

# Aircraft Component MRO Market Report by Aircraft Type (Narrow Body, Wide-Body, Regional Jets/Turboprop), Component (Fuselage, Empennage, Landing Gear, Wings, Engine, and Others), Application (Commercial Air Transport, Business and General Aviation, Military Aviation), and Region 2024-2032

Market Report | 2024-01-30 | 141 pages | IMARC Group

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### **Report description:**

The global aircraft component MRO market size reached US\$ 20.2 Billion in 2023. Looking forward, IMARC Group expects the market to reach US\$ 29.8 Billion by 2032, exhibiting a growth rate (CAGR) of 4.3% during 2024-2032. The market is experiencing steady growth driven by the growing number of air travel, aging aircraft fleets, stringent regulatory compliance to extend the lifespan of aircraft, and integration of advanced components and systems to improve fuel efficiency.

Aircraft Component MRO Market Analysis:

Market Growth and Size: The market is witnessing moderate growth, driven by the increasing demand for enhanced maintenance and repair services, along with the rising air travel among people.

Technological Advancements: The integration of digital tools, such as data analytics and predictive maintenance, benefits in enhancing efficiency and reducing downtime in MRO processes, which is propelling the market growth.

Industry Applications: The aircraft component maintenance, repair and overhaul (MRO) market primarily focuses on maintaining and repairing a wide range of aircraft components and systems, such as avionics, engines, landing gear, and hydraulic systems, to ensure safety.

Geographical Trends: North America leads the market, driven by the rising adoption of technologically advanced aircraft components. However, Asia Pacific is emerging as a fast-growing market on account of the increasing focus on enhancing safety in aircraft.

Competitive Landscape: Key companies are regularly performing inspections and maintenance tasks to identify and address wear and tear, damage, or potential issues with various aircraft components. Moreover, they are offering modification services to

improve the performance, efficiency, or compliance of aircraft components.

Challenges and Opportunities: While the market faces challenges, such as the rising need for skilled personnel, it also encounters opportunities in the growing focus on maintaining environmental sustainability.

Future Outlook: The future of the aircraft component MRO market looks promising, with increasing preferences for data-driven decision-making. The rising demand for specialized services tailored as per the aircraft types is anticipated to bolster the market growth.

Aircraft Component MRO Market Trends: Aging aircraft fleet

The rising adoption of aircraft component maintenance, repair and overhaul (MRO) due to the aging aircraft fleet is propelling the growth of the market. In line with this, many airlines and operators continue to operate older aircraft models due to the substantial capital investment required for fleet replacement. These aging aircraft require more frequent and extensive maintenance to ensure they meet safety and performance standards. Moreover, MRO providers play a crucial role in extending the lifespan of these aircraft by conducting regular inspections, repairs, and component replacements. Apart from this, advancements in MRO techniques and materials allow for the cost-effective refurbishment of older aircraft, making it an attractive option for airlines seeking to maximize the return on their investments while maintaining high safety standards.

# Stringent regulatory compliance

The increasing focus on aligning with stringent regulatory compliance is contributing to the growth of the market. In addition, aviation authorities of several countries are implementing stringent regulations and safety standards on aircraft maintenance and airworthiness, which is bolstering the market growth. Besides this, airlines and operators must adhere to these regulations to ensure passenger safety and maintain the airworthiness of their fleets. This involves regular inspections, maintenance, and component replacements. Furthermore, failure to comply with these regulations can result in severe financial penalties along with reputational damage. Apart from this, the escalating demand for aircraft component MRO services, as they are beneficial in meeting stringent regulatory requirements while ensuring the safe operation of aircraft, is impelling the market growth.

