States: there are no direct flights between the U.S. and Singapore; the time difference is substantial; and companies generally lack familiarity with key players. In addition, the high cost of travel to Singapore may make accessing this market cost prohibitive for some SMEs. Finally, manufacturers of PMA parts should be aware that, according to the U.S. Commercial Service in Singapore, their products are generally not accepted in Singapore.

Opportunities for U.S. Exporters

Despite some moderate logistical hurdles, U.S. products are generally competitive in Singapore, and the favorable business climate makes Singapore a reasonable means by which SMEs can enter the market in Southeast Asia.