# **Technological Innovations**

Modern aircraft are equipped with technologically advanced components and systems, including avionics, engines, and materials. These advanced technologies improve aircraft efficiency, fuel economy, and safety but also require specialized knowledge and equipment for maintenance and repair. In line with this, MRO providers are focusing on investing in training and infrastructure to handle the maintenance and repair of advanced components effectively. Additionally, the introduction of new materials and manufacturing techniques necessitates changes in MRO processes and capabilities. Apart from this, the growing demand for specialized services in the aviation industry is offering a positive market outlook.

# Increasing number of air travel

The escalating demand for aircraft component MRO on account of the rising number of air travel among the masses across the globe is positively influencing the market. In addition, people are increasingly choosing air travel for business and leisure purposes. Consequently, aircraft are used more frequently, leading to higher wear and tear on components and systems. Apart from this, the increasing utilization of aircraft requires more frequent maintenance and component replacements to ensure the ongoing reliability and safety of the aircraft is strengthening the growth of the market. Additionally, MRO providers are essential in supporting airlines by conducting routine inspections, repairs, and overhauls to minimize aircraft downtime and maintain operational schedules.

# Aircraft Component MRO Industry Segmentation:

IMARC Group provides an analysis of the key trends in each segment of the market, along with forecasts at the global and regional for 2024-2032. Our report has categorized the market based on aircraft type, component, and application.

Breakup by Aircraft Type:

Narrow-Body Wide-Body Regional Jets/Turboprop

The report has provided a detailed breakup and analysis of the market based on the aircraft type. This includes narrow-body, wide-body, and regional jets/turboprop.

Narrow-body aircraft are usually single-aisle aircraft with a smaller seating capacity and designed for short to medium-haul routes. In addition, maintenance requirements for narrow-body aircraft components often include avionics, engines, landing gear, and cabin systems. Besides this, MRO providers are focusing on offering timely and efficient services to minimize aircraft downtime for airlines operating these aircraft.

Wide-body aircraft are larger and twin-aisle aircraft that are designed for long-haul flights and have higher passenger capacities. In line with this, maintenance for wide-body aircraft often involves more comprehensive checks and overhauls due to their extended operational range and the need to ensure long-haul reliability. MRO providers specializing in wide-body aircraft offer advanced technical capabilities and infrastructure to handle these larger and more complex aircraft.

Regional jets/turboprop are smaller-size aircraft that are used for short-haul and regional flights. Regional aircraft often serve shorter routes with multiple takeoffs and landings daily, necessitating regular maintenance to ensure safety and efficiency. The rising focus on maintaining and repairing engines, propellers, avionics, and other critical systems specific to these aircraft types is impelling the market growth. MRO providers catering to regional jets and turboprop aircraft typically offer specialized services tailored to the unique needs of these smaller and versatile planes.

Breakup by Component:

Fuselage Empennage Landing Gear Wings Engine Others

A detailed breakup and analysis of the market based on the component have also been provided in the report. This includes fuselage, empennage, landing gear, wings, engine, and others.

The fuselage is the main body of the aircraft, housing the cockpit, passenger cabin, cargo hold, and various systems. MRO of fuselage involves maintenance and repair of the structural integrity, pressurization systems, and interior components like seating and entertainment systems. It includes services to ensure the structural integrity of the fuselage, repair or replacement of damaged sections, and refurbishment of interior components for passenger comfort. MRO providers specializing in fuselage components focus on safety, aesthetics, and passenger experience.

Empennage is the tail section of the aircraft, including the vertical stabilizer and horizontal stabilizers. MRO for empennage components involves inspections, repairs, and maintenance of these tail surfaces and their associated control systems. It includes services to ensure stability, control, and aerodynamic performance, addressing issues, such as corrosion, structural damage, and control surface wear. MRO providers specializing in empennage components contribute to the overall stability and flight control of the aircraft.

Landing gear includes the wheels, struts, and associated systems that support the aircraft during takeoff, landing, and while on the ground. In addition, MRO for landing gear components focuses on maintenance, inspections, and overhauls to ensure the safe and reliable operation of landing gear systems. It includes services to address wear and tear, structural integrity, hydraulic systems, and shock absorption capabilities. MRO providers ensure the safety and reliability of aircraft during ground operations and landings.

Wings are the primary lifting surfaces of the aircraft, responsible for generating lift and supporting the aircraft in flight. Besides this, MRO for wing components involves inspections, maintenance, and repair of the wing structure, control surfaces, and associated systems like flaps and slats. It includes services to address structural integrity, aerodynamic performance, and control system functionality. In addition, MRO plays a critical role in ensuring the safety and efficiency of aircraft flight.

The engine is the propulsion system of the aircraft, responsible for generating thrust and powering the aircraft in flight. Additionally, MRO for engine components focuses on maintenance, repair, and overhaul of engines and their various components, including turbines, compressors, and auxiliary systems. It includes services to address engine wear, performance, efficiency, and compliance with stringent aviation regulations. MRO providers specializing in engines are crucial in maintaining the reliability and fuel efficiency of aircraft propulsion systems.

Breakup by Application:

Commercial Air Transport Business and General Aviation Military Aviation

Commercial air transport dominates the market

The report has provided a detailed breakup and analysis of the market based on the application. This includes commercial air transport, business and general aviation, and military aviation. According to the report, commercial air transport accounted for the largest market share.

Commercial air transport encompasses passenger and cargo airlines that provide scheduled and non-scheduled flights for the public and freight transportation. MRO for commercial air transport focuses on the maintenance, repair, and overhaul of components and systems in large commercial aircraft, including narrow-body and wide-body airplanes. It includes services, such as routine inspections, major overhauls, avionics upgrades, and engine maintenance. MRO providers in this sector adhere to strict regulatory standards and focus on enhancing passenger safety and operational reliability.

Business and general aviation involve a wide range of aircraft used for corporate travel, private flights, and recreational purposes. Besides this, MRO for business and general aviation includes maintenance services for smaller aircraft, such as light jets, turboprops, helicopters, and personal aircraft. It covers inspections, repairs, avionics upgrades, and component overhauls tailored as per the specific needs of private owners and businesses. MRO providers offer personalized services and cater to the unique requirements of individual owners and operators.

Military aviation encompasses aircraft used by armed forces for defense, reconnaissance, transport, and combat missions. In addition, MRO for military aviation is highly specialized and focuses on military aircraft components, including fighter jets, transport planes, helicopters, and unmanned aerial vehicles (UAVs). It provides services, such as mission-specific modifications, weapon system integration, structural repairs, and avionics upgrades, while adhering to stringent military standards and security protocols.

Breakup by Region:

Europe North America Asia Pacific Middle East and Africa Latin America

North America leads the market, accounting for the largest aircraft component MRO market share

The market research report has also provided a comprehensive analysis of all the major regional markets, which include Europe, North America, Asia Pacific, the Middle East and Africa, and Latin America. According to the report, North America accounted for the largest market share on account of the rising number of domestic and international flights. Additionally, the presence of major airlines, cargo carriers, and business and general aviation activities is bolstering the growth of the market. Moreover, the increasing need for specialized maintenance services to support advanced aircraft systems is impelling the growth of the market. Besides this, the growing awareness among individuals about the importance of high-quality MRO services to ensure compliance with safety standards is offering a positive market outlook.

Asia Pacific stands as another key region in the market due to the rising air travel among individuals. In line with this, the aviation industry in Asia Pacific is characterized by a mix of legacy and low-cost carriers, covering a broad spectrum of aircraft types. This diversity necessitates a wide range of MRO services, ranging from routine maintenance for narrow-body aircraft to complex overhauls for wide-body jets. Furthermore, the region has a strategic geographical location, which makes it a pivotal transit point for international air travel. The increasing demand for cargo aircraft maintenance and modification services is propelling the market growth.

Europe maintains a strong presence in the market, with the growing number of key airlines and aircraft manufacturers. Moreover, stringent regulatory frameworks related to passenger safety are supporting the growth of the market. In addition, the rising awareness among individuals about the importance of high-quality MRO services in maintaining safety and airworthiness is propelling the market growth.

Latin America exhibits growing potential in the aircraft component MRO market on account of the thriving aviation sector. In line with this, the increasing focus on developing enhanced aviation infrastructure is contributing to the growth of the market. Latin America has a diverse range of aircraft, ranging from narrow-body to wide-body and regional jets, which require specialized MRO to maintain enhanced operational efficiency.

The Middle East and Africa region shows a developing market for aircraft component MRO, primarily driven by the improving aviation infrastructure. In line with this, various countries in the region are focusing on investing in aviation infrastructure, including modern airports and world-class MRO facilities. This region also has several major airlines that operate large fleets of modern aircraft and require specialized MRO services.

Leading Key Players in the Aircraft Component MRO Industry:

Key players in the market are continuously performing inspections and maintenance tasks to identify and address wear and tear, damage, or potential issues with various aircraft components. They are disassembling, repairing, and reassembling components to restore them to their original or serviceable condition, if components are found to be damaged. In addition, manufacturers are conducting comprehensive testing, such as performance testing and functionality checks, to ensure that repaired or overhauled components meet strict quality and safety standards. Apart from this, companies are retrofitting aircraft with eco-friendly components and systems, such as more fuel-efficient engines and emissions-reduction technologies, to align with sustainability goals. Many MRO companies leverage data analytics and predictive maintenance technologies to monitor the health of components in real-time.

The market research report has provided a comprehensive analysis of the competitive landscape. Detailed profiles of all major companies have also been provided. Some of the key players in the market include:

Delta TechOps Lufthansa Technik AG Air France Industries KLM Engineering & Maintenance Hong Kong Aircraft Engineering Company Limited Honeywell International Inc. ST Engineering AAR Corp. Barnes Aerospace, Inc. (Barnes Group) FL Technics (Avia Solutions Group) Turkish Technic Inc. (Turkish Airlines)

(Please note that this is only a partial list of the key players, and the complete list is provided in the report.)

# Latest News:

April 25, 2022: Lufthansa Technik AG introduced new condition monitoring tools for Airbus and Boeing operators, available with its AVIATAR digital platform. The new apps allow United Airlines and other operators to manage technical operations for Airbus and Boeing aircraft on a single screen in the AVIATAR platform. They also bring a range of predictive maintenance cases developed for the new-gen (NG) Boeing 737 NG to help operators avoid unplanned maintenance and grounded fleets.

September 19, 2022: ST Engineering announced that its Aerospace arm has secured a five-year component

Maintenance-By-the-Hour (MBH?) contract to service the Boeing 737-800 component MRO fleet of Thai budget carrier, Nok Air. ST Engineering will provide a full suite of component support solutions covering component repair management, pool support and dedicated consignment stock in Bangkok.

October 18, 2021: AAR signed an agreement with flydubai to renew its power-by-the-hour (PBH) component pool and repair support for the Next-Generation (NG) Boeing 737 fleet. The new five-year contract builds on a partnership that started in 2016 to provide comprehensive rotable component support for the 737NG fleet of flydubai. This renewal demonstrates the trust of flydubai in AAR and its recognition of the supply chain services of AAR.

#### Key Questions Answered in This Report

- 1. What was the size of the global aircraft component MRO market in 2023?
- 2. What is the expected growth rate of the global aircraft component MRO market during 2024-2032?
- 3. What are the key factors driving the global aircraft component MRO market?
- 4. What has been the impact of COVID-19 on the global aircraft component MRO market?
- 5. What is the breakup of the global aircraft component MRO market based on the application?
- 6. What are the key regions in the global aircraft component MRO market?

7. Who are the key players/companies in the global aircraft component MRO market?

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